

**A Study into the Motivations of Internet  
Users Contributing to Translation  
Crowdsourcing: The Case of Polish  
Facebook User-Translators**

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Thesis submitted for the degree of Doctor of Philosophy

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January 2014

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## Acknowledgements

First and foremost, I would like to thank my academic supervisor, Dr. Minako O'Hagan, who has offered me guidance, wisdom and encouragement beyond limits. She kept me going when times were tough. I consider myself extremely lucky to have had a supervisor who cared so much about my work and always had time to listen to me.

I would also like to thank Dr. John Kearns for his friendship and for setting me on the path to postgraduate research. In addition, I am most grateful to the School of Applied Language and Intercultural Studies in DCU for providing financial assistance and excellent research facilities. Without this support I would have never been able to embark on a PhD.

Many thanks are due to Google Localisation Team in Dublin for two fantastic summer internships, which left many lasting impressions, not least of which is the value of my research to the translation industry. This experience provided much inspiration and helped motivate my research ambitions.

I cannot thank my family in Poland enough. Despite the distance, they were always with me via Skype calls, e-mails, thoughts and prayers. Their faith in me has been overwhelming.

Mamo, Tato! Dziękuję Wam za każde słowo otuchy i nieustającą wiarę we mnie. Pisaliście tę pracę ze mną i właśnie Wam ją dedykuję. Specjalne podziękowanie dla Cioci Klary za cały ogrom wsparcia na mojej drodze do kariery naukowej.

A special thank you goes to Paweł for his IT expertise and for being there for me whenever I needed. You are the best brother a sister can have.

To my awesome friends – those back in Poland and in the UK, fellow research students in DCU and housemates in Dublin and also those, whom I met during the course of my studies in Ireland, but have now returned to Korea and Japan – thank you all for cheering me on, continuously keeping my spirits up and maintaining our friendship across different time zones, languages and cultures.

Last, but not least, I want to thank all the Polish Facebook user-translators, who accepted me as a researcher, welcomed me into their community, and treated me as a friend. Guys, you are fantastic! This research is the result of your eagerness to share your experience of translating Facebook with me. The contribution this research makes to the body of knowledge is yours as much as it is mine. Thank you for making it happen.

## Publications and Presentations from this Research Project

Dombek, M. 2012. Facebook translation as a gamified experience – Implications for user-translators. *Paper presented at the 8th International Postgraduate Conference in Translation and Interpreting (IPCITI)*, November 8-10, Dublin City University, Ireland.

Dombek, M. 2012. Translation crowdsourcing: The Facebook way - in search of crowd motivation. *IN: Show and Tell: Proceedings of the SALIS 2011 Postgraduate Showcase*, November 9, Dublin City University, Ireland. Available from:

<http://issuu.com/dublincityuniversity/docs/magdalenedombek/1?e=0>. [Accessed 6 November 2013].

Dombek, M. 2012. Motivation in translation crowdsourcing. A study of volunteer Facebook user-translators. *Paper presented at the 4th International Association for Translation and Intercultural Studies (IATIS) Conference*, July 23-27, Queens University Belfast, UK.

Dombek, M. 2011. Translation crowdsourcing. Towards the understanding of the factors motivating networked crowds to contribute translations in the Web 2.0 era. *Paper presented at the 7th International Postgraduate Conference in Translation and Interpreting (IPCITI)*, October 28-30, University of Edinburgh, UK.

Dombek, M. 2011. Translation crowdsourcing as a new form of translation practice adopted in the Web 2.0 environment – Volunteering translators and their motivation to contribute. *Presentation given at the InterFace 2011 Symposium for Humanities and Technology*, July 27-29, University College London, UK.

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## Glossary of Terms Specific to Facebook Translation Crowdsourcing

This section lists and defines the key terms associated with the translation crowdsourcing initiative as organised by Facebook and used in the thesis; the definitions have been provided by the researcher.

**award** – a graphic object in the form of an emblem which is displayed on a user-translator’s translator profile page on Facebook. Awards are offered for specific achievements in contribution to the translation initiative on Facebook. As translator profile pages are private, other user-translators cannot see the awards collected by others in their community of user-translators.

**glossary** – a list of words and phrases recognised as terms and translated by the user-translators. Suggestions from the glossary are displayed below the string currently being translated by a user-translator. Upon clicking on the selected suggestion, it is automatically inserted into the translation at the point indicated by the user-translator.

**in-line editing** – a mode for translation and voting on Facebook which allows these translation actions to be performed while using Facebook for day-to-day activities, as opposed to launching the collaborative translation platform. When in-line editing mode is switched on, Facebook text content which requires translation or is subject to voting will be underlined in red. A translation or a vote is submitted in a pop-up window displayed once the underlined segment is right-clicked.

**input module** – the module which provides a user interface for the display of source phrases which need to be translated into a given target language. It also receives translations from Facebook user-translators.

**leaderboard** – a ranking chart of Facebook user-translators who are listed depending either on the value and amount of their contribution to the translation of Facebook in a specified period of time or on the overall impact of their contribution on the translation initiative in their particular language.

**style guide** – a set of stylistic guidelines written for a particular language by a member of the corresponding community of user-translators. The guide can be accessed at any time during translation. The style guide cannot be edited by the user-translators.

**token** – a word or phrase in the original string which need not be translated, though has to be included in the string translation. A token is a placeholder for text with which it is replaced once

the translated phrase is displayed to a Facebook user. A token may be used to avoid re-translation of a word or phrase for which a high-quality translation already exists. A token is displayed in curly brackets.

**tokeniser** – an element which corresponds with the token included in the string a user-translator intends to translate. A tokeniser is displayed below the given source string and once clicked is automatically inserted into the translation at the point indicated by the user-translator.

**translation module** – the module developed by Facebook to facilitate community translation of text phrases on the social networking website by the members of the website, i.e. Facebook users. The translation module consists of an identification module, an input module, a voting module, a weighting module and a presentation module which enable individual actions for translation on Facebook.

**translation suggestion** – a translation of a particular string provided by one user-translator in the past and displayed to all the other user-translators working on the same string. A translation suggestion can be voted either up or down by the viewing user-translator; a user-translator can also edit the available suggestion and submit it as their new translation suggestion.

**Translations** – a Facebook application in which the whole Facebook translation module is embedded. It needs to be installed to a user's Facebook profile to facilitate their participation in the translation activity on Facebook. The application provides access to the collaborative translation platform, leaderboards, glossary and style guide, and stores statistical information about one's progress in contribution to the initiative in their specified target language (received awards, number of provided translations, votes).

**Translator Community for Polski** – a community of user-translators translating Facebook into Polish. The user-translators are not members of the community by default. They need to request group membership via the corresponding Polish Facebook translator community group page from the existing members or the Facebook Translation Team, who founded the community group. *Translator Community for Polski* is also the name of the dedicated Facebook Polish Translator Community group page.

**Translator Community group page** – a Facebook group page operating as a communication channel for the Facebook user-translators. There is a separate group page for each of the languages in which Facebook is being translated. Depending on the target language set by a given user-translator, the corresponding group page is made available to them. By default, they can

observe the activity in the group but cannot contribute to the discussions held in the group. To do this it is necessary to obtain group membership.

**variations** – a mechanism which is part of the translation module on Facebook and which enables multiplication of a single original Facebook string so that a number of its variant translations can be submitted into the translation module. Variations are created to allow for differences in word forms constituting the translation and which depend on varying grammatical categories.

**votingmodule** – the module which presents the user-translators with the source phrases and their translations, enables them to vote the translations up or down and stores these votes.

**weighting module** – the module which assigns values to the votes received from the user-translators and calculates quality of translations based on these votes.

## Abstract

### A Study into the Motivations of Internet Users Contributing to Translation Crowdsourcing: The Case of Polish Facebook User-Translators

Facilitated by technologies enabling a large number of networked individuals to collaborate voluntarily on translation tasks, translation crowdsourcing is a new translation procurement model which relies on crowds of Internet users willing to engage in translation activity at the request of a company or organisation. Taking the case of Facebook translation, with specific reference to the community of Polish Facebook user-translators, this study seeks to understand the motivation underpinning contributions that are typically without financial reward, especially when the call for translation is made by a for-profit entity.

A mixed methods research design involving netnography, online surveys and an observational study with elements of remote usability testing and contextual inquiry was incorporated to collect the data on the community of contributors, their translation activity and use of the Facebook collaborative translation platform. The analysis of the data suggests that the Polish Facebook user-translators are motivated by a number of factors, both personal as well as social, which primarily contribute to the satisfaction of their needs of competence, autonomy and relatedness. The studied user-translators perceived the Facebook initiative as an opportunity to practice skills and effect change for the better while collaborating with others and experiencing fun. However, the flaws and limitations inherent in the purpose-built Facebook collaborative translation platform frequently prevented the translation activity on Facebook from being carried out as intended. This was found to undermine the satisfaction of needs and thus negatively affect the user-translators' motivation.

Based on these findings, the study characterises the motivations of user-translators in translation crowdsourcing in for-profit contexts and explains how motivation to contribute is affected by the translation platforms provided for the purpose. A set of guidelines for the design of such platforms is offered to organisers of translation crowdsourcing initiatives for consideration in future.

Keywords: translation, crowdsourcing, motivation, collaborative translation platform

## **Part I: Research Context**

# Chapter 1 Introduction

## 1.1 Background

In recent years, the translation industry has undergone significant changes brought about by the rapid development of information and communication technologies and the exponential increase in the availability of the Internet. With the subsequent emergence of Web 2.0, a new environment where global communities of Internet users can interact in generating and sharing content from the World Wide Web, new forms of online user activity have become even more apparent.

Discussing the impact of Web 2.0 technologies on translation, translation scholars (Cronin 2010, 2013, Désilets and van der Meer 2011, O'Hagan 2009b, 2013, Pérez-González and Susam-Saraeva 2012) emphasise that this environment gives rise to a whole new opportunity for the generation of translation by Internet users which promotes interaction and user collaboration. In response to growing volumes and new types of content emerging online and requiring translation, the ways in which translation may be carried out have also been altered, as illustrated by new phenomena such as translation crowdsourcing.

In early 2010, the researcher received an invitation to join an online translation initiative where Internet users were engaged as volunteer user-translators of a particular social networking website. The request came from none other than Facebook, the world's largest social network service provider which connects its users into groups of online 'friends'. As a Facebook user herself, the researcher was asked to contribute to the Facebook efforts initiated in late 2007 aimed at making Facebook available in languages other than English. The scale of the initiative turned out to be unprecedented. Not long after the initiative began, online media reported the launch of Facebook in Spanish, a result of only four weeks of translation by Spanish-speaking users of Facebook (Arrington 2008). German and French versions were made available soon after. In December 2009, over 70 different language versions were available and many more were in production (Kwan 2008), with more than 104 in 2013.

The highly publicised initiative of Facebook translation has been recognised (Jiménez-Crespo 2009, 2011, O'Hagan 2009a, 2011, 2013, Désilets and van der Meer 2011, McDonough Dolmaya 2011, 2012, Dodd 2011, DePalma and Kelly 2011, Mesipuu 2012) as an early example of obtaining translation through "crowdsourcing", a work organisation model first defined by Jeff Howe (2006c, 2008). In crowdsourcing, various tasks are requested from large groups of people, who undertake

them usually without receiving any financial reward in return. Crowdsourcing, a primarily online phenomenon, typically involves for-profit companies and organisations leveraging communities of Internet users as their volunteer workforce. As a novel and dynamic phenomenon, the applications of crowdsourcing have been expanding to encompass a growing number of domains and areas of human activity. The understanding of the phenomenon varies and there can be differences in how it is defined depending on the particular perspective of the author approaching the topic. This ambiguity has direct implications for the discussion of the phenomenon of translation crowdsourcing as well.

Following the undertakings of Facebook, a number of similar initiatives have sprung up online presenting the global audience of Internet users with translation requests. In some cases, it is openly stated that the crowdsourcing model has been applied to obtain translations from Internet users. Examples include Twitter with its initiative started in October 2009 (Jin 2011), HootSuite with its Translation Project launched in the summer of 2010 (Au 2011), Adobe with its documentation translation within China since 2010 (Yunker 2010) and emergency response Mission 4636 organised after an earthquake hit Haiti in 2010 (Munro 2010). Other initiatives have been defined as translation crowdsourcing in scholarly publications and have been recognised as such by media and general public, for example community terminology management by Microsoft, translation projects at Plaxo and Sun (DePalma and Kelly 2011), and initiatives of Global Voices Online and TED Open Translation Project (McDonough Dolmaya 2011). While some differentiate translation crowdsourcing as a specific translation work organisation model (Désilets and van der Meer 2011, DePalma and Kelly 2011), in literature translation crowdsourcing is often discussed as synonymous with 'collaborative', 'community', 'user-generated' and 'volunteer' translation to imply the existence of translation initiatives chiefly undertaken by non-professionals of their own free will. In the context of the present study, however, translation crowdsourcing is understood as a distinct translation practice performed specifically in the online environment, at a request of a for-profit company or organisation and enabled only thanks to the incorporation of collaborative translation technologies. This distinguishes translation crowdsourcing from volunteer translation initiatives which have been in existence before technologies for collaboration in translation made their way into the online environment, for example subtitling of Japanese anime, known as fansubs (O'Hagan 2009a, b). Thus the practice of translation crowdsourcing discussed in the present research is understood as different from: (1) production of translation of a particular media or content by the fans and for the fans (e.g. subtitling of anime) or translation within the

open source movement (e.g. translation of Mozilla Firefox<sup>1</sup>) and (2) translation as a humanitarian action aimed at supporting a good cause or a charitable, non-profit organisation (e.g. Translators without Borders<sup>2</sup>). Chapter 2 offers a more detailed discussion of these concepts in relation to translation crowdsourcing.

## **1.2 Research Rationale, Aims and Objectives**

In April 2008, Hosaka (2008) reported that more than 100,000 users had Facebook's translation application installed, and of those, nearly 10,000 helped translate into French, Spanish and German. The willingness of such vast numbers of people to participate in Facebook's initiative, observed by the researcher also among her fellow Polish Facebook users nearly two years after the initiative began, was one of the very reasons for the researcher to take interest in how the initiative was organised.

The question of how Facebook managed to engage their community of users rather than assigning the task of Facebook translation to professional translators appeared to the researcher to bear extreme significance – in 2010, the initiative was already two years in operation and the number of Facebook translations available was increasing, which indicated that there still were Facebook users motivated to contribute. In other words, the initiative appeared to be a huge success for Facebook. On the other hand, the controversy around the whole phenomenon was growing. Although Facebook employs language specialists to oversee the translation efforts of Facebook users, professional translators were condemning the quality of translations on Facebook (Hosaka 2008), forming online protest groups (e.g. Leave Translation to Translators<sup>3</sup>), signing online petitions where they would emphasise the ethical problems posed by such translation models (Professional Translators Against Crowdsourcing and Other Unethical Business Practices<sup>4</sup>) and discussing on dedicated translation forums (e.g. ProZ.com<sup>5</sup>) the negative impact such practices have for the translation industry. However, despite the resistance of hundreds of professional translators, far more numerous cohorts of like-minded individuals were solidifying the validity of the crowdsourcing model as a means to obtain translation, engaging in the initiative started by

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<sup>1</sup>[https://wiki.mozilla.org/L10n:Home\\_Page](https://wiki.mozilla.org/L10n:Home_Page) [last accessed: 6 November 2013]

<sup>2</sup><http://translatorswithoutborders.org/> [last accessed: 6 November 2013]

<sup>3</sup><http://profileengine.com/groups/profile/425167855/leave-translation-to-translators> [last accessed: 6 November 2013]

<sup>4</sup><http://www.petitiononline.com/TEBP3/petition.html> [last accessed: 6 November 2013]

<sup>5</sup>[http://www.proz.com/forum/business\\_issues/153668-professional\\_translators\\_against\\_crowdsourcing\\_and\\_other\\_unethical\\_business\\_practices-page10.html](http://www.proz.com/forum/business_issues/153668-professional_translators_against_crowdsourcing_and_other_unethical_business_practices-page10.html) [last accessed: 6 November 2013]

Facebook in 2008 as well as in other similar projects. Five years into the translation crowdsourcing process, Facebook is available in 104 different languages and dialects. For each of these languages, Facebook has a community of users who continuously contribute translations of new Facebook features, vote on translations provided by others or improve the already existing translations. They epitomise the dedicated individuals who constitute the backbone of any crowdsourcing initiative.

From the outset, the present research has focused on them – the Internet users who volunteer to spend their free time using their skills and sharing their knowledge to undertake translation tasks in response to translation crowdsourcing initiatives. Considering the case of Facebook, whose practices exemplify the application of crowdsourcing to translation in commercially-oriented contexts, the study questions why so many individuals are willing to contribute their translations for which usually no financial reward is offered. In this way, the present study is centred on translation activities undertaken by self-appointed volunteer user-translators outside of traditional professional settings.

The research has been further inspired by the investigations in the sphere of Computer-Supported Cooperative Work (CSCW) describing how people work in groups and organizations and how technology affects that (Greif 1988, Schmidt and Bannon 1992, Grudin 1994, Mills 2003). The term CSCW was used for the first time by Greif and Cashman in 1984 in their workshop exploring how to support groups of people in their computer-mediated work arrangements (Greif 1988). Among others, CSCW research is concerned with how systems developed to support organizational goals act through individuals, groups and projects, how applications developed for individual users are used in group and organizational settings and how software developed to support groups affects individuals and is adapted to different organizational contexts (Grudin 1994: 21). More recent studies discuss technologies that aim to cross the boundary between physical and digital worlds to address problems that arise when multiple users collaborate across many devices with various interaction modes (Mills 2003). CSCW acknowledges that the design of computer-based technologies for cooperative work necessitates the understanding and consideration of the nature and the requirements of cooperative work. Thus in CSCW research special attention is paid to issues arising from interactions among people who share computer-controlled devices with careful consideration being given to the social, motivational, and political aspects of workplaces in which these applications are used (Schmidt and Bannon 1992, Grudin 1994).

The consideration of the research domain of CSCW has brought into focus the technology behind the translation activity on Facebook putting the investigation of the motivation of Facebook user-translators to contribute in a new perspective. The translation of Facebook entails a specific work model where the Internet users, while being dispersed around the globe, collaborate in translation efforts relying on a purpose-built technology which operates in the online environment and is accessed by individual users from their computers. Thus in the present study the collaborative translation platform on Facebook has been established as an additional object of investigation to discover how it affects the translation activity of the user-translators on Facebook and to further evaluate the role that it may play for the motivation of its intended users to contribute to the Facebook initiative.

Reflecting upon the impact of technology on the translator, the translation profession and the translation process, O'Brien (2012) implies that "today translation is a form of human-computer interaction", which often to a great extent relies on computer resources. She points to the adoption of Translation Memory (TM) tools, terminology management tools and Machine Translation (MT) to deal with high volumes of repetitive content that needs to be translated efficiently and consistently. The growing accessibility of the Internet further opened up new possibilities for information search and aid of translation through the use of dictionaries and other reference material available on the web. As O'Brien (ibid.) indicates, the development of translation as a human-computer interaction (HCI) task brings about both benefits as well as challenges. While translation technologies help to improve speed, quality and cost-efficiency of translation, dehumanisation of translation and devaluation of the practice concern many professional translators. O'Brien (ibid.) thus emphasises the need to evaluate the implications of the increased presence of technology in the work of translators. She refers to the studies on HCI (e.g. Johnson 1992) to stress that the interaction needs to be designed from the point of view of the human user intended to perform a given task with the help of a particular computer program. Consequently, the tools used to aid translation practices should be designed from the perspective of the interaction between the tool and the translator, instead of simply offering support for some individual tasks within the translation process. In line with Pym (2011a), she indicates that there is very little humanistic research on the impact of technology on translation and argues further that there is not much evidence confirming that the translation tools are actually designed with human translators in mind. Quite to the contrary, O'Brien (2012) identifies difficulties with learning how to use a given translation tool and refers to the problematic aspect

of imposed segmentation of texts in translation memory (TM) systems. Quoting studies such as Dragsted (2004), she points out the disagreement between how a translator segments a text he or she is translating and how segmentation is done in a TM tool. O'Brien (2012) further identifies that just as any other technology devised to support humans, translation tools whose design is not user-centred and does not account for the complexity of translation processes and cognitive effort they demand will disrupt the work they are supposed to aid.

It is thus reasonable to assume that the functionality and usability of the tool implemented to facilitate translation crowdsourcing involving the users of the Internet plays a role in defining the actions that are taken by those users and subsequently has an impact on all the translation-oriented activities that they are able to undertake. Thus in the present research, the translation technology which the translation contributors are obliged to use is interpreted as mediating the translation actions they intend to undertake in their translation efforts. However, to date there is no published research available which analyses in depth the use of such technological solutions from a point of view of translation volunteer motivation in the context of modern translation crowdsourcing scenarios. This forms the justification of the present study to focus on the interactions that occur between the users cooperating on translation tasks on Facebook. For this purpose the functioning of the technology implemented to facilitate Facebook translation crowdsourcing will also be investigated. As such, the present study intersects the fields of psychology and translation studies and further touches upon considerations in the sphere of interaction between humans and computers. Consequently, the study is interdisciplinary in nature.

Given the vastness of the global Facebook translation community, the study concentrates on the community of Facebook users translating the website into Polish. This narrow focus ensures the feasibility of the study in respect of time and resources while allowing the researcher to pursue the research questions at a sufficient depth. This decision is also supported by the presence of a strong Polish Facebook translation community as well as the researcher's native link to the country and language. Although the community finished the main translation processes in May 2008 (Golański 2008), which led to the global release of the Polish version of Facebook, a group of Polish volunteers remains active to date as they continue to improve the existing translations and provide translations of new Facebook features.

### 1.3 Research Questions

With the above background in mind, the present study is designed to address two research questions. Firstly, it sets out to investigate:

1. What motivates Internet users to contribute their translations for free in translation crowdsourcing initiatives for for-profit organisations?

The study draws on translation studies with a particular reference to the functionalist perspective whereby viewing translation as an action and a purposeful human behaviour, which is necessarily embedded in a given situation and culture (Vermeer 1983 in Nord 1997: 12). Nevertheless, the main research question delves specifically into psychological aspects of engaging lay participants in a particular translation activity. To this end, a conceptual framework incorporating a number of theories which go beyond translation studies per se has been applied in the present study.

A key theory of motivation this study draws on is self-determination theory (SDT) (Deci and Ryan 1985, 2008, Ryan and Deci 2000a, 2000b), which assumes internal, intrinsic motivation as a driving force behind human actions. In one of its aspects, SDT is concerned with social and environmental factors, which either facilitate or undermine intrinsic motivation by influencing the sense of autonomy, competence and relatedness to others perceived when engaging in an activity. Intrinsic motivation is enhanced once the needs of autonomy, competence and relatedness are satisfied but is thwarted when the need satisfaction is not experienced. Based on these tenets of SDT, the research addresses the motivation of those who contribute to translation crowdsourcing by examining how participation in such translation activity corresponds to the satisfaction of the needs of competence, autonomy and relatedness.

Furthermore, because in translation crowdsourcing Internet users undertake all of the required translation-oriented tasks of their own free will, their translation activity may be compared to volunteerism. Clary et al. (1998) suggested a functional approach for the study of volunteer motivation identifying six different functions that may be associated with volunteerism. These functions correspond to objectives driving individuals to undertake specific actions voluntarily. The study reported on in this thesis incorporates the approach of Clary et al. (ibid.) to further frame the discussion of motivation and investigate whether similar functions are attached to translation activity in translation crowdsourcing by the contributing volunteer user-translators.

The research also pays attention to the specificity of the environment in which translation crowdsourcing occurs as well as to the relationships formed between the individuals engaged in a

particular translation task. As a consequence, the act of translation in translation crowdsourcing is interpreted as a particular form of cooperative work performed online. The present study investigates the correlation between the factors that have been found to drive cooperation in the online environment (Kollock 1999) and motivation in translation crowdsourcing.

The study then moves away from a psychological analysis to account further for the qualities of the environment in which translation crowdsourcing is performed. More specifically, as an online phenomenon, translation crowdsourcing adopts translation technologies which facilitate collaboration in translation efforts of large numbers of Internet users. By interpreting translation in translation crowdsourcing as a form of human-computer interaction (O'Brien 2012), the study borrows some concepts from activity theory (AT) (Leontiev 1978), which was successfully introduced as a theoretical foundation for human-computer interaction (Bødker 1991, Kaptelinin 1996, Nardi 1996, Kaptelinin and Nardi 2006, 2012). The present research discusses translation actions in translation crowdsourcing as components of the activity of providing given content in the required language by the users of the Internet. In accordance with AT these translation actions are viewed as mediated (Bødker 1991, Kaptelinin and Nardi 2006, 2012) by the translation technologies integrated into a given translation crowdsourcing initiative. As a consequence, they are likely to affect how the translation actions are performed thus influencing the behaviour and motivation of those who use them to meet the objective driving the translation crowdsourcing activity.

With this in mind, a second research question has been formulated, asking:

2. What is the impact of technology facilitating translation crowdsourcing on the motivation of volunteers contributing their translations in translation crowdsourcing initiatives?

To address this question, the object of investigation in the study is shifted from the communities of Internet users participating in translation crowdsourcing to the translation technology mediating the translation activity they engage in. On Facebook, the application called *Translations* is offered to users of the Facebook service as the technology enabling their free participation in the Facebook translation crowdsourcing initiative. Through the user interface of a collaborative translation platform, the application operates a translation module facilitating the translation actions in the translation crowdsourcing initiative on Facebook. In order to evaluate the influence of this technology on the motivation of the contributing Internet users, the present research

examines the functionality of *Translations* and the use of its collaborative translation platform by the Polish Facebook user-translators.

Furthermore, the functionalities of the *Translations* application go beyond its role as a technological solution facilitating collaborative translation of a social networking service. The additional features such as leaderboards and an award system serve as mechanisms for recognition and feedback on the achievements of each of the contributing individuals. In their role, they resemble reward systems characteristic of games. The presence of such elements may further afford the whole initiative of Facebook translation crowdsourcing qualities of a gamified experience – one which through incorporation of game-like elements has the potential to positively affect motivation and strengthen the engagement with a particular activity (Deterding et al. 2011a), which in this case is translation. The research thus incorporates the framework of gamification (ibid.) to further analyse the design of *Translations* and assess the impact of incorporating game-like elements into the process of Facebook translation on volunteer translators' motivation to contribute translations for free.

#### **1.4 Thesis Structure**

The thesis is divided into three parts. *Part I: Research Context* comprises three chapters. Chapter 1, which is the present chapter, outlines the rationale for the study, the aims and objectives of the conducted research and also the main research questions and approaches taken to address them. Chapter 2 focuses on the phenomenon of translation crowdsourcing. A critical analysis of research introducing the concept of crowdsourcing provides a background for the discussion of the particular application of this model to obtain translation. Literature on translation crowdsourcing is reviewed next. To help distinguish the phenomenon from other translation practices performed by Internet users some examples of translation crowdsourcing are discussed. In the chapter, an emphasis is placed specifically on the role of technological advances which have led to the emergence of crowdsourcing and have facilitated its application for translation purposes. Examples of technologies incorporated into some of the existing online translation crowdsourcing initiatives are also presented in this chapter. Chapter 3 is dedicated to the translation crowdsourcing initiative organised by Facebook. It provides a detailed analysis of the “techniques for translating text in a social network” (Wong et al. 2008) which Facebook embedded in the purpose-built *Translations* application. The design of the user interface of the application – the collaborative translation platform – is reviewed together with the translation module, which defines the functioning of the application. The chapter also explains the particular features of the

*Translations* application which are not directly related to translation actions on Facebook, yet are relevant, given the purpose of this study, as elements of the wider environment in which these actions take place, and which allow for translation on Facebook to be performed collaboratively. As mentioned earlier, some of them are considered as game-like and thus the possible implications are highlighted.

*Part II: Theoretical Framework and Methodological Approach* includes chapters 4 to 6. Chapter 4 is concerned with the concepts of motivation and translation as a human activity to explain a theoretical framework adopted in the present research to address the research questions. It begins by reviewing how motivation is presented in the available literature and how different theoretical frameworks approach the question of human motivation. The chapter also reviews literature on motivation in the context of crowdsourcing and reflects on motivation in translation crowdsourcing as well. The chapter then discusses translation as an action and explains how by incorporating some concepts from Activity Theory (AT), the *Translations* application on Facebook can be evaluated to supplement the discussion on the impact of the design and functionality of this application on the activity of Facebook translation and translator motivation. Finally, the concept of gamification is discussed in more detail to help interpret the impact that the incorporation of game-like elements into the initiative of Facebook translation may have on motivation of contributing Facebook translators. Chapter 5 is a consideration of methodology available for investigating online phenomena where communities of Internet users are involved in activities online. The method of netnography is presented together with online surveys as a tool complementing netnographic observations with information about the adoption, patterns and preferences concerning the activities performed in the studied online community. Contextual inquiry and usability testing are introduced next as methods considered appropriate to investigate the use of a particular technology incorporated into the activities performed by the members of online communities. Ethical considerations of researching in the online environment are also addressed in this chapter. Chapter 6 presents the methods selected for the purpose of the present study. The three-stage research procedure is explained together with the justification of the choice of a mixed-methods approach and triangulation of data from different sources. Each of the incorporated methods is described individually to specify its suitability for the present research and the type of data it enabled the researcher to collect.

*Part III: Data Analysis and Research Findings* consists of three chapters. Chapter 7 provides an analysis of the data collected through netnography and online surveys on the community of Polish

Facebook user-translators, the first object of investigation in the present study. Chapter 8 focuses on the environment in which Facebook translation crowdsourcing occurs. The data on the Facebook collaborative translation platform collected in the observational study with six Polish Facebook user-translators is analysed first. The perceptions regarding the Facebook translation crowdsourcing initiative as revealed by the survey's participants are then discussed in relation to the game-like features of the *Translations* application. The findings are discussed with regards to the theoretical framework established in Chapter 4.

The conclusion summarises the key findings of the study, discusses its contribution to the existing body of knowledge in the field and also considers its limitations and weaknesses. The potential implications of the findings for the design of translation crowdsourcing, implementation of technologies to facilitate collaborative translation from the point of view of contributor motivation in collaborative translation environments are addressed. Suggestions for future research bring the chapter to a close.

A list of references and six appendices follow the conclusion.

## Chapter 2 Crowdsourcing and Translation Crowdsourcing

The Introduction established crowdsourcing and its application to translation as the core phenomenon under investigation in the present study, while also providing a general explanation of how this type of activity is defined and approached by the researcher. This chapter reviews relevant literature on crowdsourcing and translation crowdsourcing with the aim of providing a detailed analysis of the practices in relation to these two key concepts. Given its relative youth, the interpretation of the phenomenon of crowdsourcing continues to evolve, further adding to the challenge of defining translation crowdsourcing in particular. The following review opens with the discussion of these practices as outsourcing of work to a large number of users of the Internet, as facilitated by modern technologies in the Web 2.0 online environment. It further presents how Howe (2006a, b, c; 2008) named such practices as ‘crowdsourcing’, especially when adopted by commercially-oriented organisations or corporations. Next, to illustrate how crowdsourcing functions as a business model, four examples of crowdsourcing are discussed: iStockphoto, InnoCentive, Threadless and Amazon Mechanical Turk. The chapter then reflects upon the work of Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012), who attempt to characterise crowdsourcing based on the uses of the term in scholarly publications available on the topic. Based on this analysis as well as on the interpretation of the four examples of applying crowdsourcing as a business model, a working definition of crowdsourcing is proposed for the purpose of the present study. This definition serves to reflect upon the discussion of translation initiatives which involve Internet users and are enabled by translation technologies online. Literature on the genesis of these new forms of translation activity online is reviewed next. Ryugakusei Network @ Minna no Hon’yaku, Evernote Translation Server, Twitter Translation Center and Adobe Translation Center are described as examples of translation crowdsourcing initiatives in for-profit contexts. The emphasis is put on the technological solution that has either been adopted or purpose-built to facilitate crowdsourcing of translation in each of the four cases cited to further reflect on the interaction between these technologies and their users.

### 2.1 Crowdsourcing

In the June 2006 issue of Wired magazine, Jeff Howe (2006c) cited a number of cases in which companies decided to ‘outsource’ some of the work they needed to be done to the people connected into a network by means of the Internet. The contributors’ personal profiles, education, experience and location were unimportant and remained unknown. What mattered was that they

were good at what they were doing, they were extremely eager to participate and there were many of them – so many, that Howe referred to them as ‘crowds’ (Howe *ibid.*). Their photographs stored online at iStockphoto were used commercially as an alternative to the work by a professional photographer at a fraction of the professional price or even free of charge; they solved scientific problems for blue chip companies such as Procter and Gamble through online contests organised by InnoCentive while their designs were printed on t-shirts sold online by Threadless. Howe (*ibid.*) emphasised that these practices exemplify how hobbyists, enthusiasts and members of the general public alike avail of technological advances which create the opportunity for passive consumers to become active producers of different types of content. Tools and systems such as cameras or graphic design software once developed to support only professionals in their job-related practices are now being made much more readily accessible to people interested in developing their own interests and skills; they enjoy long hours practicing and experimenting on their own, hoping to become as skilful in their personal pursuits as professionals. Some of them take further advantage of technologies available online and use the Internet as a platform for sharing their passion and showing off their talent to millions of others with whom they are connected into online networks and communities of interest.

What Howe noted was that these activities of networked and creative crowds of non-professionals, defined also as ‘Pro-Ams’ (Leadbeatter and Miller 2004) - amateurs working to professional standards - have started to be utilised in business contexts. A new form of exceptional but increasingly common social behaviour has emerged, where tasks which used to be undertaken by paid employees are now made available to Internet users who typically perform them with no financial benefit involved. These practices are further conceptualised by Howe (2006a, 2006b, 2006c, 2008) as “crowdsourcing”. Howe initially coined the term together with Mark Robinson, further discussing the concept himself on his online blog and in his book. In one of his blog entries Howe (2006a) specifies:

“Simply defined, crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential labourers”. (Howe 2006a).

Elsewhere, he further indicates that the product of the work of online crowds as developed at a request of a given company or organisation should then be reused on a large scale and sold for the whole initiative to be branded as crowdsourcing (Howe 2006b).

Both the social aspect of crowdsourcing as well as the technology used to facilitate the phenomenon are extremely important for the discussion of how crowdsourcing has emerged and operates. Recognised as an Internet-based phenomenon (Howe 2006a, Estelles-Arolas and Gonzalez-Ladron-de-Guevara 2012), crowdsourcing relies on recent technological advances, which have broadened access to and transfer of information allowing for a requested task to be completed through the contribution of large numbers of individuals in the online environment. Howe indicates that crowdsourcing takes advantage of what is highlighted by James Surowiecki (2004) as 'crowd wisdom' achieved through collective work and decision-making facilitated by modern technologies available on the Internet. As Howe further explains (2008:14), crowdsourcing "capitalizes on the deeply social nature of the human species (...) and uses technology to foster unprecedented levels of collaboration and meaningful exchanges between people from every imaginable geographical location".

Crowdsourcing thus embraces the technological developments which have enabled computer networks to go beyond their primary function of linking individual machines to connect people using these machines irrespectively of their locality. As indicated by Wellman (2001) and Wellman et al. (1996, 2002) the advent of industrialisation and urbanisation and the following advances in communication and transportation have transformed the understanding of community as a structured, densely-knit and village-like local group. Wellman (2001) does not limit community to neighbourhoods or villages but defines it as spatially-dispersed, loosely-bounded and sparsely-knit "networks of interpersonal ties that provide sociability, support, information, a sense of belonging, and social identity". He further explains that the developments in communication afforded by the advances in technology have established such social networks as a dominant form of social organisation. Instead of operating in groups, people live and work in networked societies which create demand for collaborative communication and sharing of information (Wellman et al. 2002). Developments in computer-mediated communication, computerised communication networks and the Internet afford for social relations and social structure meeting the demands of networked societies (Wellman 2001).

More specifically, in the case of crowdsourcing the technological foundations upon which it functions are provided by the second generation of the World Wide Web branded by O'Reilly and

Battelle (2009; also O'Reilly 2005) as Web 2.0 (Andriole 2010, Vukovic and Bartolini 2010). The online environment of Web 2.0 is being developed by Internet users themselves, promotes networking and allows people to work together. They are the active participants in the generation of Web content through collaboration, contribution of data and sharing of resources (O'Reilly and Battelle 2009, Shuen 2008).

Millions of Internet users have been unleashing their potential by creating their own websites, writing blogs, publishing photographs, videos, software and any other content that is a product of a wide range of interests they have and like to pursue in their free time, as a result becoming active producers of the online content. They participate in turning the Internet into a platform which serves to showcase human talents and creative potential. Consequently, Internet users are no longer perceived solely as passive media consumers but as active co-creators and participants in the generation of content available online (O'Reilly and Battelle 2009, Howe 2008).

The early practices where online crowds would engage in work oriented towards a particular objective are illustrated by the open source movement applied to software development (e.g. Linux operating system, Mozilla Firefox web browser), as well as the creation of open content encyclopaedia, Wikipedia. As explained on the portal page of Red Hat<sup>6</sup>, an American-based company providing open source software, while the term 'open source' originated in the context of software development, today it is associated with projects, products, or initiatives which "embrace and celebrate open exchange, collaborative participation, rapid prototyping, transparency, meritocracy, and community development" (Red Hat 2013a). The Open Source Initiative<sup>7</sup>, a non-profit corporation with a global scope formed to educate people about and set standards for the incorporation of open source as a method of software development specifies that 'open' does not only refer to free access to the source code. It ensures software redistribution rights (either for free or with a charge) and further allows for modifications to source code without discriminating against any person or group of persons. According to Red Hat, open source enables openness in the exchange of information and existing resources so that others can learn from and reuse the available material to create new ideas. In open source individuals who share a common goal form a community and work together seeing collaboration as a way of finding solutions to problems which cannot be solved by an individual alone (Red Hat 2013b).

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<sup>6</sup><http://opensource.com/> [last accessed: 6 November 2013]

<sup>7</sup><http://opensource.org/osd> [last accessed: 6 November 2013]

The examples such as Linux or Wikipedia indicate how voluntary contributions were successfully sought from Internet users resulting in the production of 'open' content freely available to anyone. Reflecting upon open source programming, Howe indicates that the openness of the whole model instils collaboration and information exchange amongst programmers. Their labour is broken down into smaller units, facilitating the come-one come-all approach to software development. Howe identifies these as the core features of crowdsourcing specifying open source movement as "a blueprint" of this work organisation model (Howe 2008: 48).

Ever since Howe's publications validated crowdsourcing as a new model of work organisation, the term has started to be used in reference to a multitude of commercially-oriented initiatives involving Internet-based collaborative activity at the request of an organisation. Crowdsourcing has thus been presented as a mechanism for problem solving (Brabham 2008a) and an approach to harvest expertise and innovation from the masses (Vukovic and Bartolini 2010).

Over the last few years crowdsourcing has gained momentum and the number of publications and conferences devoted to the phenomenon has been growing. A search in the Academic Search Complete Database for the phrase 'crowdsourcing' produces 36 publications on the topic published between January 2006 and December 2008, 152 publications between January 2009 and December 2011, and 272 publications since January 2012 to date (21 June 2013). According to Lanyrd<sup>8</sup>, crowdsourcing was the theme of 12 conferences in the years 2006-2009, 38 conferences in 2010, 152 in 2011, 175 in 2012 and 68 from the beginning of 2013 to June 2013. In their study, Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012) reviewed the existing descriptions of crowdsourcing and concluded that the phenomenon itself and how it is defined keep evolving with new applications of the practice appearing in different domains. Furthermore, they observed a lack of consensus and semantic confusion regarding how the term is used. They made an attempt at providing an integrated definition of crowdsourcing based on their textual analysis of 40 original definitions retrieved from papers and scholarly articles on the topic. Consequently, their study led them to specify a number of features as typical of a crowdsourcing initiative:

- the process will be carried out on the Internet and will involve the crowd being informed about a given initiative through an open call;
- the initiator will be any entity capable of carrying out the initiative benefiting from the solution to the problem in question, as offered by the work of the crowd;

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<sup>8</sup> Lanyrd is an online social conference directory (<http://lanyrd.com/> [last accessed 6 November 2013])

- the crowd will be a large group of individuals whose characteristics will vary depending on the requirements of a given crowdsourcing initiative;
- the task will involve problem solving, with the problem being any situation of need as specified by the initiator, through voluntary contribution of work, money, knowledge and/ or experience;
- the recompense will be satisfaction of a necessity which may be economic or realised as self-esteem, social recognition or development of certain skills.

In the present research, crowdsourcing is understood as a work organisation model, which bears the features specified by Estelles-Arolas and Gonzalez-Ladron-de-Guevara (2012) and, as implied by Howe (2006a, 2006b), is applied for commercial purposes by for-profit companies and organisations. In addition to the well-known examples such as the iStockphoto and Threadless projects (Howe 2006c, Brabham 2008b, 2010), as well as the initiatives of Innocentive (Brabham 2008a) mentioned earlier, another example of crowdsourcing are the numerous micro-task projects organised by Amazon on their Mechanical Turk platform (Alonso et al. 2008, Kittur 2008, Doan et al. 2011, Ipeirotis 2012). Each of these is briefly explained below.

#### *2.1.1 Threadless<sup>9</sup>*

Threadless was started in 2000 as a web-based company crowdsourcing T-shirt designs. Anyone with a valid email address can become a member of the Treadless' community of designers and contribute their own designs or and/ or vote on the designs of others. The most highly rated designs are selected and printed, mainly on t-shirts, which are then sold on the company's website. Some of the designs also have features on products of companies such as Dell and Thermos. Depending on the item on which the selected design is printed, the author receives a cash payment of \$250-\$2,000 and is entitled to royalties of between 3-20%, depending on how many items featuring their design are sold. As of August 2013, Threadless' has awarded over \$8 million to more than 1,200 individual designers worldwide (threadless.com).

#### *2.1.2 iStockphoto<sup>10</sup>*

Established in 2000, iStockphoto sells royalty-free stock photography, animations, illustrations and audio files provided by contributors approved to be members of the iStockphoto community. New members are asked to read through the company's training manual and are then tested on their

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<sup>9</sup><http://www.threadless.com/> [last accessed 6 November 2013]

<sup>10</sup><http://www.istockphoto.com> [last accessed 6 November 2013]

knowledge on photography as well as knowledge of iStockphoto policies, requirements and legal issues via a quiz on the company's website. Next, each candidate needs to submit 3 original samples of their material which are screened for suitability and quality. If approved, the candidate becomes an official iStockphoto contributor. No specific experience is required of the potential contributors, thus similarly to Threadless, professionals as well as amateurs may participate in iStockphoto's crowdsourcing initiative. The basic royalty rate is 15% of the price paid for an individual download of the contributed file, with exclusive contributors being paid up to 45% royalty rate. According to officially published data, in 2007 iStockphoto's revenue reached \$71.9 million of which \$20.9 million (29%) was paid to the contributors (Bitter 2008). The gross revenue in 2011 was estimated to be about US \$350 million (Pickerell 2012).

### *2.1.3 InnoCentive<sup>11</sup>*

Crowdsourcing has also been adopted in the initiative of InnoCentive, which serves as a platform offering companies an opportunity to crowdsource their innovation challenges to the global community of problem-solvers. The challenges on InnoCentive are open to everyone, not necessarily limited to professional researchers or scientists. Financial awards are offered by the seeker companies and granted to the best problem-solver(s) who meet the criteria of a given challenge. As of October 2012, over 1300 awards were made ranging from \$500 to over \$1 million each (InnoCentive Facts&Stats 2012).

### *2.1.4 Amazon Mechanical Turk<sup>12</sup>*

Amazon Mechanical Turk (AMT) was introduced by Amazon in 2005 as an online marketplace for crowdsourcing tasks which cannot be automated and require human intelligence to be completed. It functions as a platform for recruiting subjects who perform the specified tasks and are paid for their completion. The tasks are usually broken down into smaller segments and paid from as little as \$0.01 up to a few dollars depending on the complexity of a task. The workers logging in to the AMT website remain anonymous and themselves select the tasks which they want to complete. Those who request a given task may test the potential workers before they are accepted to fulfil the task and also have the right to reject the result received from the workers. The requestors also pay Amazon 10 % of the value of successfully completed tasks (Pontin 2007). AMT has also been applied to tasks requiring the workers to translate sentences or evaluate Machine Translation

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<sup>11</sup><http://www.innocentive.com/> [last accessed 6 November 2013]

<sup>12</sup><https://www.mturk.com/mturk/welcome> [last accessed 6 November 2013]

(MT) output whereby providing reference translations and parallel corpora for MT training as well as facilitating reading comprehension experiments with MT (Ambati et. al 2010, Callison-Burch 2009).

## **2.2 Translation Crowdsourcing – The Origins**

Based on the above discussion of crowdsourcing in general, this section reflects upon the undertaking of translation tasks by Internet users in order to distinguish and define the particular practices ‘translation crowdsourcing’. Here translation crowdsourcing is presented as a translation procurement model applied in commercial contexts and is located in the broader sphere of translation activities performed collaboratively in the online environment. The practice of translation crowdsourcing is thus distinguished from other associated practices such as certain types of voluntary translation and fan translation that existed prior to the widespread availability of the Internet.

Translation scholars investigating the recent changes in technologies and their impact on translation (Cronin 2010, 2013, Désilets 2007, Désilets and van der Meer 2011, O’Hagan 2009a, 2009b) emphasise that the characteristics of translation processes as well as the type of content requiring translation have changed once media use and production have become more participatory in nature as afforded by the modern technologies of Web 2.0. A whole new opportunity for the generation of translation by communities of networked Internet users has been opened up introducing what Perez-Gonzalez and Susam-Saraeva (2012: 154) identify as “co-creational or participatory linguistic mediation”, in their view primarily resulting in the form of translation produced by “non-professionals” (ibid.). New translation work organisation models have emerged, and translation crowdsourcing is one of them.

As discussed by O’Hagan (2011) in her introduction to the 10/2011 special issue of *Linguistica Antverpiensia*, focused to address how Web 2.0 technologies allow for more participative production of translation on the Internet, the emerging new forms of translation online have started to be described in more general terms as ‘collaborative’ or ‘community translation’. Hartley (2009) identified ‘collaborative translation’ as a practice adopted by groups of self-organising enthusiasts who try to meet the needs of particular communities requiring availability of online content in different languages. He indicated the growing demand for translation by and for the users of the Internet as further strengthening the collaborative aspect of translation. As an example of collaborative translation, Hartley (ibid.) cites the sphere of open-source software

development and translation of user-generated applications. Nevertheless, 'collaborative' and 'community translation' are often used interchangeably, with some scholars specifying translation crowdsourcing as synonymous with these two (Pym 2011b), while others present it as a specific manifestation of collaborative/ community translation (Désilets and van der Meer 2011, O'Hagan 2011).

For Pym (2011b) the term 'collaborative translation' is synonymous with 'crowdsourcing' and 'community translation'. Nevertheless, he comments on a quite specific and fixed meaning of the word 'collaborative' in English and thus suggests 'participative translation' or 'volunteer translation' as more appropriate to describe the phenomenon. Pym recommends the use of the latter with his rationale being that collaborative translation is "largely voluntary (i.e. unpaid in financial terms)" (2011b: 77) and that it is the financial payment received (or not) by the translator that differentiates this type of translation from translation which he describes as 'professional' (Pym 2011b: 97). In the same work, Pym expands on his understanding of 'community translation' defining it as a "(t)erm used for the practice whereby non-professionals translate software or websites that they actually use" (2011b: 78) and again specifying it as synonymous with 'collaborative translation', 'crowdsourcing', 'fan translation', 'user-based translation', 'lay translation' and 'citizen translation'.

Perrino (2009), in reference to specific forms of translation production, where the translated versions of the digital media created or edited by Internet users are distributed online introduces the term 'user-generated translation' (UGT). He emphasises that UGT practices avail of Web 2.0 technologies and imply collaboration between translators, be they amateurs or experts. However, according to Pym (2011b), UGT is treated as an alternative to 'community translation', 'crowdsourcing' and 'collaborative translation' though again 'volunteer translation' is specified as a preferred term.

Désilets and van der Meer (2011) in their discussion refer specifically to translation crowdsourcing, which they define as translation provided "by large crowds of mostly amateurs, through an open-call process" (2011: 29). Their interpretation of the concept is thus very broad. As examples of translation crowdsourcing initiatives they specify: translation of software user interface and technical documentation at Adobe (Meyer 2012), translation of video transcripts/ subtitles like the initiative of TED Open Translation project, translation for humanitarian purposes like in the case of initiatives by Translators without Borders (TWB; Cavalitto 2012) and Kiva (Baer 2010) or Mission 4636 organised in response to the earthquake disaster relief efforts in Haiti (Munro 2010).

In the actual documents describing the Kiva and Mission 4636 initiatives, Baer (2010) and Munro (2010) use the term 'crowdsourcing' to refer to the employed translation practices where a large number of Internet users responded to volunteer as translators. While Christine Duran in an interview with Lori Thicke (2011) defines translation at Adobe as crowdsourced as well, Meyer (2010) describes the translation processes at Adobe as 'collaborative' and 'community-driven' translation. The descriptions of TWB and TED Open Translation project emphasise the mission pursued by each initiative (humanitarian work for NGOs in the case of the former and spreading of ideas and stimulating global dialogue in the case of the latter) as well as the voluntary aspect of participation.

Kageura et al. (2011) (see also 2.5.1 in this chapter) describe their three initiatives where their purpose-built collaborative translation platform Minna no Hon'yaku (MNH) facilitates (1) 'online collaborative translation', which is an initiative open to everyone where a variety of projects are translated collaboratively on voluntary basis; (2) 'crowdtranslation' (Ryugakusei Network @ Minna no Hon'yaku (RNMNH)), which is a business solution where foreign students studying in Japan are paid in return for providing translation requested by clients; and (3) 'crowdsourcing and UGT' (Kotoba no Volunteer @ Minna no Hon'yaku (KVMNH), whose aim is to collect and make available useful expressions in different languages in disaster situations. Nevertheless, the concepts of crowdtranslation, UGT and crowdsourcing are not precisely defined by the authors and thus it is not completely clear how they differ from one another. From the description of the individual initiatives it can be concluded that both MNH and RNMNH operate on the basis of translation requests to which an interested translator responds. However, while in the case of MNH translation is performed voluntarily free of charge, RNMNH is a paid service and offers financial remuneration to the participating student-translators. Because the service is not provided by professionals, Kageura et al. (ibid.) define it as 'crowdtranslation'. In the case of KVMNH there are no specific requests for translation. The whole project is driven by the online community of volunteers and it is the crowd of participants who decides on what is contributed to the initiative and then translated. Kageura et al. (ibid.) refer to this project as UGT. Translation here is also viewed as a problem-solving task by the crowd thus the term crowdsourcing is also used to describe KVMNH.

In reference to their Common Sense Advisory report on collaborative translation published in 2007 and entitled "Translation of, by, and for the People", DePalma and Kelly (2011) specify the changes brought into the translation industry by Web 2.0 technologies leading towards more dispersed,

asynchronous models of professional translation involving online collaboration between multiple, concurrent translators. In the report they introduced the notion of 'CT3', which stands for "community, crowdsourced and collaborative translation", to describe the processes that have started to replace the traditional procedures of translation project management. They explain that by community translation they mean translation performed voluntarily by groups of likeminded individuals while collaborative translation intends to describe the work of professional translation teams working collaboratively on one project with individual translators interacting and sharing translation resources. Crowdsourcing, on the other hand, implies leveraging 'the power of the swarm' (2011: 382) with translation projects opened up to many different parties including volunteers, contractors and language service providers. DePalma and Kelly (ibid.) further specified that the boundaries between these three concepts are blurry as they have started to overlap. As a consequence, they decided to refer to the three phenomena collectively as 'crowdsourced translation'. They emphasise the extreme importance of the role of technology to facilitate and manage crowdsourced translation initiatives. For a dispersed crowd to work collaboratively, it is necessary to provide access to translation tools and resources in real time via the Internet such as networked translation memories, infrastructure for communication among individual project participants and project management as well as platforms for collaborative translation work. DePalma and Kelly (ibid.) claim that the community approach has the potential to facilitate more time- and cost-efficient translation where different steps of the process (translation, editing, proofreading) may be carried out simultaneously.

Kelly et al. (2011) differentiate between (1) product-driven collaborative translation, where for-profit companies request a crowd to provide translation as exemplified by the practices of Adobe or Facebook, (2) cause-driven collaborative translation which encompasses translation for non-profits, for disaster relief purposes and of online media content in general (including 'fansubbing' and 'fandubbing') and (3) outsourcing-driven collaborative translation. As in the product-driven model, remuneration of contributors may come in the form of free merchandise or recognition by the general public while translators in cause-driven translation initiatives most often are not provided with any remuneration. In outsourcing-driven scenarios communication between the members of the translating crowd and the entity requesting translation is mediated via an online portal. Those who provide translation services usually receive payment for their work. As examples of outsourced community translation providers they indicate platforms such as

CrowdFlower<sup>13</sup>, microtask<sup>14</sup> or OneHourTranslation<sup>15</sup>. Kelly et al. (ibid.) use the term ‘crowdsourced translation’ in the title of their concluding paragraph, where they again mention the practices of Adobe, HootSuite and also the non-profit Kiva as collaborative translation.

For the purpose of her article, McDonough Dolmaya (2011) adopts the typology proposed by Kelly et al. (2011) and provides more examples for each of the three translation scenarios, to which she refers as ‘crowdsourcing models’. However, her classification differs slightly from what was originally proposed by Kelly et al. (ibid.). She considers the translation initiatives organised by for-profit companies as outsourcing-driven and exemplified by the practices of Facebook and Twitter, while product-driven translation crowdsourcing is, in her view, represented by translation of open source software, for example Open Office.

Ambati et al. (2010) reported how Mechanical Turk was used to obtain translations from Internet users which then served as training data for MT engines. Callison-Burch (2009) discussed how human evaluation of MT content can be successfully accomplished via a request on Mechanical Turk.

### **2.3 Translation Crowdsourcing – Towards a New Categorisation**

All of the above discussions imply how in the sphere of translation studies the use of the term translation crowdsourcing has not solidified yet as and it seems that more preference is given to use of the notions of collaborative and/ or community translation. Notwithstanding, in very many cases the term ‘crowdsourcing’ is implied as a synonym to these two terms and is used interchangeably. The same examples of translation initiatives online may thus be branded as collaborative, community or crowdsourced translation. The classification offered by Kelly et al. (2011) aims to distinguish between three different scenarios for collaborative translation. Nevertheless, Kelly et al. (ibid.) further specify ‘translation crowdsourcing’ as a term synonymous with collaborative translation and thus encompassing with its meaning all the three types of translation they suggested. McDonough Dolmaya (2011) incorporated the typology by Kelly et al. (2011) into her study but interpreted product-driven, cause-driven and outsourcing-driven collaborative translation initiatives differently.

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<sup>13</sup><http://crowdfunder.com/> [last accessed 6 November 2013]

<sup>14</sup><http://www.microtask.com/> [last accessed 6 November 2013]

<sup>15</sup><http://www.onehourtranslation.com/> [last accessed 6 November 2013]

O'Hagan (2011) emphasises that there exist some key characteristics common to all the different forms of translation online described as 'community', 'collaborative', 'volunteer' or 'user-generated translation' as well as 'translation crowdsourcing'. She specifies that all of them involve some form of collaboration, are produced on a voluntary basis and with the use of specific translation platforms by grouping people together into an online community.

The discussion provided in the previous sections offers support for this claim. With regards to the definition of community provided by Wellman (2001), online translation initiatives engage dispersed individuals into social networks facilitated by the technology of the Internet, thus forming a community. What unites them, secures a sense of belonging and enables identification with the community and its members is the common objective of providing translation. This objective is being met through collaborative work as translation activity online is decentralised and the final outcome of translation efforts in a particular initiative usually cannot be attributed to one single individual.

However, as offered by O'Hagan (2009b), a distinction can be made between fan-driven illegitimate online translation practices applied to copyrighted content without permission and the practices where translation of legitimately owned content is requested from the online crowds by organisations, not infrequently for-profit enterprises, who for this purpose apply the crowdsourcing model. Even though translation crowdsourcing may seem a novel approach to the production of translation out of a strictly professional domain, O'Hagan (2011) emphasises that translation initiatives such as translations of a variety of media content produced by fans and for fans and the endeavours of volunteers translating software and related material produced within the open source movement are practices already long in existence. As she states elsewhere (O'Hagan 2009a, b) media users have been involved for many years in the generation of subtitles for Japanese anime (see also Trykowska 2009), online subtitling of films and other audiovisual content (see also Díaz Cintas and Muños Sánchez 2006, Bogucki 2009) and also ROM-hacking of video games with the aim of replacing the professionally translated script with a fan-generated one. O'Hagan claims that this type of translation is often a form of "a protest against the official often over-edited versions" (O'Hagan 2009: 100) of original animation and video games when prepared for consumption in other markets than the country of origin.

According to O'Hagan (2009a), fan translations of anime are the earliest forms of UGT and predecessors of translation crowdsourcing (2009b: 4). She characterises the producers of UGTs as those who freely apply their knowledge of a foreign language to produce translation of some

distinct media content that is of special interest to them and which would otherwise remain linguistically inaccessible. UGT can be associated with non-profit initiatives such as translation of open source software and its documentation or may serve as a way of manifesting one's support for various humanitarian causes. However, as emphasized by O'Hagan (2009b), the translations produced by fans or gamers are usually intended for other enthusiasts of the same media content. Moreover, fan activities which avail of copyrighted materials without permission are not considered legitimate. On the contrary, the translations received by implementing crowdsourcing are "solicited" (O'Hagan 2009b), i.e. usually requested by content owners from the crowds in the form of an open call and then published as official. Consequently, she considers translation crowdsourcing as a form of online translation that is not a breach of law and a more legitimate form of UGT. What further differentiates translation crowdsourcing from other forms of UGT is the fact that in most cases crowdsourcing is applied as a business model with translations being requested from the online crowd usually for free, albeit serving commercially-oriented purposes. On the basis of such reasoning and the literature reviewed above, different forms of online collaborative translation are categorised depending on how and by whom the initial translation request is made in order to distinguish translation crowdsourcing practices studied in the present research. The three proposed categories of online collaborative translation initiatives are thus as follows:

1. translation of content by fans intended for fans, as well as translation of open source content; in such initiatives translations are not produced at the request of the content owner but rather to satisfy the demand of users and developers of the specified content themselves; these practices are not investigated in the present study;
2. translation for non-profit entities such as charities, NGOs and other institutions operating for humanitarian causes and common good in general; here the contributors volunteer mainly because they identify with the mission statement of the entity requesting translation or with the overall ideology driving the initiative as a whole; such practices are also not investigated in the present study;
3. translation for for-profit organisations, who would traditionally need to engage professional translation services or else do not obtain translation at all; the requestors do not pay any money to the crowds providing translations, they may recognise contributing translators in a way other than financial rewards, including

offering free merchandise; in some cases the requesting entity may engage an intermediary body specialised in managing the online crowd of translators, including receiving requests from clients and offering the platform (and other tools) for the crowds to work on translations; the present research aims to investigate motivation of Internet users contributing to such translation crowdsourcing initiatives.

Table 2-1 provides an outline of the typology of online collaborative translation practices suggested by the researcher for the purpose of the present study with examples illustrating each type. It considers whether a given initiative involves translation of content provided at the request of the content owner who is further specified as either a for-profit or a non-profit entity. The highlighted row identifies the research domain.

**Table 2-1 A typology of online collaborative translation practices with examples**

Category	Organiser	Purpose	Examples
1. user-initiated, not for profit	individuals with interest in a given subject or domain; fans of a specific type of content	make content available to others in the language they understand	translation of <i>Mozilla</i> Firefox and Wikipedia; fansubs
2. content owner-initiated, not for profit	NGOs, non-profit organisations, charities	promote humanitarian ideology, support disaster relief, spread information and knowledge	Translators without Borders, Haiti 4636, TED Open TranslationProject
3. content owner-initiated, for profit	for-profit company	reduction of translation costs, time to market; community building	Facebook, Twitter, Adobe; translation via CrowdFlower platform

As already indicated, all types of translation are considered as online activities and performed in a collaborative manner by a dedicated online translation community. It has to be emphasised that the ‘collaborative’ aspect here does not imply simultaneous work of a group of individuals on the exact same fragment of text in order to produce its translation. Thus ‘collaborative’ aspect of

online translation implies rather specifically that the final outcome of translation efforts in a particular online translation initiative is considered as a product of work of a large number of Internet users and normally no credit is given to any of the involved contributors individually<sup>16</sup>.

With regards to Pym's definition of 'volunteer translation' as "unpaid in financial terms" (2011b: 77), all the specified types of online collaborative translation can be also considered as implying translation as a voluntary activity. Research in the area of volunteering defines volunteers as those who decide to offer help and support free of charge to contribute to the public good and generate social capital (e.g. Stukas et al. 2009). The participation in translation initiatives such as those for charities and NGOs as well as translation of open source content can thus be treated as a form of volunteering. The interpretation of the activities of fans subtitling TV series or anime as volunteering can be questioned in relation to the fact that these activities are performed illegally, i.e. without the approval of the content owner. As for some, such activity may be perceived as beneficial to the public (in reference to the special interest groups made up of other fans of the same content genre but not familiar with the language of the original), for others it is a breach of law. In the case of translation crowdsourcing where translation is provided at the request of a for-profit entity, the contribution of such initiatives to the good of the public may be contrasted with the benefit gained by the requestor. As already implied, this distinguishes translation crowdsourcing in commercially-oriented contexts from online translation initiatives such as those initiated by Translators without Borders or Mozilla. Nevertheless, it seems valid to assume that in all the three types of online collaborative translation from the perspective of the contributing Internet users their translation activities are perceived as voluntary in the sense that they bring benefit to others. The present research considers them as voluntary in line with such reasoning. The perception of the contributing user translators may be affected by the fact that the for-profit organisations utilising translation crowdsourcing often offer their services for free (as is the case with Facebook and Twitter), which may create an illusion of the requestor as a non-profit. Chapter 4, which introduces approaches for the study of human motivation, will discuss volunteering and voluntary translation activities in more detail.

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<sup>16</sup>For example, studies such as Clark (2010) (see also section 2.4 in this chapter) investigating the nature and extent of interactions between students performing translation in the online collaborative environment of *Minna no Hon'yaku* imply that the direct interactions and the actual linguistic collaboration between the contributors are very limited and indirect, usually in the form of editing the work done by others.

In the present research, the purpose of a given translation initiative and the circumstances in which it is initiated are considered as the core factors differentiating between different types of online collaborative translation initiatives. The present research is concerned with translation crowdsourcing where a for-profit company asks online crowds to provide translations typically for free. The translation request is made in the form of an open call so that anyone, no matter what their educational background, skills or experience, can get involved. In the majority of cases, no financial payment is offered for the contributed translation work. The process of translation is facilitated by collaborative translation platforms which are either provided directly by the company requesting translation or adopted from a third party. The translation request in translation crowdsourcing is addressed to Internet users who in the majority of cases will also be the users of a given product or service (or any other type of content) for which translation is requested. Furthermore, as the present research aims to emphasise, the participation in translation crowdsourcing requires the contributors to use a specific translation technology enabling a particular initiative. To highlight the fact that a contributor in translation crowdsourcing is a 'user' in many different aspects, the individuals contributing to translation crowdsourcing are in the present research referred to as user-translators.

Based on the discussion of the nature of translation crowdsourcing which is of interest to the present study, it becomes apparent that this translation procurement model implies a unique form of human translation activity distinct from translation proper as traditionally considered within translation studies. Nevertheless, translation in translation crowdsourcing is still a form of intentional communicative interaction with the aim to transfer messages across languages and cultures. Thus as will be explained later in the thesis, the discussion of translation crowdsourcing can be located in the sphere of translation studies and the existing theories of translation can be adopted to examine the phenomenon and explain the translation activity it entails.

The acts of "soliciting" translation through crowdsourcing (O'Hagan 2009b) are currently being widely applied by a growing number of for-profit corporations, product developers and service providers including Microsoft, Plaxo, Sun (DePalma and Kelly 2011), Adobe (Petras 2011), Evernote (Sinkov 2009), HootSuite, Twitter and Facebook (McDonough Dolmaya 2011). The practices implemented by Facebook – a global brand and developer of a social networking service with the same name – exemplify the use of crowdsourcing in commercially-oriented contexts (McDonough Dolmaya 2011) aimed at obtaining free translations from the users of Facebook themselves, in a vast range of languages and in a timely manner. The following section describes some of the

existing online translation practices which fit the category of translation crowdsourcing which is of interest to the present research, further focusing on the technology facilitating collaborative translation in each case.

#### **2.4 Technology and Collaborative Translation Online**

As the Web has provided a platform for user collaboration in the creation of online content, not infrequently for commercial purposes, the incorporation of advances in technology in the translation industry is considered to have had the most noticeable impact on the growth of the number of online translation initiatives carried out by Internet users (Cronin 2010, 2013, Désilets 2011, O'Hagan 2013). The most significant of these have been the extensions to translation technologies now commonly referred to as Computer-Aided Translation (CAT) tools, whose purpose is to maximise the productivity of human translators performing the core translation tasks (Hartley 2009: 107). As indicated by Hartley (*ibid.*), various other technologies are further available to complement CAT tools and support management and sharing of the content that needs to be translated. They serve as a 'platform' providing the infrastructure for the translation proper to happen (Hartley *ibid.*).

Traditionally developed with professional translators in mind, translation technologies have become accessible on the Internet where they are offered to Internet users to support a variety of collaborative translation-related activities (Désilets 2011). Désilets and van der Meer (2011) identify a number of infrastructures available online, for example, agile translation teamware for collaboration of professionals on translation tasks, the use of Wikipedia-like platforms for terminology management, or purpose-designed platforms for translation memory sharing, post-editing of MT output by the crowd and also translation crowdsourcing. Many of these technologies are available for free, such as the platform for sharing translation memories developed by the Translation Automation User Society (TAUS), open source translation management systems (e.g. GlobalSight<sup>17</sup>), open source translation memory tools (e.g. OmegaT<sup>18</sup>), or platforms combining translation memory tools with MT engines (e.g. Google Translator Toolkit<sup>19</sup>). Désilets and van der Meer (*ibid.*) further note that the emergence of new forms of collaborative translation online is not so much about the use of completely new technological solutions in translation but it is rather a result of the incorporation of existing groupware technologies on a much greater scale with

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<sup>17</sup><http://www.globalsight.com/> [last accessed 6 November 2013]

<sup>18</sup><http://www.omegat.org/> [last accessed 6 November 2013]

<sup>19</sup><http://translate.google.com/> [last accessed 6 November 2013]

larger groups of people who may be complete strangers yet who come together to accomplish a given task in collaboration.

Kelly et al. (2011) indicate a profound change in the translation industry brought about by the emergence of virtual, web-based work environments and the growing presence of online communities. The translation processes employed by private-sector language service providers have been changed to exploit collaborative and community-based translation models. In such translation work environments the parties involved in a translation process – project managers, translators, proofreaders and editors – form a community interacting in real-time and simultaneously performing their individual tasks. As emphasised by Kelly et al. (ibid.), Web 2.0 has offered infrastructure for asynchronous and remote workflow enabling more extensive and reliable collaboration in translation practices. Translation communities have at their disposal technologies which facilitate collaboration in support of instantaneous communication, exchange of information and sharing of resources which helps with real-time consultations, solving of queries and quality control. Translation memory and automated translation tools are no longer bound to individual computers but are accessible on the cloud. This is purported to lead to much faster and significantly more efficient translation workflow (Kelly et al., ibid.).

Clark (2010) investigated a number of online collaborative translation environments such as the Facebook translation application, Google Translator Toolkit, Minna no Hon'yaku and Lingotek. She pointed out how these environments differ in the design of the site serving as the translation premises, the translation set-up and the features facilitating collaboration in translation and motivation of the contributors. As some may have specific products for which translation is sought, others can simply facilitate upload and translation of texts by many users working together. However, Clark (ibid.) further emphasised that the purpose of enabling collaborative translation is common for all the environments.

Babych et al. (2012) refer to the systems designed specifically to support all aspects of distributed collaborative translation projects as collaborative translation platforms. These platforms offer access to all or some of reference resources such as translation memories, terminological databases and MT engines further incorporating features for translation management and building of communities of the contributing translators. Consequently among features common to collaborative translation platforms, Babych et al. (ibid.) identify messaging systems and discussion boards facilitating communication between the contributors, systems for progress-tracking, allocation of tasks and recognition of individual translators' contributions.

Organisations applying the crowdsourcing model to obtain translations from Internet users have been incorporating the available online translation technologies as well as developing their own purpose-built platforms to facilitate collaborative translation practices most suited to the particular requirements of their translation crowdsourcing projects. Examples here include (1) Ryugakusei Network @ Minna no Hon'yaku, (2) Evernote Translation Program, (3) Twitter Translation Center and (4) Adobe Translation Center as well as Facebook which all maintain their respective translation crowdsourcing initiatives with the use of collaborative translation platforms. The next section looks into the platforms supporting crowdsourcing efforts in the four initiatives (1-4). The platforms have been selected based on the similarity between the initiatives they facilitate and the initiative of Facebook translation crowdsourcing: the platforms are offered for the use by a community of Internet users, by and large users of the translated product, while the initiative organiser is a profit-making company. Specifically, the section aims to highlight the differences in features supporting communication and collaboration among the contributing user-translators to compare what translation practices look like when performed collaboratively by Internet users in each distinct crowdsourcing scenario. The translation crowdsourcing initiative organised by Facebook serves as the case study in the present research and is described in detail in Chapter 3.

## 2.5 Collaborative Translation Platforms in Translation Crowdsourcing

### 2.5.1 Ryugakusei Network @ Minna no Hon'yaku

Ryugakusei Network @ Minna no Hon'yaku<sup>20</sup> (RNMNH) has been operating since March 2010 as a commercial project, a spin-off of Minna no Hon'yaku<sup>21</sup> (MNH). MNH was launched in April 2009 as a translation hosting and translation-aid service with non-governmental organisations as the primary users in mind (Kageura et al. 2011). Available from the main MNH translation portal (see Figure 2.1) is the MNH translator platform which incorporates the translation editor, QRedit, with built-in dictionaries.



Figure 2.1 The home page of Minna no Hon'yaku

MNH service is available to anyone who registers via the MNH portal. Registered users obtain access to the translator platform where they can search through the available documents to provide their translations or request translation of a document from other MNH community

<sup>20</sup> <https://en.ecom.trans-aid.jp/> [last accessed 6 November 2013]

<sup>21</sup> <http://en.trans-aid.jp/> [last accessed 6 November 2013]

members. RNMNH utilises the MNH translator platform and Qredit editor to provide clients requesting translation with a service performed by foreign students residing in Japan (Kageura et al. 2011). In order to register with RNMNH, the students need to pass a proficiency test and they are paid for their work depending on its quality (but significantly less than what is offered by Japanese translation agencies). As of 2011, 489 translators were registered at RNMNH (Kageura et al. 2011).

As specified by Kageura et al. (ibid.) the translation system on RNMNH provides more social-networking and community-making functions than the original MNH translation platform, offering access to Facebook and Twitter to its users. Additionally, a phrase-based statistical machine translation engine developed by the Japanese National Institute of Information and Communications Technology (NICT) is incorporated into the platform and may be used to support the translation process. Kageura et al. (ibid.) specify that users can register their own linguistic resources in the system such as terminology databases and parallel texts, organise into groups to work on individual projects, communicate with other group members (via a messaging system and bulletin board), share among each other their translation tasks, reference materials and other documents as well as the ability to compare different versions of translations. MNH supports translation between any two of English, Japanese, Chinese, Korean and German and additionally from English into Catalan.

After the translator specifies the language pair for their current translation project they load the QRedit translation editor, which is the main translation interface where the content for translation is displayed once a document is uploaded into the system (Figure 2.2).

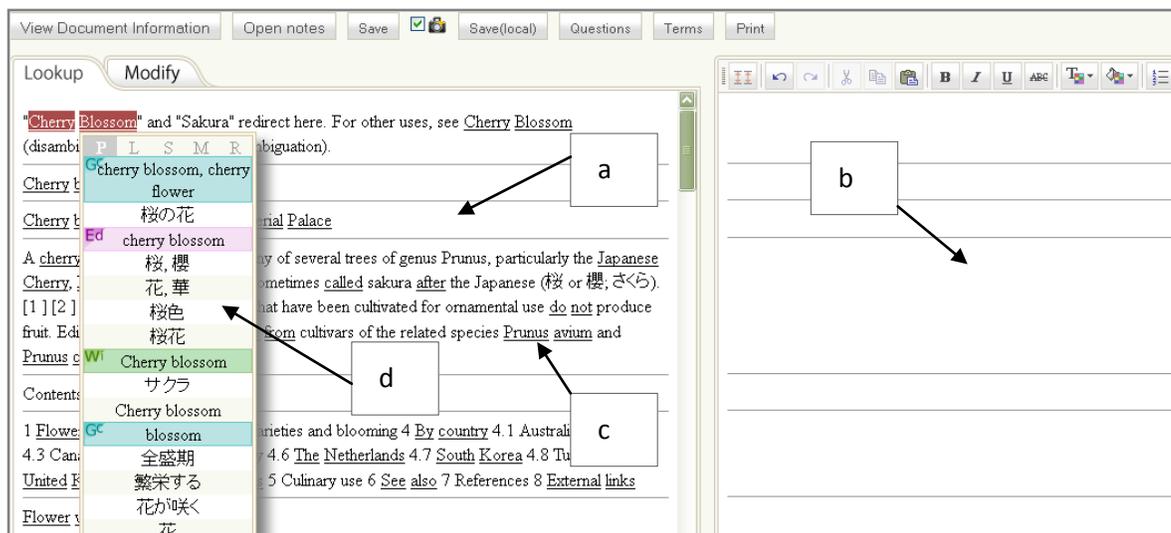


Figure 2.2 QRedit translation editor of Minna no Hon'yaku platform

In the QRedit, the URL of the website containing the text for translation is entered for the system to process and prepare it for translation. As shown on Figure 2.2, the source text is segmented into paragraphs and displayed in the original text field panel (see selection a in Figure 2.2) and the translation is to be provided in the translated text field panel (selection b). A number of resources can be looked up directly from the editor during the translation process, including the user's own linguistic resources such as lists of term translations uploaded earlier, and the reference material provided by MNH. The system also connects to Wikipedia as well as Google search engine.

The QRedit editor is supported by a special module, which automatically extracts keywords from the input text. For example, for Japanese-English and English-Japanese translation, the system searches for translation suggestions in the existing bilingual aligned texts, such as those available from the databases of Amnesty International Japan, Democracy Now! Japan or Japanese-English News Article Alignment Data, Wikipedia and bilingual dictionaries. In the original text the system underlines what have been recognized as idioms, phrases, technical terms, etc. (see selection c in Figure 2.2). Some phrases are highlighted when pointed at with the mouse; these are compound terms which should not be translated individually but must be translated as whole phrases.

However, the help documentation<sup>22</sup> indicates that the linguistic analysis of the source text in QRedit is automated and may not always be precise.

The system also searches for translations of any selected source text word in all of the available linguistic resources. By clicking on a word or phrase in the original text, a pop-up window opens where all the available translations and definitions of the selected word are listed (see selection d in Figure 2.2). The translations found by the system can be directly copied and pasted into the target text panel. An online search for the selected word via Google or Wikipedia may be requested as well. The translator may also register a new word or phrase as a term to be stored in the MNH termbase to serve as a reference for future users of the platform. This termbase can also be searched while translating.

It is possible for a group of translators to work together on a document in MNH. One of the translators acts as a moderator and forms a group by selecting the translators he or she wants to work with. Once the moderator uploads a document for translation, they need to give permission to other group members to work on the text, translate and edit it. However, only one person can edit the text in QRedit at one time. The translators have at their disposal a messaging system to communicate with one another individually or within the group as a whole. For the purpose of communication, the group can also create their own bulletin board. MNH features also a system which allows the translators to ask questions – either within the whole community or within one selected group of translators.

### *2.5.2 Evernote Translation Server<sup>23</sup>*

Evernote is a popular free software application for archiving different types of digital content such as text, web pages, photographs or voice memos. The basic version of the software is available for free but is supported by advertising and is limited in terms of the amount of data which can be uploaded and archived in a given month. An additional storage capacity may be purchased after upgrading to Evernote Premium. The software was developed in English and Russian in 2008. In 2009, Evernote Translation Program was launched with the initial objective to translate the software into four additional languages: French, Italian, German and Spanish. As of November 2013, the translation is ongoing in 52 languages<sup>24</sup>. The technological solution adopted by Evernote

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<sup>22</sup><https://en.ecom.trans-aid.jp/> [last accessed 6 November 2013]

<sup>23</sup><http://translate.evernote.com/> [last accessed 6 November 2013]

<sup>24</sup><https://translate.evernote.com/availability/evernote/> [last accessed 6 November 2013]

and serving as a platform for their translation crowdsourcing initiative is Pootle<sup>25</sup>, a free online application for crowdsourcing translation. It offers translation user interface which Evernote embedded in the dedicated Evernote Translation Server website. On the website, a user-translator can browse through the Evernote content requiring translation which is divided into separate projects and files referring to different features and services available in Evernote as well as versions of Evernote operating on different platforms and operating systems. To become an approved translator it is necessary to contact Evernote with a request specifying one's relevant translation experience. The requests are reviewed and the approvals are granted at the discretion of Evernote. User-translators unapproved by Evernote can only suggest translations while approved translators have the right to submit their own translations and review translations provided by others.

After selecting a file for translation, the user-translator is redirected to the translation editor where the translation takes place (Figure 2.3).

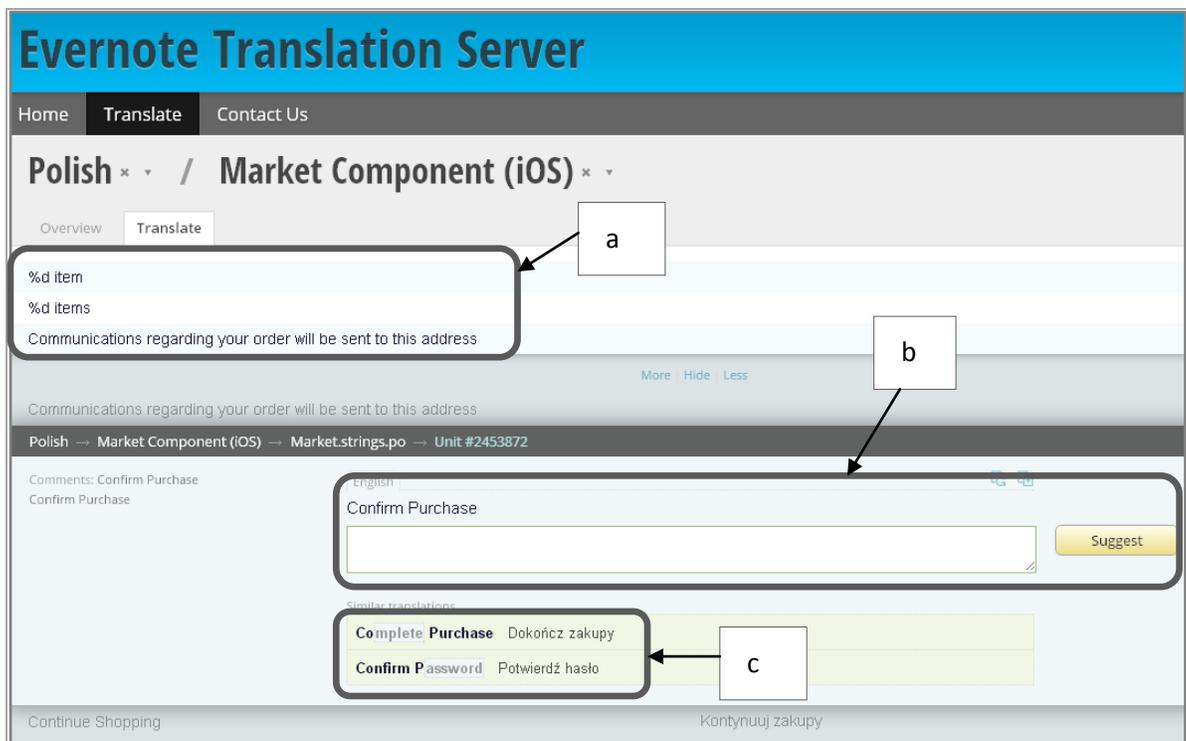


Figure 2.3 Translation editor of Evernote Translation Server

<sup>25</sup><http://pootle.translatehouse.org/> [last accessed 6 November 2013]

The content for translation is divided into strings, which are short segments of text, usually individual sentences. In the editor, all the strings in the given file are displayed (see selection a in Figure 2.3). Thus the user-translators do not translate individual strings out of context but can control their translation by referring to the strings preceding and following the string they want to edit. Translation of a selected string is suggested in the specified translation field (see selection b in Figure 2.3). If translations for segments similar to the selected one had already been provided by other user-translators, they will be displayed as translation suggestions for the edited string. The difference between the edited string and the suggestions retrieved from the existing translations is marked (see selection c in Figure 2.3) with the exact same text fragments displayed in bold and the different fragments being greyed out. Some additional information about the context in which the segment appears may be also provided.

The translators approved by Evernote can flag string translations as ‘fuzzy’ if they are unsure whether the translation is correct. They can also comment upon individual strings and in this way inform other involved user-translators working on the same file about some specific aspects of their translation. The translation editor is interconnected with Google Translator Toolkit (GTT), which provides MT for a segment at the request of the user-translator. Additional feature allows copying the original text into the translation field, which may be helpful with translating strings with many HTML tags. Furthermore, these tags are displayed in brown font colour and are interactive – once clicked with the mouse they are automatically pasted into the translation field.

Evernote identifies 100<sup>26</sup> user-translators as approved translators but contributions are provided by many more individuals. Evernote maintains simple statistics specifying top contributors in a given project, in a given language and also across all languages. Each user-translator has their own profile page where their contribution is specified including the number of translations suggested and accepted. The user-translators can share their opinions or concerns about the initiative of Evernote translation with Evernote’s localisation managers. An online contact form is available from the Evernote Translation Server website.

### *2.5.3 Twitter Translation Center<sup>27</sup>*

Twitter Inc. launched Twitter Translation Center in 2011 with the aim of translating the main user interface of their social networking service and micro-blogging service, Twitter, which facilitates

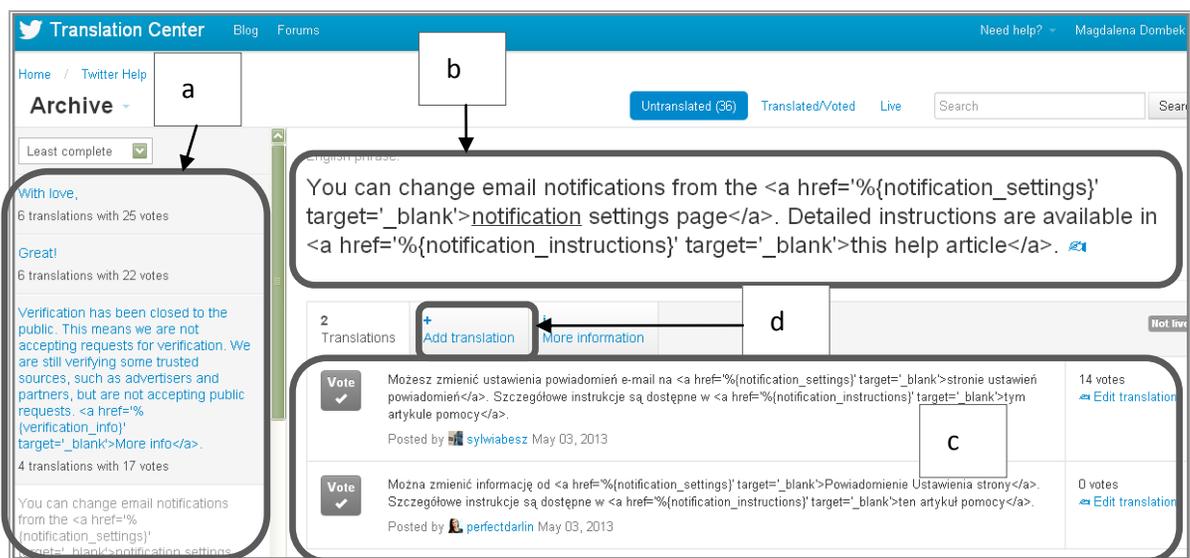
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<sup>26</sup><https://translate.evernote.com/pootle/pages/credits/> [last accessed 6 November 2013]

<sup>27</sup><https://translate.twitter.com/home> [last accessed 6 November 2013]

communication through 140-character long messages known as tweets. French, Indonesian, Italian, German, Japanese, Korean, Russian, Spanish, and Turkish were the first languages into which translation was requested from the online community of Twitter users. To facilitate the process, Twitter developed their own online collaborative translation system embedded into the Twitter Translation Center website. Any of the registered Twitter users may contribute to the translation initiative in their selected language.

In the system, the content for translation is divided into projects referring to particular Twitter features and platforms on which the service functions. Once a user-translator selects the content they are interested in translating, they are redirected to the translation interface (Figure 2.4).



**Figure 2.4 Translation interface in Twitter Translation Center**

The translation interface is divided into two panels. On the left-hand side all strings in the selected project are displayed (see selection a in Figure 2.4). Usually they are short commands and notification messages in the form of sentences, presented in a random order. On the right-hand side a string selected for translation appears (see selection b in Figure 2.4). A user-translator may vote on the available translations (to indicate that they approve it), edit these translations or provide their own, new translations for untranslated strings. If a similar string was translated in the past, the system will retrieve it as a suggestion for the translation of the edited string. Together with the suggestion, the username of its author is specified (see selection c in Figure 2.4). A user-translator may edit a selected suggestion or click 'Add translation' (selection d in Figure 2.4) to provide their own translation.

Some words in a string selected for translation may be underlined. This means that they have been recognised as terms; their definitions (in English) and translations are provided in a pop-up window displayed once the mouse is hovered over the underlined word. All the terms are listed together with their translations in glossary maintained individually for each language. Additional information about a string may be provided specifying the context in which a given string will be used or when it was added for translation. Some strings are further accompanied by a screenshot representing how they appear in the environment of the Twitter user interface. The Twitter translation initiative is supported by a forum where the Twitter translators can discuss Twitter translation into their respective languages as well as post general queries about the initiative or suggest new features for the Translation Center. A translation blog is also written by Twitter representatives overseeing the translation initiative. They use this medium to inform the user-translators on the progress with the initiative or communicate any other news related to Twitter translation, although the updates are posted very infrequently (two to three posts per year).

Each contributing user-translator has their own translator profile on Twitter where their achievements and recent activity are listed. Badges are offered to mark significant achievements and the top contributors are also listed on a leaderboard.

#### *2.5.4 Adobe Translation Center<sup>28</sup>*

Adobe began their translation crowdsourcing efforts in 2010 with volunteers translating Adobe documentation into Chinese. To this end Adobe leveraged cloud-based translation management system developed by Lingotek<sup>29</sup>, which offered the features of translation memory, terminology and translation voting (Yunker 2010). Since then Adobe has expanded its crowdsourcing efforts resulting in the launch of two translation projects: Adobe TV Community Translation and Adobe Translation Center. In the former, translations of videos uploaded by Adobe online are requested. The videos are promotional materials and tutorials for Adobe products. For this project, Adobe utilises dotSUB<sup>30</sup> as a platform for translation and rendering of multiple language video subtitles (Figure 2.5).

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<sup>28</sup><https://translate.adobe.com/adobe> [last accessed 6 November 2013]

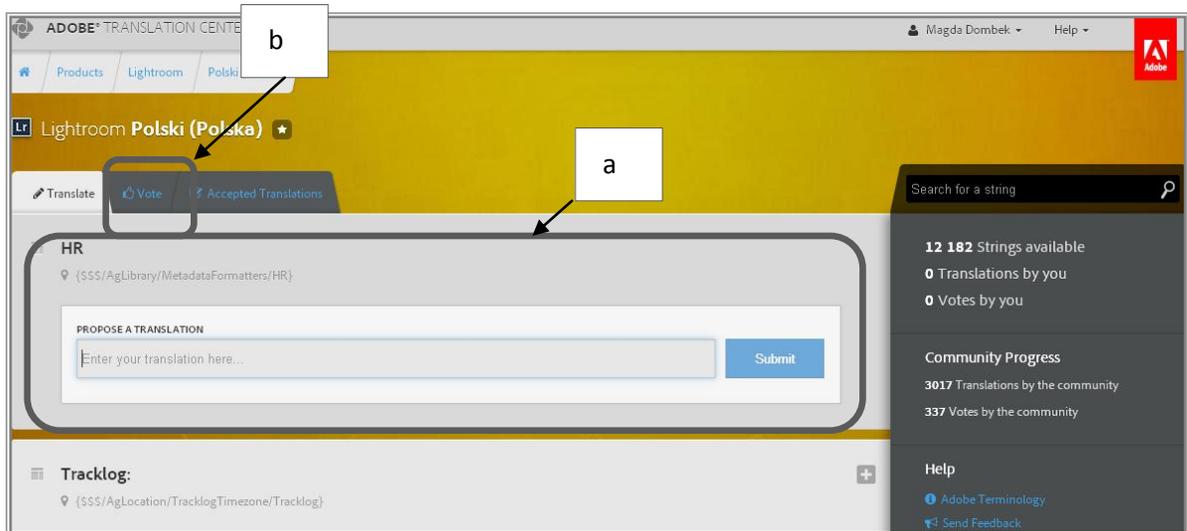
<sup>29</sup><http://www.lingotek.com/> [last accessed 6 November 2013]

<sup>30</sup><http://dotsub.com/> [last accessed 6 November 2013]



**Figure 2.5 Adobe video displayed for the translation of subtitles in dotSUB**

Adobe Translation Center was created in 2012 to support the processes of translating user interfaces of Adobe products. Only some Adobe products are released in languages other than English. Adobe translation community provides translation for in-demand languages which are not delivered with Adobe products by default such as Polish, Romanian, Turkish, Ukrainian or Vietnamese. The translation crowdsourcing organised by Adobe thus has the potential to increase the company's market penetration. The community can also access the official translations provided by Adobe, review them and improve if necessary. The content for translation is categorised by product in the Translation Center. A translator selects the product they are interested in and is redirected to the translation interface where the strings for translation are displayed. The translator can either provide new translations (see selection a in Figure 2.6) or switch view and vote on the translations provided by others (see selection b in Figure 2.6).



**Figure 2.6 Translation in the Adobe Translation Center**

For each of the translated products Adobe provides language-specific leaderboards, where for each of the participating user-translators the number of all their translations, accepted contributions and votes is specified. The community also has a dedicated Facebook page and a Twitter profile so that the communication between the individual contributors and the Adobe Translation Center team can be maintained. Adobe also provides an email address through which the user-translators can send their feedback on the initiative of Adobe translation. The community translators are assisted by “professional translators or moderators” (Meyer 2012), who approve translations submitted by the community.

### *2.5.5 Collaborative Translation Platforms - Summary*

This overview of translation crowdsourcing initiatives illustrates that the incorporated translation platforms differ in how they operate and in what functionalities they offer depending on the organisers and the nature of the particular translation initiative which they support. The characteristics of the content for which translation is requested and the communities of Internet users it involves as translators influence how a given platform or system displays the content for translation, how it handles submitted translations and what additional attributes it offers to provide for optimal quality and efficiency of the translation process. The QRedit editor in MNH and RN@MNH offers the most extensive access to reference resources including built-in dictionaries, connection to an MT system as well as Google and Wikipedia search features built into the editor. While in the case of Twitter translation the user-translators have at their disposal an internal

glossary, the platforms supporting the translation of Adobe and Evernote do not offer any built-in reference resources, although Evernote Translation Server is interconnected with GTT.

While the MNH platform provides the community of user-translators with an internal messaging system, a bulletin board and access to Twitter, such communication channels are neither part of the Adobe nor Evernote translation platforms. The community of Adobe user-translators is invited to use external services such as Facebook and Twitter to interact with other members and the Adobe Translation Center, while the contributors of Evernote translation initiative do not have any specific channel for communication provided. However, a commenting feature is available to Evernote user-translators with reviewing rights and an online form enables the communication between individual contributors and the Evernote localisation team.

The translation platforms and systems incorporated into the processes of translation crowdsourcing form a user interface and are to a large extent responsible for the overall workflow in the given translation initiative they support. What becomes apparent is that the functionality and usability of a particular technology facilitating translation crowdsourcing is likely to play a significant role in defining the actions that are undertaken by the actual users of this technology and subsequently, has an impact on all the translation-oriented activities that the user-translators are enabled to undertake in the given translation crowdsourcing initiative. This emphasises the need to recognise the influence that the design of a technological solution for online collaborative translation may have on the nature and the outcomes of the translation efforts in translation crowdsourcing initiatives employing such technological solutions. The perception of the translation crowdsourcing initiative may also be affected, influencing further participation patterns and decision whether and to what extent to contribute to a particular translation crowdsourcing initiative. With this in mind, it becomes self-evident that the design of a collaborative translation technology employed in a given translation crowdsourcing initiative is likely to impact on the motivation of the contributing user-translators to contribute to a particular initiative.

## **2.6 Concluding Remarks**

Based on the literature review on crowdsourcing and its application to translation, this chapter identified translation crowdsourcing as a distinct practice of online collaborative translation provided at the request of a for-profit entity. The working definition of translation crowdsourcing established in this chapter has allowed the research domain to be precisely specified and guide

the discussion to follow. This chapter further emphasised the role of Web 2.0 as a provider of technological advances facilitating translation crowdsourcing and described a number of translation crowdsourcing initiatives. The aim here was to draw attention to the collaborative translation platforms enabling translation activities in each of them and to identify how these initiatives differ depending on the functionalities of the incorporated translation platform.

The present research aims to focus on the motivation for Internet users to contribute to translation crowdsourcing initiatives for for-profit organisations. It further asks whether and how translation technologies may affect motivation. To this end, the particular case of translation crowdsourcing organised on Facebook is investigated. The community of Facebook user-translators working on Facebook translation into Polish is studied as well as the Facebook-specific translation technology developed explicitly for this purpose. The next chapter describes in detail how Facebook has adopted the crowdsourcing model to obtain translation from its users, providing an insight into the design and functionality of the Facebook application as the core technology behind the translation actions on Facebook.

## Chapter 3 Facebook Translation Crowdsourcing

This chapter describes the mechanism developed by Facebook specifically to enable translation of its social network website by its users themselves. The *Translations* application as the translation environment on Facebook is explained together with its features and components. These are considered from the perspective of (1) how they facilitate online collaborative translation and (2) how they shape the translation actions of the contributing user-translators. The specifications are based on the official patent application filed by Facebook with regard to their “computer implemented method of translating text in a social network” (Wong et al. 2008). More detailed information on the characteristics of the translation actions on Facebook was gained through the researcher’s own experience of using *Translations* and observation of how the application evolved throughout the duration of this study. The translation environment on Facebook is dynamic with the *Translations* application and its features being constantly modified. Furthermore, the changes are typically not communicated in advance by Facebook directly to the user-translators who therefore would often be surprised to discover that a feature was added, changed or completely excluded from the application. Starting with how the initiative of Facebook translation crowdsourcing has emerged, this chapter covers the specific elements and features of the *Translations* application enabling Facebook users to perform translations. The elements which are critical to the collaborative aspect of Facebook translation will be described in more detail, as well as those supporting communication and providing support throughout the translation process. The screenshots assisting the discussion in this chapter have been obscured in order to ensure that no personal information is visible.

### 3.1 Translation Crowdsourcing by Facebook

When launched for the first time in 2004, Facebook was available only in English. Once opened to the global audience of Internet users in 2006, Facebook was first adopted in English-speaking countries. The popularity of the service was however on the rise, reaching over 50 million active users worldwide in October 2007. As statistical data indicates (Smith 2008a), over 40 million new users have joined Facebook since its translation initiative was launched in early 2008 and different language versions of the website became available.

Facebook has been one of the very first companies to successfully introduce crowdsourcing for the translation of its online service. Employing the innovative concepts and affordances of Web 2.0,

the company designed a translation module integrated into a purpose-built platform, which has enabled collaborative translation of Facebook into numerous languages by the users of the service. The initiative started with a community of 1,500 Spanish-speaking Facebook users who, after only four weeks of translation work, produced a Spanish-language version of Facebook which was released online soon after, in early February 2008 (Arrington 2008). German and French versions followed soon after. In April 2008, Facebook opened their translation initiative to 22 new languages, including Polish (Smith 2008b). Just one month later, in May 2008 the Polish version was made officially available to users around the world (Burcher 2008).

Following this success, and in response to the demands made by Facebook users (Little 2008), Facebook has been requesting users of their service to produce as many of its language versions as possible. Invitation messages to join the initiative and contribute to the Facebook translation were being posted to the individual users' Facebook profiles. At the time of writing (August 2013), the initiative is open to over 104 different languages (including varieties and dialects). For each of these languages, Facebook has a dedicated community of user-translators providing them with an environment where they collaborate on translating into their selected language.

In 2009, Facebook decided to obtain a patent for their method for procuring translation in a social network. As detailed in the application submitted by Facebook to the United States Patent and Trademark Office (Wong et al. 2009), the company has developed its own translation module to enable translation of a social networking site by its users. On Facebook, the module is embedded in the *Translations* application which, as any other Facebook application, needs to be installed to a user's Facebook profile in order to recognise them as a contributor to the translation crowdsourcing initiative on Facebook.

As already mentioned, documenting Facebook's crowdsourcing initiative is likened to chasing a moving target. At Facebook's own f8 conference held in September 2011 in San Francisco, Mark Zuckerberg announced a major revamp of the whole Facebook service, introducing its new elements such as Ticker or Timeline (Lowensohn 2011). He explained the changes as a part of the ongoing efforts to meet the needs of the current and future users and to improve their overall experience of using Facebook (Zuckerberg 2011). Even though Zuckerberg did not mention *Translations* in his keynote speech, in early November 2011 a new redesigned version of the application was introduced. While some of the application's existing features were removed or temporarily disabled, new ones were also offered and the processes of translation continued uninterrupted. As a consequence, the descriptions provided in this chapter provide an account of

the features of *Translations* which were operational in the time period October 2011 – June 2012, when the application was studied for the purpose of the current research.

The functionality of *Translations* is discussed with regard to its use for the purpose of Facebook translation into Polish by the Polish community of Facebook user-translators. Nevertheless, *Translations* has been developed as a ‘global’ application and designed to facilitate translation of Facebook into any language of the world. Thus to a large extent the application looks and operates in the same way for all Facebook users who have it installed to their profiles, regardless of their selected language preferences. However, as the example of Facebook translation into Polish indicates some aspects of how individual components of the application function had to be tailored specifically for individual languages. These language-specific features will be indicated and explained in the discussion below in the context of Polish language.

### *3.1.1 Translation Module*

The translation module (Wong et al. 2008) is the main mechanism behind the translation activity in Facebook translation crowdsourcing. The module operates to present the Facebook user-translators with the source text phrases for translation and to receive from the user-translators their translations of these phrases. It also identifies text content that requires translation and additionally operates a voting module and weighting module for the evaluation of translations provided by the user-translators.

The text content for which translation is required includes commands, menus, toolbars, instructional text, button labels as well as text describing other objects that are part of the infrastructure of Facebook or additional applications that can be installed there (Wong et al. 2009).

The user-translators on Facebook mainly interact with the purpose-built collaborative translation platform, which is the main element of the *Translations* application and operates as the user interface (UI) of the translation module for the input of translations and votes by the user-translators (Figure 3.1). The in-line translation mode is an alternative method which allows users to translate strings directly in context of the Facebook UI while engaged in normal activities on the site. It operates the same translation module as the collaborative translation platform (see section 3.2 for more details on the in-line mode).

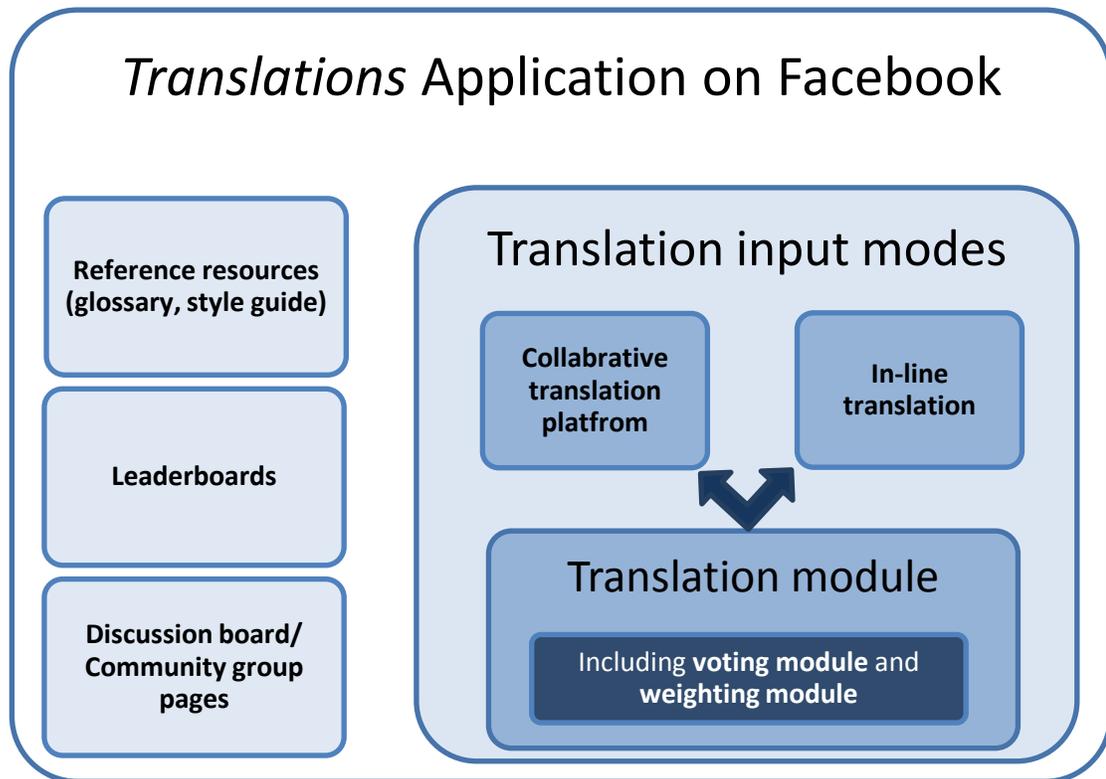
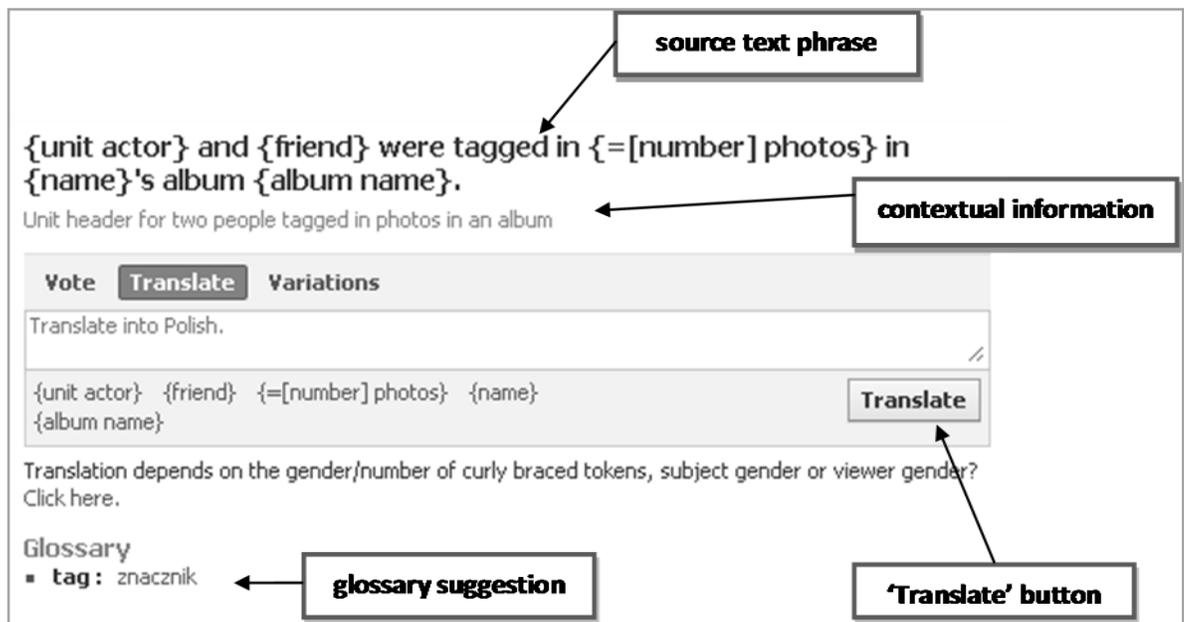


Figure 3.1 The components of the *Translations* application on Facebook

The collaborative translation platform displays the text that requires translation in the form of short phrases or sentences – also known as strings<sup>31</sup> (see Figure 3.2). The strings are listed randomly so that one string is not in any way related to the previous or following ones. The translation is inserted into the space provided and submitted by clicking on the ‘Translate’ button (Figure 3.2). As shown in Figure 3.2, some contextual information about a string may be provided to help with its interpretation.



**Figure 3.2 A string for translation displayed from within the Facebook application on Facebook**

The same original string may also be concurrently displayed to other user-translators working in the same language and several translations may be generated in parallel for one string. All the submitted translation suggestions are collected from different user-translators and stored in the translation module.

<sup>31</sup> In software localisation, the term string is used to refer to fragments of text which are embedded in software and need to be translated (see, for example, Esselink 2000: 21).

The voting module facilitates the translation evaluation procedure, which is based on a two-score system, i.e. a user-translator either votes for a translation by selecting the 'vote up' button, or votes against it using the 'vote down' button, depending on how he or she perceives its quality (see Figure 3.3).

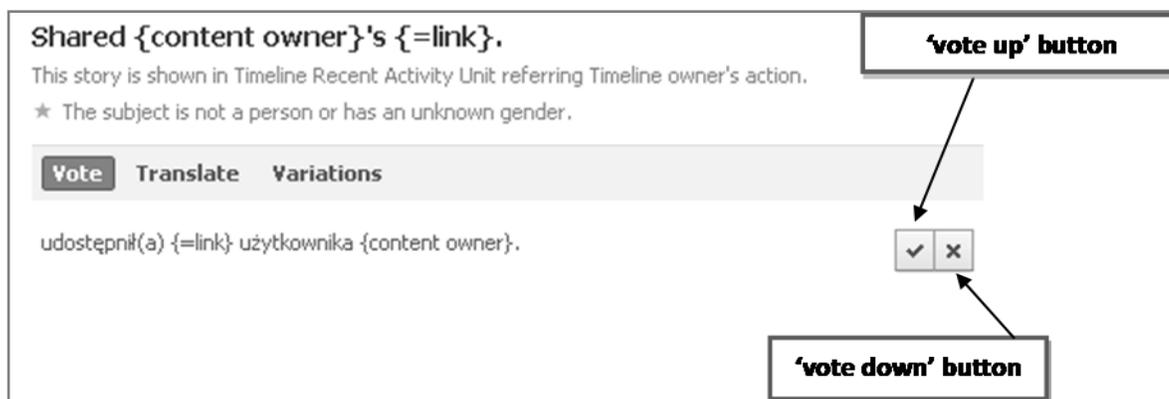


Figure 3.3 A string presented for voting

The weighting module assigns values to the collected votes and calculates the quality score for the translations based on the credibility of the voting user-translator. The credibility of the voter is determined by the quantity and quality of translations and/or votes that he or she has submitted previously.

### 3.1.2 Features of the Translations Application

Previously the *Translations* application used to be accompanied by a dedicated Facebook page through which access to the collaborative translation platform was obtained. This is no longer the case and once installed to a user-translator's profile, *Translations* is listed among other applications he or she may use on Facebook. After a user-translator selects *Translations*, he or she is presented directly with the UI of the collaborative translation platform occupying the central part of the screen where all the strings – both those available for translation and for voting – are displayed. The *Translations* application operates from within the regular environment of the Facebook social network. As a consequence, the user-translators performing translation actions at the same time receive live updates on the activity of their Facebook friends and can also engage in social activity on Facebook themselves.

The panels displaying on Facebook live updates on the activity of others as well as specifying friends available to chat at a given moment are located just opposite the interface of the collaborative translation platform where strings for translation are listed, as shown on Figure 3.4.

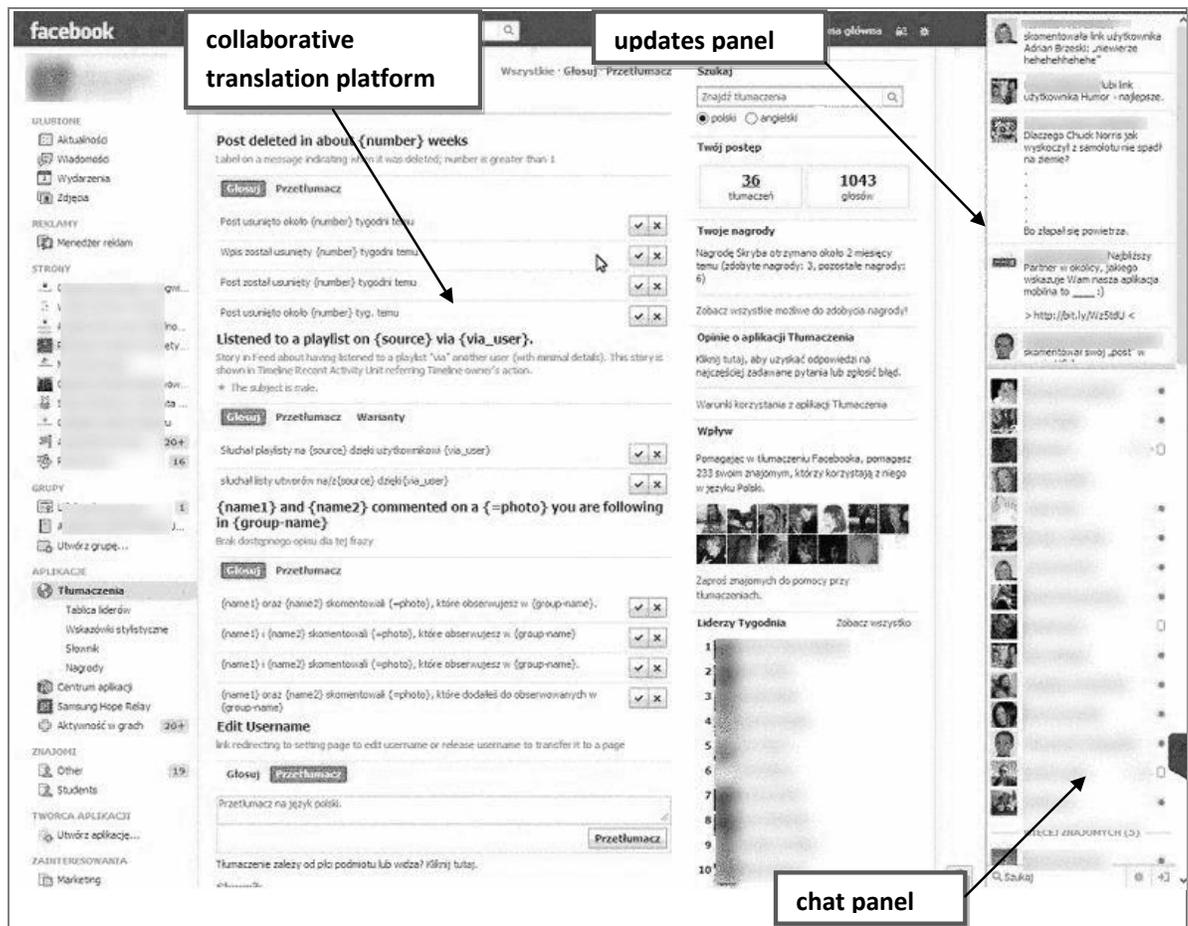
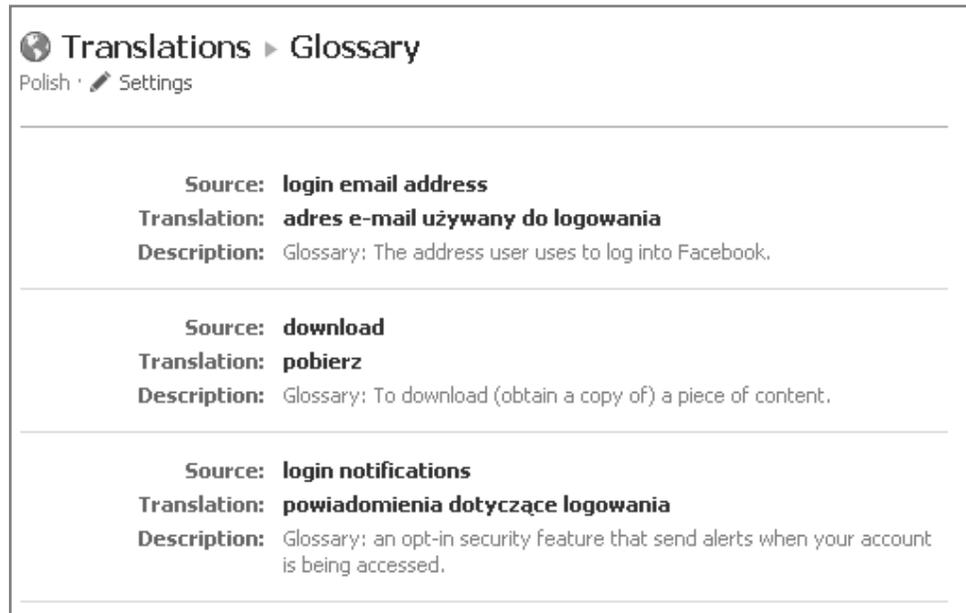


Figure 3.4 Translation environment on Facebook

It is possible to filter the strings listed in the collaborative platform so that only those for which translation is requested or only those which need to be voted on are displayed. The user-translators can scroll through all the available strings and translate (or vote on) them selectively. This is a key aspect of translation crowdsourcing, differentiating these practices from commissioned professional translation work where there is no freedom to select content for translation. A search function also allows for specific strings to be found, for example, containing a particular word or phrase. This enables the user-translators, for example, to apply global changes by substituting all the instances of a particular term across the existing translations.

Facebook has equipped the *Translations* application with a number of additional features which support the user-translators in their efforts and provide them with feedback on their work. These

include a glossary (Figure 3.5), which supports consistency while working with strings containing words recognized as terms, and also a set of stylistic guidelines (Figure 3.6) written individually for each language.



The screenshot shows a web interface titled "Translations > Glossary" with a "Polish" language indicator and a "Settings" link. It lists three glossary entries, each with a source term, a Polish translation, and a descriptive note.

Source	Translation	Description
login email address	adres e-mail używany do logowania	Glossary: The address user uses to log into Facebook.
download	pobierz	Glossary: To download (obtain a copy of) a piece of content.
login notifications	powiadomienia dotyczące logowania	Glossary: an opt-in security feature that send alerts when your account is being accessed.

**Figure 3.5** An excerpt from the glossary listing original English terms with descriptions and their Polish translations

Translations ▶ Style Guide  
Polish · Settings

## Witamy w Przewodniku dobrego stylu dla języka polskiego na Facebooku

Jest to miejsce, gdzie zasady dobrego stylu, przyjęte przez wspólnotę polskich tłumaczy, mogą zostać ujednolicone w taki sposób, aby tłumacze byli ich świadomi podczas tłumaczenia.

Zachęcamy do rozwijania przewodnika. Najlepsi tłumacze z polskiej społeczności na Facebooku (20 najlepszych z tablicy liderów), mają uprawnienia do jego edycji. Wszyscy członkowie społeczności mogą umieszczać swoje pomysły do przewodnika na forum dyskusyjnym.

**Porady językowe** ← 'Linguistic guidelines'

**Stosowanie polskich liter** ← 'The use of'

W tłumaczeniach należy stosować polskie znaki diakrytyczne.

**Odmiana słowa Facebook** ← 'How to decline the word'

Nazwę Facebook należy odmieniać według poniższego wzorca odmiany:

- M. Facebook
- D. Facebooka
- C. Facebookowi
- B. Facebook (a. Facebooka)
- N. Facebookiem
- Ms. Facebooku
- W. Facebook!

**Grzeczność językowa** ← 'Linguistic politeness'

Zaimki zwrotne w tłumaczeniach na język polski należy pisać wielkimi literami, np. „na Twojej Tablicy”, „dodał Cię do znajomych”, ale „na jej stronie”. Podczas tłumaczenia należy zwracać uwagę na rodzaj czasownika/rzeczownika (jeśli nie jest określony w opisie, należy zaznaczyć w formularzu opcję „gender”, aby dostosować tłumaczenie do płci odbiorcy).

Przykład zdania, gdy nie jesteśmy w stanie określić płci osoby, która jest mowa (is not a person or has an unknown gender):  
 „... która dodała(a) do jej/jego wydarzenia.” ← 'Punctuation and the use of symbols in Polish'

**Niektóre znaki interpunkcyjne i specjalne w języku polskim**

**cudzysłów („”) w języku polskim oznaczamy: „tekst” (nie "tekst").** Kod ASCII dla znaku otwierającego („) to alt+0132, a dla zamykającego (”) alt+0148.

**półpauza (a. myślnik) (–)** oznaczana jest w kodzie ASCII przez alt+0150. Nie stawiamy spacji pomiędzy myślnikiem, jeśli stosujemy go do określenia przedziału czasowego (od do).

**dywiz (-)** oznaczany jest krótką kreską (minusem).

**ukośnik (/),** inaczej ciach, slash; łączący pojedyncze wyrazy nie wymaga odstępów po bokach,

Figure 3.6 An excerpt from the style guide for Polish available in the Facebook application

The terms in the glossaries have been suggested by Facebook but their translations have been provided by the user-translators themselves; similarly the stylistic guidelines have been written by the member of the respective language translator communities. Translations are retrieved from the glossary automatically once a word recognised as a term is part of the string which requires translation. A suggestion is displayed below the corresponding string (see Figure 3.2) and, once clicked, it is inserted into the translation where indicated.

The guidelines are available to be consulted at any time during translation. Both the glossary and the stylistic guidelines were not available for the Polish community of user-translators over the first few months after the re-design of Facebook and the whole *Translations* application in November 2011. They were gradually re-introduced – the glossary with a slightly changed layout while the style guide remained the same.

In lieu of any financial remuneration, Facebook acknowledges the user-translators by listing their names on leaderboards and adding ‘awards’ in the form of icons displayed on their individual user-translator profile pages. Leaderboards (Figure 3.7) are rankings of user-translators working in the same language, where the position occupied by a given volunteer translator depends on how active they are and how good the quality of their contribution is according to the evaluation based on peer voting.



**Figure 3.7** An excerpt from a ‘total impact’ leaderboard listing the top 10 Polish Facebook user-translators

For each language, Facebook maintains four different leaderboards with one being updated on a weekly basis, another on a monthly basis and the third one listing the best user-translators of all time. For these three, weights are distinguished between voting and translating (Wong et al. 2008) where a submission of a single translated string is worth more than a single vote, given the greater effort involved in translating. The fourth leaderboard ranks the user-translators depending on the

total impact their contributions have had on the whole initiative. Here the submitted votes and translations are treated equally and their total number is taken into account. Leaderboards are displayed to all the user-translators in the given language community.

Awards (Figure 3.8) are granted on the basis of the number of submitted translations, the number of translated words and also the number of submitted votes. Similarly to the glossary and the style guide, the awards were not available to the translator community immediately after the re-design process in late 2011 but were re-introduced, more than a year later in December 2012. However, at the time of writing, the awards are only visible to their owner as the user-translators' profiles are also private and cannot be viewed by other contributors or the users of Facebook in general. This potentially reduces their impact as a form of recognition of the achievements of a particular user-translator among all the other contributing user-translators.

Translations >
**My Awards**

Polish
Settings

---

**First Translation:** May 10, 2011 at 5:43pm  
**First Vote:** May 26, 2011 at 11:05pm  
**First Award:** June 7, 2011 at 8:07pm  
**Vote Submitted:** 752  
**Last Translated:** November 22, 2012 at 12:20pm  
**Last Voted:** November 22, 2012 at 12:19pm

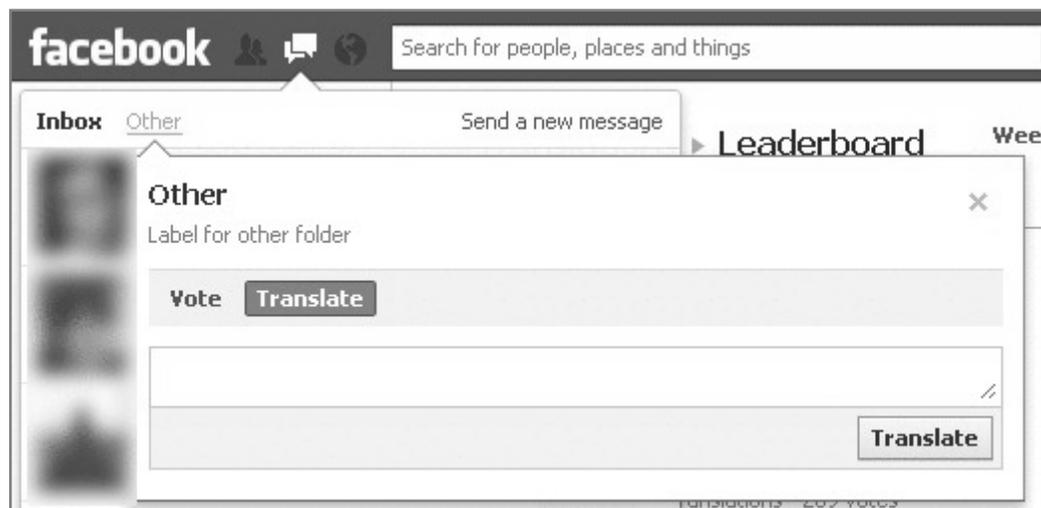
**My Awards**

 <b>Mayor</b> June 7, 2011	 <b>Senator</b> February 2, 2012	 <b>Voting Participation</b> Awards granted for the number of translation votes
 <b>Blogger</b> November 20, 2011	 <b>Translations Submitted</b> Awards granted for the number of translations submitted	 <b>Words Published</b> Awards granted for length of translations submitted
 	 	 

**Figure 3.8** A list of awards for a Facebook user-translator, a member of the Polish community of user-translators

### 3.2 Specificity of Facebook Translation

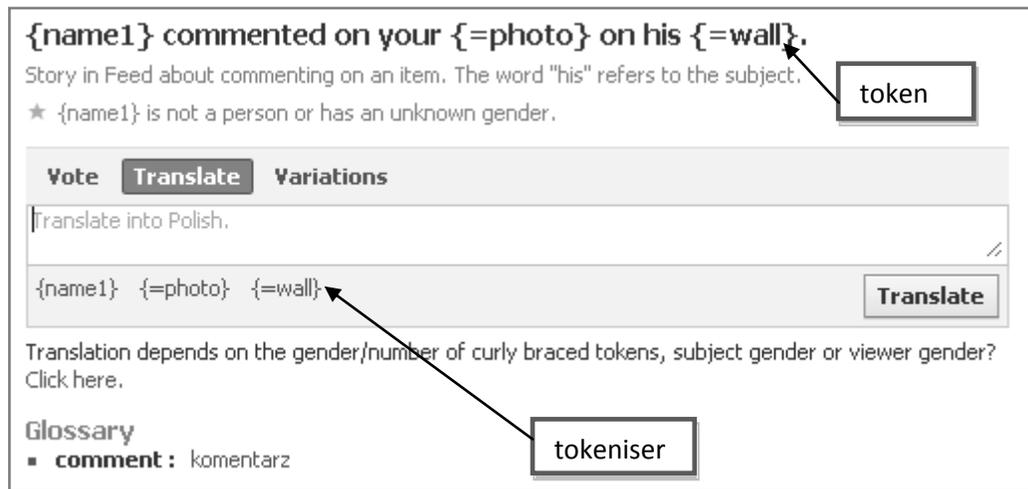
The translation environment on Facebook is dynamic, with the translation module, collaborative translation platform and other features of the whole *Translations* application subject to very frequent change. Between October 2011 and 31 May 2012, while the activity in the community of Polish Facebook user-translators was being observed, the means of providing translation have changed many times. For example, the in-line translation mode was offered to the user-translators in April 2008 (Smith 2008b) as an alternative method allowing users to translate strings while engaged with Facebook for normal activities. In this mode, untranslated UI elements, or elements that are subject to voting are underlined, and, when selected, a pop-up window is displayed where the translation can be provided (Figure 3.9). This allows for the translations and votes to be provided in-context.



**Figure 3.9** A pop-up window displayed by right-clicking a string for translation in the in-line editing mode

With regard to the translation of Facebook into Polish in particular, the functionalities of the translation module were being gradually extended to accommodate for the complexity in the linguistic structure of this highly inflected language. Apart from the specific features of the translation module as a whole, the strings for which translation is required also have a characteristic structure affecting how their translation needs to be provided.

Specific elements which constitute part of a string for translation are called ‘tokens’ (Figure 3.10). They are “placeholders for text” (Wong et al. 2008) which are dynamic components in a given string to be included in the translated phrase when it is displayed to the end user.



**Figure 3.10 A string for translation which contains tokens in curly brackets and their corresponding tokenisers**

In software localization, placeholders – also known as variables – are a common feature; as they are to be replaced at application run-time, depending on the current contextual information (i.e. user input), they should not be translated (see, for example, Esselink 2000:68, O’Hagan and Mangiron 2013: 132-133). Similarly on Facebook, tokens are included in strings to reduce the need to repeat translation of the same, recurring phrase or word referring to a specific concept, feature or functionality on Facebook. Thus user-translators would be asked to leave the word or phrase represented by a token untranslated and just insert the corresponding token itself into their translation in an appropriate position. It is then automatically substituted with its translation stored in the translation module. Below the space into which the translation needs to be provided, tokenisers corresponding with the tokens present in the original string are displayed (Figure 3.10). Once a user-translator clicks on a tokeniser, it is automatically inserted into the translation as a token.

Referring to software localisation and game localisation, Esselink (2000: 73-75) as well as O’Hagan and Mangiron (2013: 132) indicate that placeholders are known to cause problems in some instances. Esselink (2000: 73) offers an example of a string: “This is not a valid %s”, where ‘%s’ is a placeholder. He indicates that depending on what is substituted for the placeholder in this string, the grammatical form of the word ‘valid’ will vary, which may affect its translation. In many

languages the gender of the substituted word will determine the correct translation of this string. Similarly, there is a lot of uncertainty about the correct translation of the string: “Copying %s to %s”, as the two variables can be replaced by many different words further determining how the preposition ‘to’ will need to be translated. Díaz Montón (2007) discusses a similar example of a string with two placeholders “%s” gets a “%d” and specifies that the translation of “gets a” into Spanish depends on the gender and number of the noun substituted for the second placeholder as Romance languages require agreement in the values of grammatical categories (e.g. number, gender) of words in the sentence.

It is thus not surprising that the use of tokens as a feature of the translation module on Facebook turned out to be less functional than intended in the case of Facebook translation into Polish. This is because the assumption that once a single word referring to a specific concept or structure is translated then all its instances can be substituted with the same word form does not hold in Polish. In Facebook translation a similar assumption seemed to be applied to the level of entire strings – it was assumed that for a single string it was possible to select on the basis of voting one ultimate translation for this string. It is often not the case in Polish where translations of strings describing actions need to reflect the number and gender of the subject through the use of different verb forms. On Facebook, the subject would often be represented by a token and therefore the gender would not be specified. Thus, for a Facebook string in English: “{user1} posted a photo”, in Polish two different formulations need to be provided depending on the gender of the subject, which in this case is expressed by the token {user1}:

1. [{user1} is masculine]: {user1} **opublikował** zdjęcie.
2. [ {user1} is feminine]: {user1} **opublikowała** zdjęcie.

Also, in the case of a sentence where two subjects perform the same action as in: “{user1} and {user2} posted a photo”, in English the form of the verb does not change. However, in Polish two translations are possible:

1. [if both {user1} and {user2} are feminine]: {user1} **oraz** {user2} **opublikowały** zdjęcie.
2. [in all other cases]: {user1} **oraz** {user2} **opublikowali** zdjęcie.

In relation to the glossary, the translation suggestions stored there for the nouns recognised as terms are all in nominative case. Once retrieved from the glossary, their use in actual translations is therefore also very limited since nouns need to be inflected in Polish depending on their

syntactic function in a particular sentence. Retrieving *zdjęcie* from the glossary as a translation for the token {photo} works in the following situation:

1. {user1} tagged a {photo} = {user1} *oznaczył* [masculine]/ *oznaczyła* [feminine] **zdjęcie**;

but not in the case below:

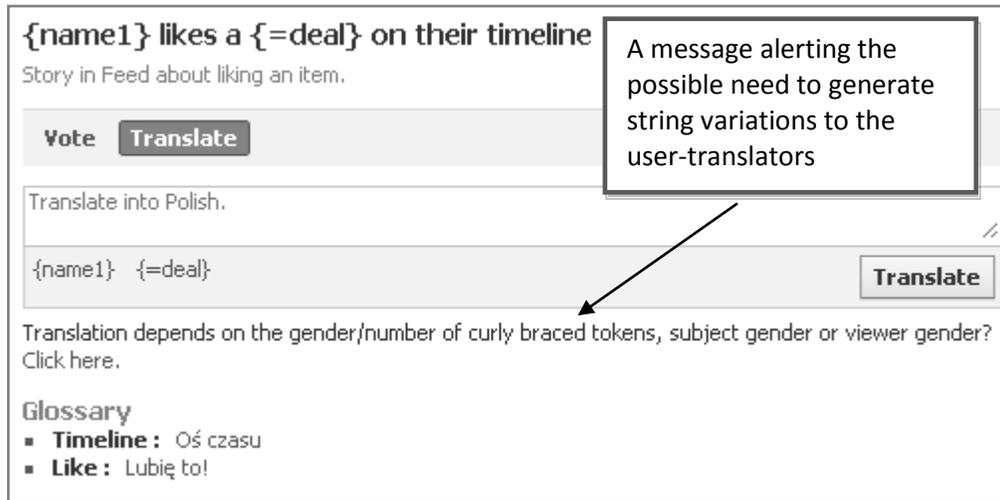
2. {user 1} was tagged on a {photo} ≠ {user1} *został oznaczony* [masculine]/ *została oznaczona* [feminine] **nazdjęcie**.

In (2), {photo} should be inflected – the locative case of the noun needs to be used; hence the correct translation must be:

2. {user 1} was tagged on a {photo} = {user1} *został oznaczony* [masculine]/ *została oznaczona* [feminine] **nazdjęciu**.

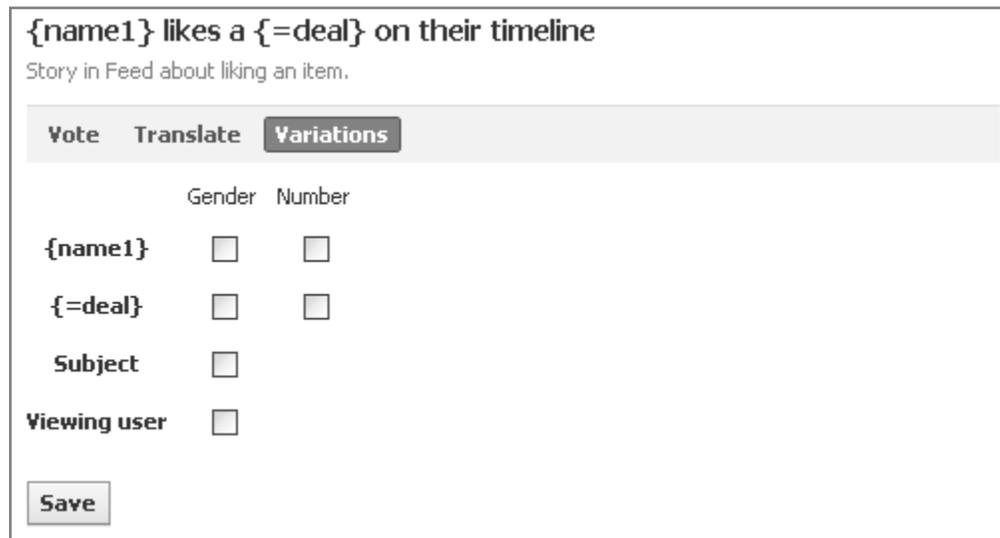
For this reason, Facebook introduced another feature to their translation module known as variations. The feature was not available to the community of Polish Facebook user-translators at the very start of the translation initiative, but was being developed over time to allow for variation in different grammatical categories (i.e. number and gender) and for different sentence elements (the subject of the action described in the string, the person viewing the string translation, tokens included in the string). However, such modifications to the translation module were never officially announced to the community of Polish Facebook user-translators and thus a user-translator could only discover the changes in the functionality of the translation module by engaging in the translation actions. Furthermore, as of now, the variations feature does not support variations in the grammatical category of case. As a result, it is not possible to inflect the nouns substituted for tokens from the glossary and thus translations for strings such as ‘on a {photo}’ are grammatically incorrect in Polish.

Nevertheless, variations enable a user-translator to indicate whether the translation of a given string depends on the gender or number of the subject, on the person viewing the translation or on the tokens, if included in the string (Figure 3.11):



**Figure 3.11** Generating string variations on Facebook

If it does, the user-translator is required to click where indicated to specify the translation variations appropriate for the source string (Figure 3.12):



**Figure 3.12** Variations parameters to be specified for individual string elements

The variations feature allows for accommodating all possible instances affecting inflection so that the final resulting string in Polish will not be ungrammatical. The translation module generates additional English strings to reflect differences in grammatical categories of string elements, as

indicated by a user-translator. Figure 3.13 illustrates an example where the gender of the string subject is indicated as affecting the translation.

### Shared {content owner}'s {=link}.

This story is shown in Timeline Recent Activity Unit referring Timeline owner's action.

**Vote** **Translate** **Variations**

	Gender	Number
{content owner}	<input type="checkbox"/>	<input type="checkbox"/>
{=link}	<input type="checkbox"/>	<input type="checkbox"/>
<b>Subject</b>	<input checked="" type="checkbox"/>	
<b>Viewing user</b>	<input type="checkbox"/>	

**Save**  Edit variations

Figure 3.13 Variations settings specifying that the variations depend on the gender of the subject

As a result, three string variations are generated as the translation module makes it possible to differentiate between feminine, masculine and unknown gender of the selected string element. This is shown in Figure 3.14.

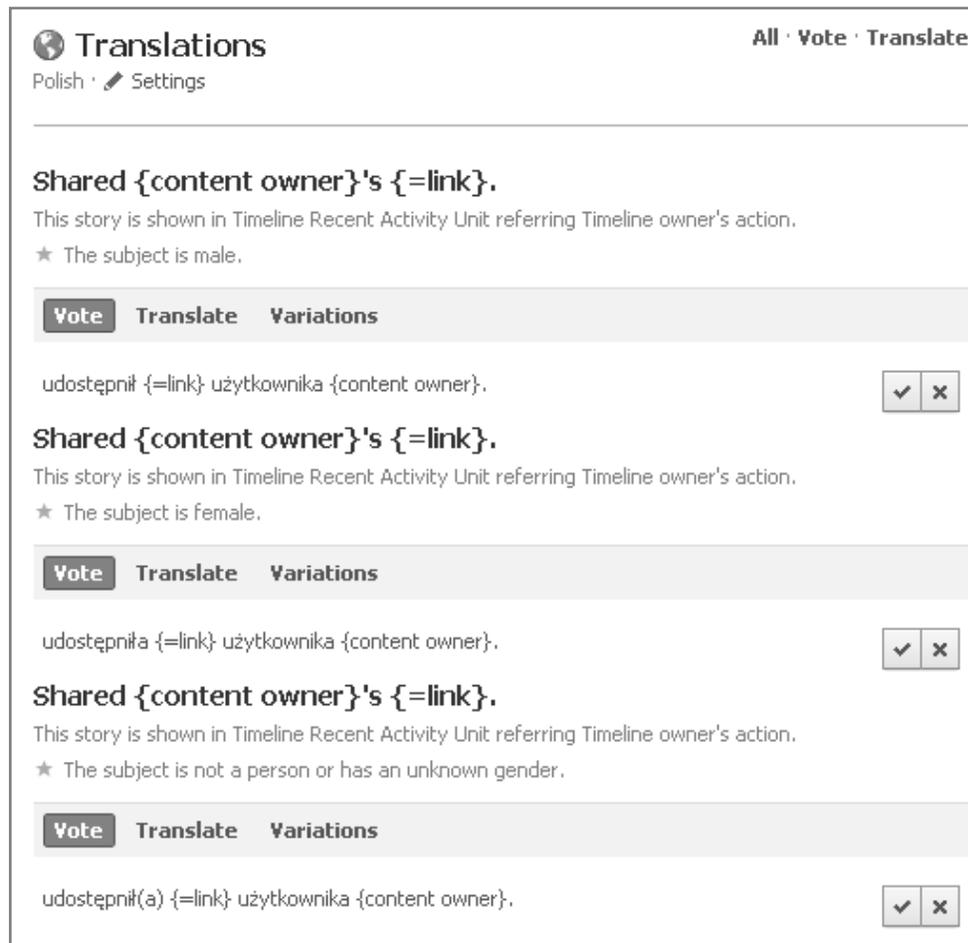


Figure 3.14 String variations generated by the translation module as indicated by a user-translator

### 3.3 Communication

The initiatives of translation crowdsourcing rely inherently on the sharing of knowledge and collective solution for problems which emerge dynamically given that experience in translation and linguistic knowledge of individual contributors will vary. In the case of Facebook translation, one of the challenges is for the user-translators to reach consensus on how the terminology characteristics of the social networking environment of Facebook will be represented in their target language. In many cases the specific concepts or features do not have their exact equivalents readily available in other languages (for example 'ticker', 'timeline', 'to poke', 'to tag'). Equally important is to secure consistency in translation and ensure that all user-

translators involved follow the same guidelines, for example, with regard to the style and register of translation. As a consequence, it is necessary to provide user-translators with dedicated channels of communication and discussion of issues related to the translation processes.

Ever since the initiative of crowdsourcing translation on Facebook started, the feature that was an integral part of the *Translations* application was the discussion board. A separate discussion board was assigned to every community of user-translators working with a particular language. Each of the community members had the right to post a new topic or contribute to the discussion already established by others. The forum formed an asynchronous medium of communication and the user-translators had to check it regularly for updates on the topics that were of interest to them.

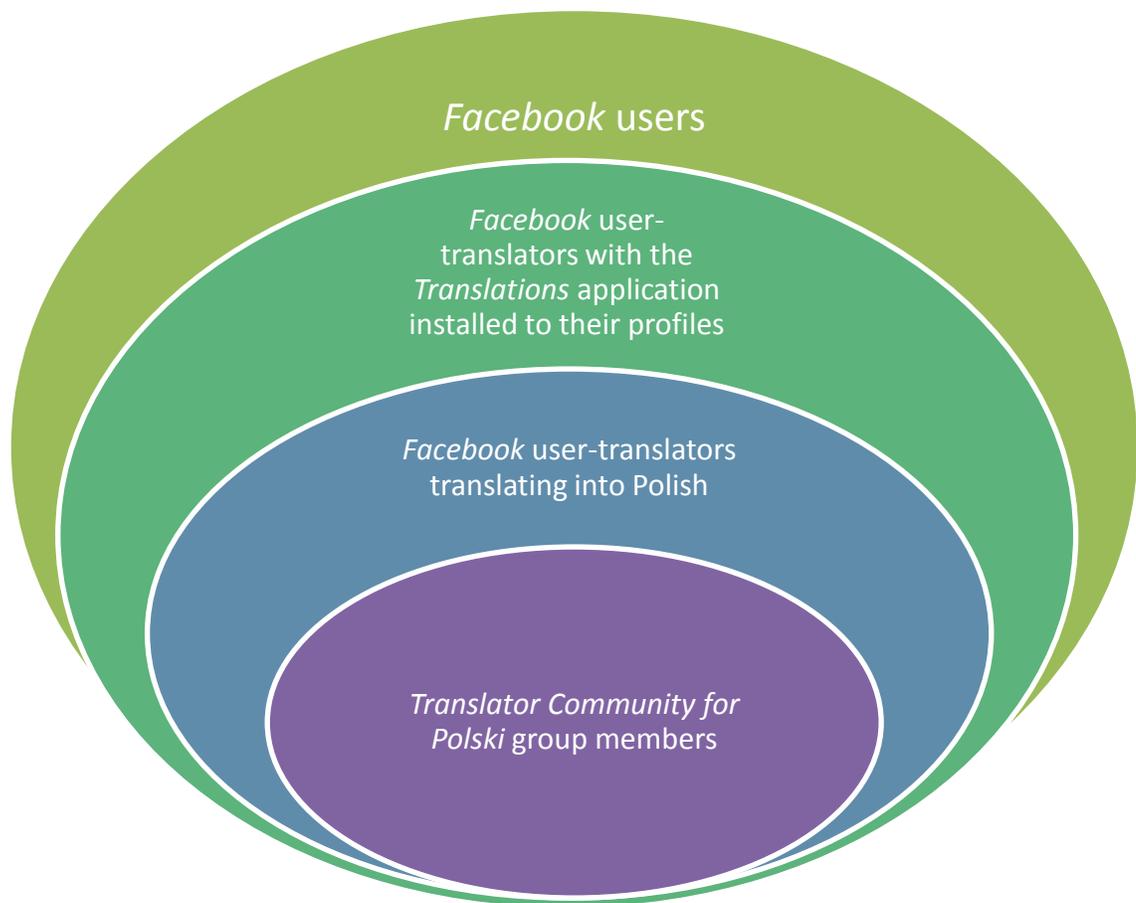
The changes within the *Translations* application introduced in late 2011 included the deactivation of the discussion board and opening up of Facebook translator community pages as an official new space and communication channel for the user-translators on Facebook. For each language into which Facebook is being translated, a separate Facebook group page has been created. All the translators working with a particular language can join the group. They then form a community of user-translators and use the group page to exchange ideas, discuss problematic translations, offer support and comment on the progress with the translation in real time. As anyone with the *Translations* application installed onto their Facebook profile could contribute to the discussions held on the board, it is necessary to be a member of the community of user-translators working in the same target language to post a new message, add content or participate in an ongoing discussion on the community group page. There are no specific guidelines on becoming a member of a particular community of user-translators. Any user of the *Translations* application can join the community upon being accepted by the administrator of the corresponding group page. Also, the existing community members have the right to invite their Facebook friends to join the community as well. The only requirement is to have *Translations* installed onto one's Facebook profile.

The change from the discussion board to the community page made communication between the contributing user-translators more interactive, facilitating to an even greater extent the collaborative aspect of the process of Facebook translation. All the members of a particular language community receive a notification once a new message is published on the page and thus can instantly read it and reply to it. The exchange of comments for a single post can be carried out in real time. Other features with which the pages are equipped include sharing and collaborative editing of text documents as well as uploading of images and videos. A community member may also start a poll to enquire among the community members about a particular issue they may have

– be it the choice of the most appropriate terminology or a solution to an issue with a problematic translation. Thanks to this feature the whole community may be made aware of a specific aspect of the translation that needs to be addressed and then collaboratively discussed by the member user-translators.

### **3.4 *Translator Community for Polski Group Page***

The community page was offered to the user-translators translating Facebook into Polish in early October 2011, a few weeks before the whole Facebook application was redesigned in November 2011. The page was created by the Facebook Translations Team on the 13th October but the first user-translator was not added until October 19th. At the time when the community page was opened, there were 5433 Polish Facebook users recognised as ‘active translators’, i.e. users with the *Translations* application installed onto their profile with Polish as their selected target language. Figure 3.15 illustrates the members of the *Translator Community for Polski* group in relation to global Facebook users.



**Figure 3.15 Polish Facebook user-translators in relation to global Facebook users**

The number of those who decided to join the community was steadily growing from 33 members in late November 2011 to reach 71 a year later. This indicates that only a small fraction of those who have *Translations* on their profile have decided to become Polish translator community members. The analysis of leaderboard rankings listing user-translators and their contribution to the translation of Facebook into Polish reveals that there are still hundreds of user-translators contributing to the initiative on a weekly basis although their rate of contribution can be very low (for example, just a single vote or translation in a week). In personal communication, a Facebook employee revealed that “(a)bout 6,000 people have contributed at least one translation to Facebook in Polish since we enabled the translation” in 2008. However, Facebook does not wish to reveal how many users display Facebook in Polish (Krieger, A. S. 2012, personal communication). Typically, it is the actual members of the translator community who contribute the most. They also tend to be ranked highly on the leaderboards of the best translators of all time with the greatest total impact on the initiative of Facebook translation into Polish.

Since the release of the Polish version of Facebook in 2008, user-translators have been catering to the dynamic changes in the infrastructure of Facebook by providing translation of new Facebook features. As the translation module has started to allow more flexibility in how original English strings are translated into Polish (i.e. the variations feature discussed in section 3.2), the user-translators have also been working on improving the existing translations, using the variations feature to accurately express number and gender differences.

In the present research, the translation activity and communication in the community of Polish Facebook user-translators were monitored to provide data on the actual participation in Facebook translation crowdsourcing. The members of the community of Polish Facebook user-translators actively mark their presence on their dedicated Facebook group page. They maintain communication in the community using the messaging system and the commenting feature. In the community, they share information on online resources and publications helpful for translation and also collaboratively develop their own documents with guidelines for Facebook translation into Polish. Individual members alert the community once they come across a mistranslated or untranslated string in the Polish version of Facebook by posting information (sometimes accompanied by a screenshot) on the page. These observations helped to characterise the behaviour of the user-translators involved and guided the design of a method of enquiry incorporated in this study to investigate the motivation of user-translators in translation crowdsourcing (see Chapter 6 for full discussion).

### 3.5 Game-like Features of Facebook Translation Crowdsourcing

The previous sections of this chapter have provided an overall description of the initiative of Facebook translation crowdsourcing, the design and features of the *Translations* application and the characteristics of translation activities performed there by Facebook user-translators. What has emerged from this description is an example of the impact of the broader technological trends on the manner in which translation began to be practiced in the online realm of Web 2.0. This section aims to further consider the specific organisational structure of the initiative of Facebook translation to further shed light on how such online translation activities may be perceived by Internet users in light of their motivation to become involved in translation activity on Facebook.

According to O'Hagan (2012), the infrastructure established by Web 2.0 technologies has consolidated social networking as part of daily lives of millions of Internet users. She implies that the incorporation of these technologies to facilitate translation initiatives in the online environment, and especially those in the sphere of social networking, signifies that translation is now being undertaken as an 'extension' of their daily social activities, and thus may be perceived as recreational in its character. O'Hagan (ibid.) thus presents the act of translation by the users of Facebook themselves not as a strict work procedure but rather a form of 'socialising' where translation concerned with social dimensions of one's life becomes entertainment in itself.

Commenting on how the social networking paradigm served Facebook to organise crowdsourced translation of its user interface, O'Hagan (ibid.) emphasises the specificity of the emerging forms of translation online implying that online translation has come to be enjoyed by Internet users in their free time providing pleasure thus becoming a new form of entertainment. She further specifies that in addition to its social qualities, in some cases, translation crowdsourcing initiatives "acquire game-like characteristics of playful fun" (O'Hagan 2012: 137). O'Hagan (ibid.) points out challenges and competition which set the scene for such translation initiatives where peer-voting and leaderboard systems are also incorporated as features of platforms and systems facilitating crowdsourcing of translation. Facebook serves as an example here where all these elements can be found, as discussed in this chapter. In the initiative of Facebook translation crowdsourcing the purpose-built translation module has been designed by Facebook to specifically support translation in the context of a social network. The Facebook *Translations* application, whose core purpose is to solicit user-translators' translations and votes, comes with additional features of the translator ranking system and the translation voting system. The user-translators participating in the Facebook translation initiative are presented with a clear goal and have at their disposal tools

which capture their performance and facilitate collaboration and integration with other user-translators. According to Zichermann and Cunningham (2011), integrating such game-like components into non-game activities is meaningful from the perspective of the behavioural change it can induce from the user. O'Hagan (2012) herself hints at the concept of 'gamification', which is the incorporation of game elements into non-game activities to make them more engaging to the user. According to O'Hagan, gamification is possibly making its way into the sphere of translation indicating the need to incorporate media and game studies perspectives into the study of translation to understand the contemporary translation practices emerging in today's particular technological contexts.

The process of crowdsourced Facebook translation as presented in this chapter can therefore be interpreted as an experience into which some elements characteristic of games have been incorporated. The remainder of this section explains in more detail how the specific elements of the Facebook translation crowdsourcing initiative may afford qualities of a gamified experience, turning translation activities into something engaging and enjoyable. The subsequent impact of gamification on motivation to perform a certain activity will be implied, but a more detailed discussion on the correlation between gamification and motivation is provided in the next chapter.

### *3.5.1 Game Elements in the Translations Application on Facebook*

Gamification, which Deterding et al. (2011a) define as "the use of game design elements in non-game contexts", considers game design as an approach which can make non-game products, services and applications more enjoyable and fun, and their users motivated to engage with them. Some examples of gamification include the joint initiative of Starbucks and Foursquare<sup>32</sup>, where customers using the Foursquare mobile application to 'check-in' at Starbucks retail locations earn points and complete quests (such as "visit five different Starbucks") to win trophies and badges. Nike developed the Nike+ programme<sup>33</sup> where runners can monitor their workout using GPS-connected iPods. They upload their statistics online where they can set further goals and join challenges as well as network with other runners (Bunchball 2010). Microsoft gamified the application built into Microsoft Office providing training on the functionalities available in the suite. The training is organised as a set of missions which, when completed, are rewarded with a badge, and involves goal setting and enables users to master their skills (Bunchball 2012).

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<sup>32</sup><https://foursquare.com/starbucks> [last accessed 6 November 2013]

<sup>33</sup><http://nikeplus.nike.com/plus/> [last accessed 6 November 2013]

Zichermann and Cunningham (2011) present gamification procedures within the Mechanics Dynamics Aesthetics (MDA) game design framework originally developed by Hunicke et al. (2004) to guide game designers. Zichermann and Cunningham (2011) indicate that to design a gamified experience is to incorporate into its structure the three of the framework's components: game mechanics, game dynamic and game aesthetics. They explain that game mechanics are the functioning components of a game which allow game designers to navigate and control the actions taken in the game by the players. Examples of game mechanics include scores, leaderboards, levels, badges, challenges and quests. Dynamics determine what a player is doing – either on their own or in collaboration with other players – when interacting with the actual mechanics incorporated into the game. Thus depending on the mechanics incorporated into the game, the dynamics may imply rewarding, gaining status, competing with others, gifting, receiving feedback, collecting, creating order and organising. The composite outcome of the interplay between game dynamics and mechanics are the emotions evoked in the players, represented by game aesthetics (ibid.). The ultimate goal is for the aesthetics of a game to be perceived by a player as 'fun'. Hunicke et al. (2004) identify that different games rely on different player experiences – e.g. pleasurable sensation, discovery, competition, fellowship – for the game to become a 'fun' experience.

Leveraging some of the aspects of game design outlined in the MDA framework to design a gamified application or system can help produce the desired impact on the targeted users – high levels of motivation for a prolonged engagement in a specific activity.

Based on the concept of gamification outlined above, we can identify a number of elements characteristic of games in the *Translations* application on Facebook. These constitute the game mechanics which correspond to the dynamics of the translation processes on Facebook and mutually affect the overall aesthetics of the translation process on Facebook, affording it the quality of fun. Below, the design of translation crowdsourcing on Facebook is considered from the perspective of the MDA framework to present how the individual features of the Facebook application may afford the experience of Facebook translation game-like qualities of an experience perceived as 'fun' and thus likely contributing to motivational factors.

- mechanics:

The main element of the initiative is the challenge to produce the target language version of the Facebook user interface. The initiative is organised on a social network where the user-translators

form communities based on the language into which they translate. Communities of translators can communicate through their dedicated Facebook group page which serves as a main channel for communication. Group pages feature functionalities such as a messaging system, sharing and collaborative editing of documents, uploading of images and videos, etc. The user-translators can contribute either by providing translations of new strings or by voting on the translations provided by others. All the contributions are scored to rank the user-translators on leaderboards updated on a weekly and monthly basis as well as according to the overall contribution to the initiative. The leaderboards are displayed to all the members of a given language community. Instantaneous feedback on the number of translations and votes submitted is provided to each user-translator individually and is known only to them. Facebook also rewards individual translators' achievements with awards in the form of badges displayed on individual translators' profiles.

- dynamics:

The translation challenge presents user-translators with a problem-solving task which is taken up voluntarily. The contributors have the option to choose how they will contribute to the initiative with further ability to decide on the text, volume and frequency of their contribution. Forming communities unified by the same target language, the user-translators collaborate through their exchanges of opinions on terminology and style of their translations as well as discussing solutions for particular translation problems. The scoring and reward systems and the feedback they provide through leaderboards and badges indicate the progress made by individual user-translators and communicate the achievements of an individual to all the others in the community.

- aesthetics:

Considering the game-like mechanics and dynamics characterising the initiative of Facebook translation, a few assumptions can be made in relation to the emotions the initiative evokes in the contributing user-translators. As specified by Hunicke et al. (2004), the emotions evoked in the players are the outcome of the interplay between game dynamics and mechanics represented by game aesthetics. Upon analysing the design of the whole translation environment on Facebook in search for game-like features, elements characteristic of games (e.g. leaderboards, awards, challenges, collaboration, sharing) have been identified. This supports a claim that while engaging in the activity of translation on Facebook, the user-translators have the opportunity to experience a degree of pleasure and fun, as is the case when playing a game incorporating similar components.

Such an interpretation of the elements of *Translations* opens up a discussion on the design of the initiative of Facebook translation to further consider the effect that these elements may have upon motivation of the contributing user-translators. The following chapters will incorporate the notion of gamification into the discussion of theoretical approaches to motivation informing the framework of analysis for the consideration of the research questions this study set out to address.

### **3.6 Concluding Remarks**

The Facebook translation initiative has been developed to harness the unique characteristics of Facebook as a social networking website incorporating its core focus into meeting its translation needs, tapping into the readily available community of users as translators. The choice of translations displayed in the target language version of the website is to a large extent determined by the collaborative efforts of all the participating user-translators. They are required to provide different translation candidates for individual original strings and then evaluate their quality through voting. Even though the translations and votes are submitted independently by individuals, it is the combined value of all the received votes that affects the overall quality score of the translations and determines their incorporation into (or exclusion from) the final target language version. Still, the final list of translations provided and selected by the user-translators is subject to review by the internal professional translators before being published online (DePalma and Kelly 2011).

The design of the initiative and functionality of its technological components, which facilitate the translation actions and communication between the involved user-translators, have all been tailored to the requirements of an initiative where translation is crowdsourced. They support collaboration in decision-making and problem solving, operate a quality control mechanism based on the results of collective voting and also provide dedicated spaces for user-translators to address any translation-related issues they may have in their respective language communities. Additionally, upon the analysis of individual components of the translation crowdsourcing initiative on Facebook, their similarity with elements characteristic of games has been pointed out. This will be further discussed in the next chapter as a feature of Facebook translation crowdsourcing potentially affecting the motivation of the participating Facebook user-translators to contribute.

Nevertheless, a number of elements can be considered as missing from the initiative. Facebook does not provide user-translators with any instructions on how the translation actions should be

performed, how the translation module operates or how to interact with the collaborative translation platform. The About section of the *Translations* application, which provides a very simple explanation of the initiative as a whole, has not been included in the re-designed version of the application. The use of the variations feature has also not been explained which may lead to significant confusion among those who try to generate the translation variations required for a single original string for the first time. Similarly, the user-translators were never officially provided with guidelines on the use of tokens and the actual working of the mechanism substituting them for text when displayed on screen to the users of *Translations* in a particular locale. Despite the fact that the translation module and the *Translations* application are designed to successfully support translation actions in the online environment of Facebook, the lack of explanation on how they function and how they should be used could significantly impair the contribution of translations and votes by user-translators otherwise willing to participate in the initiative of Facebook translation crowdsourcing.

Moreover, the initiative of Facebook translation crowdsourcing is characterised by frequent and sudden modifications, not only in a visual sense but also in how individual components of the *Translations* application function. This can have a significant impact on how translation actions are performed by user-translators and also negatively affect consistency in the structure of translations produced over the years. With regard to the translation of Facebook into Polish, the subsequent changes in the translation module, and specifically the variations feature, offered new possibilities for formulating target text content. Once the variations feature became fully operational, many of the previously translated strings, which did not have a typical Polish grammatical structure, became subject to retranslation by user-translators to provide for their most natural grammatical structure.

The description and analysis provided in this chapter have characterised the specific translation crowdsourcing initiative that is studied in the present research. Considering the distinct features of a translation procurement model where translation is requested from Internet users, the following chapter provides a literature review on human motivation, motivation to contribute to crowdsourcing initiatives in general as well as to offer translation in online translation initiatives as identified in Chapter 2. The next chapter draws on the existing theories providing an explanation of the factors driving people to act in a particular way and identifies other approaches to the study of human activity in translation crowdsourcing. It will discuss a theoretical framework applied in

the present research to address the research questions and study the motivation of Internet users contributing to translation crowdsourcing initiatives.

## **PART II: Theoretical Framework and Methodological Approach**

## **Chapter 4 Motivation and Translation Crowdsourcing – Framework of Analysis**

The objective of the present research is to examine the motivations that drive Internet users to participate in commercially-oriented translation crowdsourcing. As an investigation into factors that draw people to perform certain activities, the study thus requires to gain an understanding of what human motivation is, how it is realised and how it can be studied. This chapter first introduces the concept of motivation and reviews how it has been researched in different fields that are relevant for the present study. Literature on motivation for online collaboration is analysed together with the studies reporting on motivation in crowdsourcing initiatives. Aiming to present how the concept of motivation has been investigated in the field of translation studies, this chapter attempts to shed light on motivation in translation crowdsourcing through literature review on motivation in online collaborative translation.

As indicated in the previous chapters, the study of motivation in the present research goes beyond a purely psychological analysis to encompass the evaluation of the environment in which translation crowdsourcing is performed and how it may affect motivation of contributing user-translators. By considering a collaborative translation platform as the core element of the translation crowdsourcing environment, the chapter presents a framework for the evaluation of how the functioning of a platform may influence motivation to contribute translation in a crowdsourcing initiative. The functional approach to translation is discussed to present translation as a purposeful human activity and some concepts from activity theory (AT) are then borrowed to interpret the collaborative translation platform as a tool mediating the translation actions performed by Internet users in translation crowdsourcing. It is argued that the quality of this mediation affects motivation to contribute to translation crowdsourcing. The concept of gamification outlined in the previous chapter is then explained in more detail to present the role of incorporating game-like elements into the environment of a translation crowdsourcing initiative in relation to a contributing user-translator.

### **4.1 The Concept and Study of Motivation**

As suggested by Reeve (2009), the study of motivation is primarily a behavioural science, the understanding of which depends on recognising different motivational processes and how they operate. Motivation is a “private, unobservable, and seemingly mysterious experience” (Reeve

2009: 10) and consequently judging an individual's motivation is never a straightforward process. Motivation cannot be explicitly stated at all times; it must be inferred from its behavioural manifestations. Reeve specifies four aspects through which human motivation is expressed. These are an individual's behaviour (attention, effort, latency, persistence, probability of response, facial expressions and bodily gestures), engagement (behavioural intensity, emotional quality, personal investment), physiology (brain and body systems' activity) and self-report. It is only through analysing what is public and observable about an individual's actions that an attempt can be made at reasoning out and ascribing their particular motivations. In the present research, motivation driving participation in the translation crowdsourcing initiative organised by Facebook is studied on the basis of the collected research data corresponding to three of the manifestations indicated by Reeve: behaviour, engagement and self-report of Facebook user-translators contributing to Facebook translation into Polish.

The fundamental goal of motivation research is to explain what causes behaviour and also what influences its intensity. Reeve (*ibid.*) further explains that it is the role of motivation theory to provide an understanding of the processes that give behaviour its energy (or strength) and direction (the purpose and goal which is aimed to be achieved). What Reeve strongly emphasises is the fact that behaviour is energised and directed by processes that come both from the individual and from the environment. Experiences such as emotions, needs and cognitions are some of the internal motives while external processes encompass social, cultural or environmental events which may either attract or repel the individual from getting engaged in a particular action.

Over the years, a number of approaches have been proposed by scientists investigating human behaviour and psyche leading to the emergence of distinct theories of human motivation. The energisation and direction of behaviour were addressed first in the classic motivation theories (Deci 1992, Deci and Ryan 2000) offered by Lewin (1936) and Tolman (1932) with physiological and psychological needs studied as the main factors underlying behavioural energy by Murray (1938) and Hull (1943) respectively. In the 1950s, a cognitive approach to the study of human behaviour became more prevalent also influencing motivation theorists, with the concepts of intentions and desired outcomes (expectations) being placed in the centre of discussions on factors directing human behaviour. The role played by an individual's expected outcomes of their behaviour in the actual driving of their behaviour was studied by Bandura (1977) and Locke and Latham (1990). The latter pair of researchers presented goal theory postulating that an individual's intention to attain specific goals or outcomes is what determines their behaviour.

#### *4.1.1 Self-Determination Theory*

Deci (1992) describes these cognitive theories as “partial” because they fail to address the issues of behaviour energisation and why the expected outcomes of behaviour are found to be motivating in the first place (1992: 169). Furthermore, cognitive theories represent motivation as a unitary concept recognising human behaviour as ‘motivated’ only when mediated by personal intentions. Impersonally caused or non-intentional behaviours are on the other hand referred to as ‘amotivated’. Deci, however, argues that even the intentional, personally caused behaviours themselves can be subject to some external regulatory processes coming from the environment in which an individual resides. As a consequence, he suggests that motivated behaviours will differ in the extent to which their regulation is experienced as being freely chosen or compelled by a force from outside. These views constitute the core of self-determination theory (SDT) developed by Deci together with Ryan (1985, 2000, 2008; also Ryan and Deci 2000a, 2000b). With the approach postulated in SDT, it is possible to account for variety in the qualitative aspects of the behaviour of an individual depending on the perceived source of control in their actions.

With regards to the cognitive theories, which ignored earlier need theories and proposed goals and their pursuit as the main drivers of motivation, SDT specifies that the motivation to pursue and attain one’s valued outcomes depends on the degree to which the needs of autonomy, relatedness and competence can be satisfied in these processes (Deci and Ryan 2000). Self-determination theory is further different from other cognitive motivation theories through its consideration of human nature. This is reflected in the central assumption of SDT that “humans are growth oriented, proactive, and inherently desirous of autonomous, or self-determined, functioning (as well as needing to be competent and related), but that they are also vulnerable to being controlled – to being coerced or seduced by interpersonal or intrapsychic forces” (Deci 1992: 170). SDT thus additionally takes into consideration social contexts which are seen to play a crucial role in facilitating or thwarting the satisfaction of the basic human needs and consequently define the quality of human performance further affecting the levels of motivation displayed by an individual.

SDT focuses on intrinsic motivation which is based on the inherent satisfaction and enjoyment derived from a particular action (Ryan and Deci 2000a). According to SDT, intrinsic motivation arises from human inclination to learn, explore and creatively apply the skills one possesses even in the absence of reinforcement or reward. In one of its aspects, SDT is concerned with the social and environmental factors, which either facilitate or undermine intrinsic motivation by influencing

the sense of autonomy, competence and relatedness to others perceived when engaging in an activity. Sense of autonomy is associated with the perception of an activity as self-determined and internally regulated. Activities which promote growth enable a person to exercise their capacities and convey their effectance correlate with the sense of competence. Relatedness is realised through the experience of belongingness and connectedness with others engaging in a particular activity (Deci and Ryan 2000, Ryan and Deci 2000b). Intrinsic motivation is enhanced once the needs of autonomy, competence, and relatedness are satisfied but is thwarted when the need satisfaction is not experienced (Deci and Ryan 2008).

The SDT framework has broad implications for understanding what enhances versus diminishes need satisfaction and the dynamics of need support and need thwarting have guided research on motivation in sports, education, gaming, and other domains (Przybylski et al. 2010). With its strong acknowledgement of human behaviour as emerging internally from inherent human desires but also affected by external factors as sources of control and constraining forces, the consideration of motivation from the perspective of SDT has been found relevant to the present research which studies the behaviour of an individual Facebook user-translator but also is interested in the impact that the collaborative translation platform exerts on this behaviour. One of the characteristic features of the translation crowdsourcing initiative on Facebook is the high level of participant freedom to determine the character and extent of their contribution. The external supervision of translation processes is minimal and thus by and large it is the individual's perception of what the personal and social benefits of participation may be that bears a lot of significance for the decision on whether or not to contribute. Nevertheless, Facebook translation crowdsourcing is embedded in the context of collaborative work requiring the use of specific tools which may affect how the contribution corresponds with the expectations set beforehand. Taking these factors into consideration, SDT (Deci and Ryan 1985, 2000, 2008; also Ryan and Deci 2000a, 2000b) has been incorporated into the present research to explain the motivation of user-translators to contribute to translation crowdsourcing by analysing the potential of the participation in the Facebook initiative to satisfy (or undermine) the needs of autonomy, competence and relatedness.

Furthermore, the specificity of Facebook translation crowdsourcing as an activity performed voluntarily for a for-profit and in its entirety based on cooperation between large numbers of individuals in the online environment have led the researcher to further search for theoretical approaches to the study of motivation that would account for the distinct character of the investigated activity and enable the researcher to more precisely pin down how it may be specific

to the particular translation environment setup of Facebook. The next two sections discuss approaches to human motivation which address the voluntary aspect of Facebook translation crowdsourcing and the collaborative nature of this online activity and explain how they were adopted to supplement the framework of SDT for the discussion in the present research.

#### *4.1.2 Functional Approach to Volunteer Motivation in Translation Contexts*

As indicated in Chapter 2, many discussions of translation practices involving large numbers of Internet users consider them as 'voluntary' (see Désilets and van der Meer 2011, Kageura et al. 2011, Kelly et al. 2011, McDonough Dolmaya 2011, 2012, Pym 2011b, DePalma and Kelly 2011, Drugan 2011, Babych et al. 2012), though the authors use the term focusing on different features of such practices: to emphasise the altruistic attitudes of the contributors, or the fact that the contributors are non-professionals, or that they do not receive any financial reward for their efforts. O'Hagan (2011, 2013) however further indicates that not all community translation initiatives online involve untrained individuals, and also that a lack of remuneration is not the only factor that allows for such practices to be characterised as voluntary. The present research adopts the view of Stukas et al. (2009), who define volunteers as those who offer help and support free of charge to create social capital in the form of benefits provided to society, to recipients of services and to volunteers themselves and thus contribute to the public good. As stated earlier (see Chapter 2), the contribution to Facebook translation crowdsourcing is considered as voluntary and thus to broaden the framework for addressing the main objectives of the present study, the motivation of Facebook user-translators is studied with reference to theories on motivation in volunteering.

Clary et al. (1998) differentiate volunteering from spontaneous helping, i.e. offering support in contexts of unexpected, immediate need for help usually in the form of one single act of help only. In their view, volunteering is more sustained and involves significant planning and consideration given by the person willing to volunteer with regard to the match between the characteristics of the required intervention and individual capabilities and interests. As a consequence, volunteers will intentionally seek for opportunities to help, deciding by themselves about the levels of time and effort put in with their commitment frequently becoming long-term and demanding in terms of personal costs.

Clary et al. (1998) incorporated the functional approach to motivation, the central tenet of which indicates that people can and do perform the same actions but may associate them with different psychological functions (Smith et al. 1956, Katz 1960, Cantor 1994, Snyder 1993), to study factors

driving people to volunteer. In the Volunteer Functions Inventory (Clary et al. 1998) they specified six categories of motives each serving a specific function – personal or social – for a particular volunteer. They further related each function with reasons, purposes, plans and goals that the volunteer associates with a given volunteering task. The important aspect of the theory is that each person has different attitudes and the same motives may have different functions for different volunteers (Clary et al. 1998).

The functional approach further assumes that a person's overall satisfaction from performing a task voluntarily depends on how well his or her predefined motivations are realised in the environment in which the task is performed and then met during the actual engagement with the task (Stukas et al. 2009). In this way, the functional approach is similar to SDT as it takes into consideration the broader social and physical environments which provide a context for an individual's engagement with an activity and its influence on one's motivation. According to Stukas et al. (ibid.) the features of the environment decide whether a given activity will ultimately serve the function an individual expects it to serve for them. If in their environment an individual is able to fulfil their expectations about a given task, then they will be more satisfied and more likely to continue volunteering in the future.

Based on the earlier research on functionalism, volunteering and their own findings from studies on volunteer motivation, Clary et al. (1998) specified that volunteering may be perceived as an opportunity to realise one's different objectives presented as corresponding with six different functions:

- values function, where volunteering is perceived as an opportunity to express one's altruistic and humanitarian concerns for others;
- understanding function, where volunteerism offers an opportunity to learn, improve one's skills and develop knowledge;
- social function, offering an opportunity to socialise with others and engage with friends while volunteering;
- career function, where through undertaking a task voluntarily one's career prospects are improved by maintaining or obtaining new career-related skills;
- protective function, where volunteering is an opportunity to escape from negative feelings about oneself, especially guilt at being more fortunate than others;

- enhancement function, where volunteering is seen as an opportunity to maintain positive perception of the self by contributing to one's self-development, growth and enhanced esteem.

Within their theory, Clary et al. (ibid.) developed a set of items reflecting the psychological and social functions that volunteering may serve. Their conceptualisation has been embraced in the Volunteer Functions Inventory (VFI), which may be incorporated into studies aiming to identify and measure motivators among volunteers. The functional approach to volunteers' motivation emphasises that individuals to a great extent pursue volunteering opportunities reflecting their identity and are of importance to the self. As such, this approach very much focuses on the fact that an individual's decision to volunteer is preceded by a deliberate consideration of a given volunteering initiative with regards to their personal expectations about how the outcomes of volunteering will benefit them. According to Clary et al. (ibid.), by acknowledging the fact that specific volunteering tasks may be perceived as fulfilling different psychological functions to different individuals, it may become easier to maintain and further strengthen people's motivation to volunteer once they find particular tasks to be attributed to functions they consider as appealing.

With the concept of functions, the functional approach to motivation enables a more specific characteristic of motivation to volunteer in translation crowdsourcing, complementary to attributing one's behaviour to the need satisfaction in accordance with SDT. While the understanding function, which resembles the need for competence with its focus on learning and self-development, and the social function, which embraces the human inclination to engage with others, can be mapped with the need for relatedness, the remaining functions in the VFI pertain to some distinct qualities of a voluntary activity.

Although Facebook translation crowdsourcing has been defined as distinct from translation initiatives involving contribution of translation specifically aimed at humanitarian purposes or for non-profit organisations on the basis that seemingly no similar ethos drives the initiative (see Chapter 2), Facebook translation as well as many other translation crowdsourcing initiatives experience high levels of participation from Internet users involved who are usually not financially rewarded for their work, yet still willing to contribute. The functional approach to motivation developed for the analysis of voluntary behaviours implies that apart from altruism and humanitarian concern, represented in the VFI by the values function, there may be other functions associated with and further driving volunteerism. Thus the approach offered by Clary et al.

(1998) has been incorporated into the present research to serve as a framework suitable to aid the interpretation of motivation in translation crowdsourcing along with SDT.

#### **4.2 Motivation and the Online Environment**

As discussed earlier, the initiative of translation crowdsourcing as organised by Facebook is an example of translation collaboratively produced on a social network and realised in the virtual environment of the Internet. Discussing the particular conditions of collaborative work online, Kollock (1999) outlines four motivations for providing public good by means of cooperation on the Internet. This has been found relevant in the studied case of cooperative translation in the crowdsourcing initiative on Facebook.

The first motivation is rooted in the belief in mutual exchange and reciprocity, where a contribution is made with an expectation to receive information or help from others in return. Kollock (ibid.) stresses that this type of motivation will be strengthened where the interactions between the community members are maintained at high levels, and where the members of the community can easily identify the other contributors and keep track of the contributions made by others over time.

The second factor that has an effect on the motivation of contributors is reputation. In online communities, members are aware that individual contributions are witnessed by many others in the community. To increase their prestige in the community, individuals are driven to provide contributions higher in volume and better in quality. Lampel and Bhalla (2007) further point out that the online environment is often perceived as a desirable place for constructing one's identity, an identity that is closer to the 'ideal self'. They add that each online contribution functions as a message about the self that is sent to others on the Internet. The wish to build a positive image of oneself thus initiates participation and encourages contribution.

The third source of motivation indicated by Kollock (1999) is the level of self-efficacy possessed by a contributor. Self-efficacy, as defined by Bandura (1997), is a belief about one's own ability to perform on a designated level in order to exercise influence upon future events affecting one's life. Bandura (ibid.) in his work further identified four ways of achieving high levels of self-efficacy, with 'mastery experiences' indicated as the most effective of them. He explained that past successes, especially if their achievement required perseverance and an ability to overcome some specific obstacles, strengthen one's belief that they possess what is necessary to succeed. This is significant for establishing high self-efficacy levels. Self-efficacy may also be modelled through

seeing how others similar to oneself achieve their success. This type of experience may convince the observer that they too possess capabilities to exercise similar activities that will consequently lead to a success. Verbal persuasion by others may also boost self-efficacy as it promotes self-development and improvement of skills and dispels self-doubt. Friedman et al. (2009) in their work made similar observations and introduced a concept of motivation synchronicity. They noted that observing motivational orientations of others has an influence on the motivational orientations of an individual. The experiments they conducted led to their conclusion that the degree of motivation synchronicity is higher for intrinsic motivation. Furthermore, being exposed to an intrinsically motivated person increases the motivation to perform a task even if this task differs from the one undertaken by the observed person. Human behaviour is both implicitly as well as explicitly influenced which puts forward a suggestion that motivation orientation is to a great extent socially shaped, which may be of significance in online cooperation in translation crowdsourcing. Kollock (1997) further maintains that having the opportunity to contribute to the group makes a person believe that his or her actions have a greater impact on a significantly larger number of people. This boosts self-image and leads to the perception of the self as being efficacious, strengthening the motivation to get involved.

The fourth motivator discussed by Kollock (ibid.) manifests itself when an individual is strongly attached to the group to which he or she contributes. The consequence of this is their identification with the needs of the group. These needs are then satisfied by contributing, which helps to achieve the key objectives of the collective.

Group attachment as a factor motivating online cooperation suggested by Kollock is very closely linked to what in SDT terms encompasses the need for relatedness. Both concepts seem to recognise that an individual is driven to act when they can identify with others engaging in the same activity. Similarly, Kollock's discussion of self-efficacy resembles the need for competence within the framework of SDT with its focus on one's striving to effectively exercise one's skills. Nevertheless, Kollock further considers the highly interactive character of online cooperation as well as the fact that the work contributed to the activity of online communities is witnessed, and also evaluated, by others to specify the belief in reciprocity as well as one's intention to maintain one's reputation as two additional factors which impact on the motivation to cooperate online. Here the influence of reputation on motivation as discussed by Kollock may be mapped with the enhancement function in the VFI. However, while the former specifies that increasing one's esteem in the community is achieved directly through the act of contributing, the latter is a

broader concept identifying that the enhancement of one's reputation occurs not directly through the act of volunteering but thanks to the associated opportunity to grow and develop oneself. As such, the approach proposed by Kollock has been considered as further enriching the theoretical framework for the discussion of motivation in translation crowdsourcing and has thus been combined with SDT and the functional approach for the investigation of motivation in the present study.

It ought to be mentioned that the translation technology facilitating crowdsourcing on Facebook has been developed to operate from within the main Facebook social networking service (SNS). As a consequence, and which was also implied by O'Hagan (2012) (see also 3.5), translation of Facebook may be perceived as a form of social networking because the process of contributing translations is directly related to the fact of being a user of the Facebook SNS. The study of motivation in translation crowdsourcing on Facebook may thus benefit from the interpretation of motivation to use this type of social media itself. Research conducted by Kim et al. (2010) leads to the conclusion that SNS use behaviour is subject to the influence of "social motivations" and the processes of constructing the "cultural self" online. Referring to the work of boyd and Ellison (2007), Kim et al. (2010) point to the benefits of using web-based services that allow individuals to create their profiles and share a connection with other users. They claim that social networking services positively affect self-esteem by helping to construct personal identity, support collective action, strengthen interpersonal ties as well as satisfy needs for entertainment and recreation. The key finding reported by Kim et al. (ibid.) can be interpreted to suggest that higher motivation levels to engage in the use of social network sites are noted among those who are willing to enhance their social relationships with others and with their surroundings. They also note that the higher the motivation levels, the more satisfactory the use of SNSs becomes. The outcomes of the research by Kim et al. (ibid.) may suggest that as contributing translations to Facebook is a part of using this SNS it is also performed in a bid to develop social ties with other Facebook users and the environment.

### **4.3 Motivation in Translation**

By shedding light on the factors affecting motivation to contribute to collaborative initiatives online, the previous section accounted for the environment in which such forms of human activity are performed. This section focuses on translation as the main activity in translation crowdsourcing and takes on the perspective of translation studies to indicate how the concept of motivation has been studied in the field so far and considers the implications for the present study.

The last decade of the 20th century marks the “sociological turn” in translation studies. The interest of certain translation scholars has shifted from studying translation as a cultural artefact to focus more on the translator as the human agent and “member of a sociocultural community called upon to interact with and within the community’s structuring and structural dimensions (...).” (Merkle 2008: 175). This brought about an interest in the psychology and sociology of both translation and the translator. An emphasis was placed on translation behaviour as well as on studying the cognition and thought processes behind translation (Simeoni 1998). The discipline of process-oriented translation research has emerged, inspired by cognitive psychology and psycholinguistics (Halverson 2009: 212). Research methods characteristic of these disciplines have been incorporated to help access the translator’s mind and understand what goes on in the translator’s head when they are translating (Bernardini 2001). Studies based on think-aloud protocols were carried out to reveal information, for example, on translation strategies adopted by professional and non-professional translators and translation trainees (ibid.). Apart from these cognitive aspects, process-oriented translation research has focused on affective factors in translation and their correlation with translators’ attitudes and behaviour during their translation processes. The works of Kussmaul (1991); Laukkanen (1996); Tirkkonen-Condit and Laukkanen (1996) were concerned with factors such as translators’ involvement with the translation task, perceived self-confidence and atmosphere (relaxed vs. tense). It has been found that these factors were correlated with how the process of translation was performed and how the translators felt about their work; the quality of the produced translation was also affected.

In a similar vein, Koskinen (2009) investigated how professional translators’ activities and their identities are affected by different institutional and organisational contexts. Her research indicated further implications of these affective factors on the overall work motivation of the studied translators as well. Koskinen (ibid.) interviewed groups of translators working for the European Commission but in different settings as these changed in the period between 2004 and 2008 as explained below. She compared the outcomes of her ethnographic study carried out with Finnish translators employed by the Commission in 2004, with a similar one implemented in 2008, when a new communication strategy adopted by the European Commission framed the work of the translators in a different way. Koskinen (ibid.) found that even within the same organisation, difference in institutional as well as physical space occupied by the translators affects how they perceive their status and motivation to work.

The focus group discussions conducted by Koskinen in 2004 involved Finnish translators working in the European Commission's translation units in Brussels and Luxembourg. The translators revealed that they felt detached from the other European Commission officials for whom and with whom they worked, despite sharing the same status and salary levels, acknowledged by the Commission in the official documents on staff regulations. Some of the translators had the impression that others viewed them as "a necessary evil" (Koskinen 2009: 95) and their work as complicating and slowing down the text production processes. They complained that their translation activity was performed separately from the actual text production process and thus they further felt detached from the core activities in the Commission. This discourse indicated that it was difficult for the translators to identify with other officials and the Commission as an institution. Koskinen (ibid.) concluded that the translators seemed to suffer from a lack of visibility and recognition in the institution.

In 2005, a new communication strategy, 'Plan D', was outlined by the Commission (Koskinen 2009). The main idea was to reconsider the public image of the European Union and incorporate citizens to actively participate in the decision making processes. But 'Plan D' also changed the communication within the Commission and brought about a new kind of partnership between the DGT and other units of the Commission. As indicated by Koskinen (ibid.), the DGT has become more pro-active and the activity of the translators more visible. She indicated translators' participation in training sessions and workshops, as well as conferences. Additionally, translator representatives were assigned to work in offices located in their corresponding countries, with three Finnish translators posted to Helsinki. Those translators, interviewed by Koskinen in 2008, indicated that many aspects of their work have been improved. They specified that they were receiving regular feedback on their work from their language coordinator as well as the officials with whom they could maintain a closer relationship thanks to being located in the same premises. Feedback was also provided by the actual users of their translations – for example, journalists quoting translated press releases. Koskinen (ibid.) emphasised that "being part of the bigger picture, and the constant reward of getting immediate feedback (...) all add to increased job satisfaction" (2009: 205). She notes that the translators' commitment and enthusiasm, as observed in the second study, have been significantly increased. Koskinen's (ibid.) comparative study thus implied that the recognition of translators' work, their visibility in the institution, feedback they receive on their work as well as spatial distance between where they work and

where their work is used have impact on the translator's attitude towards their work, which in turn affects their motivation levels and job satisfaction.

Two more studies, by de Jong (1999) and Fraser and Gold (2001) discuss motivation of translators investigating aspects to pursue translation as a profession. de Jong (1999) investigated the correlation between motivation and commitment to one's career as a literary translator, while Fraser and Gold (2001) studied the motivation to work as a freelance, self-employed translator. de Jong (1999) studied a group of Dutch professional literary translators to address the importance of motivation to continue their careers. She indicated some problematic aspects of the profession of literary translator, which she characterised as an uncertain one. With regard to the Dutch context, de Jong specified publishers as the main decision makers controlling the literary translation industry through their purchase of the rights to translate specific books, and also emphasised the generally low and irregular income derived from literary translation assignments. However, she described literary translation as a creative task and an artistic activity which challenges translators intellectually. As such, she specified literary translation as intrinsically motivated but also affected by extrinsic factors, such as rewards, recognition as well as competition on the market and deadlines. Her study found that overall it is the intrinsic motivation that prevails among the investigated group of Dutch translators, who were further found to have a high degree of career commitment. Intrinsic aspects of working as a literary translator were indicated as more stimulating while extrinsic aspects were reported as rather constraining. The great majority of translators indicated problem solving, creativity, and complexity of work experienced when translating a piece of literature as motivating their efforts and driving job satisfaction. On the other hand, only a quarter of the respondents specified some extrinsic factor (financial remuneration, recognition) as affecting their work motivation. de Jong observed an increase in the importance of extrinsic aspects among translators with greater work experience. As a consequence, she concluded that in the literary translation profession (especially at the beginning of one's career), the commitment to continue the career is primarily based on intrinsic motivation.

Fraser and Gold (2001) looked at freelance translators with the aim of revealing more about differences in working conditions of "self-employed without employees" depending on profession. Their study, which involved surveying of a group of translators – members of the Institute of Translation and Interpreting (ITI) – specified reasons for being freelance translators. As a comparable number of study respondents indicated that they always wanted to freelance, wanted

a change from an in-house job, many more women than men specified that their decision was motivated by a change of circumstances (e. g. the need to combine work with childcare). The responses indicated that with regards to the deadlines, rates of pay and selection of clients for whom they worked, the levels of control enjoyed by the studied freelance translators were high. As a consequence, autonomy was found to be the most significant aspect motivating the choice of freelancing over in-house work. However, Fraser and Gold emphasised that additional factors such as specialist skills and experience as well as labour market conditions may affect for example the levels of freedom when choosing clients, further negatively affecting the perceived autonomy of freelance translators.

The three studies discussed in this section bring to the fore how the environment in which translation is performed and the characteristics of a particular translation activity – with regard to the expertise that a translator has and what their expectations about this translation action are – affect the translation behaviour and overall attitude to the translation task at hand. Each of the studies accounts for the impact that the social context in which an activity is exerted has on the perception of this activity and motivation to engage in it, with Koskinen's study (2009) reporting the highly remarkable change in the perception of job satisfaction among the translators within the European Commission once their work set-up was altered. This further indicates how the theories of motivation presented earlier, all of which help to take into consideration the particular characteristics of the work arrangements of translation crowdsourcing and the environment in which it occurs, fit in well with the objectives of the current study and are thus regarded as suitable to characterise motivation in initiatives where translation is crowdsourced. The next section reviews studies on motivation specifically in crowdsourcing and in collaborative translation shedding light on the implications of the findings for the present research.

#### **4.4 Motivation in Crowdsourcing**

Studies on motivation in crowdsourcing as applied to a wide range of tasks other than translation have been carried out by Lakhani et al. (2007) as well as Brabham (2008a, b, 2010). Among the reasons likely to drive participation in crowdsourcing initiatives, they report the ability to further develop the skills that one already possesses, the opportunity to make friends with other contributors and to develop a network of people sharing similar interests and the chance to do what one does best and something fun and enjoyable. It can be expected that the motivations of volunteer Facebook translators will likely correspond to at least some of these factors.

The majority of literature on motivation for participation in crowdsourcing initiatives discusses the application of the model in areas other than translation. For example, Brabham focused on the motivation to contribute to the crowdsourcing of photography at iStockphoto (Brabham 2008a, b) or T-shirt designs at Threadless (Brabham 2008a, 2010), while Lakhani et al. (2007) explored the motivation to solve scientific challenges for InnoCentive.

Brabham (2008b, 2010) as well as Lakhani et al. (2007) emphasise the relationship between crowdsourcing and the practices within the open-source movement, indicated by Howe (2006c, 2008) as the genesis of the crowdsourcing model of content production. Brabham (2008b, 2010) and Lakhani et al. (2007) refer in their discussions to the findings of studies on motivation in open-source software development adapting them to support their consideration of motivation in crowdsourcing. Similar links between translation generated by online communities and the open source movement were also indicated by Hartley (2009), O'Hagan (2009a) and McDonough Dolmaya (2011).

In the studies by Hars and Ou (2002) and Lakhani and Wolf (2005) quoted by Brabham (2008b, 2010), the significance of the aspects of creativity and enjoyment given by the opportunity to participate in such projects is emphasised with regard to the motivation of contributing members of open source communities. They also indicate that experiences of this type are seen as an investment in one's own human capital as well as a chance to improve one's skills. The participants of the study conducted by Lakhani and Wolf (2005) additionally mention that they do what they feel is important and useful for themselves as well as for others. Hars and Ou (2002) quote a number of their respondents as claiming to contribute to open-source projects in order to build a network of peers, express themselves and gain positive reputation. However, they and similarly Lakhani and Wolf (2005) stress that factors such as direct compensation and payment for the provided contributions were also being mentioned as motivating forces.

In the crowdsourcing initiatives studied by Brabham (2008b, 2010) and Lakhani et al. (2007) a monetary reward is offered should a contribution be selected to be used commercially. Consequently, the opportunity to be financially rewarded was indicated as a motivating factor by the participants of all three initiatives. The appeal of financial gain was strongest in the case of InnoCentive where the winning contribution could be substantial. According to Brabham (2008b, 2010), the joy of solving the problem and having free time available to take up a scientific challenge were among significant incentives for participation. Brabham (2010) additionally found that through their efforts, the contributors to Threadless and iStockphoto initiatives believe to

improve their creative skills. While those submitting T-shirt designs to Threadless emphasised the love of and even addiction to the community of Threadless contributors and the opportunity to make friends with other community members, many of the non-professional photographers at iStockphoto were motivated by the chance to gain a position on the professional market.

Kaufmann et al. (2011) also studied motivation in paid crowdsourcing initiatives as organised on the Amazon Mechanical Turk platform. By adopting SDT and research on motivation in the open source software movement they offered a model of workers' motivation composing external and internal motivating factors. Among the external factors, they identified immediate payoffs (in the form of monetary remuneration received for task completion), delayed payoffs (in the form of advancements of one's skills and further job opportunities) and social motivation (compliance with one's values through participation, obligations towards a third party, the prospect of feedback). Their intrinsic motivating factors included enjoyment-based and community-based motivation. The latter were realised through personal identification with the crowdsourcing community and opportunity of social interaction. The former were realised through task identity and autonomy, opportunity to use a variety of skills, availability of direct feedback and opportunity to pass free time. According to Kaufmann et al. (ibid.), these enjoyment-based motivating factors lead to the sensation of 'fun' which might be experienced by the workers and drive the participation. The results of their survey-based study with Mechanical Turk workers indicated that the extrinsic motivational categories were positively associated with the time spent working on the tasks. However, the intrinsic factors were overall found to dominate the extrinsic ones, with enjoyment-based motivators playing a major role in motivating the surveyed workers to participate in the crowdsourcing initiatives on the Amazon platform.

#### **4.5 Motivation in Online Collaborative Translation**

Considering the broader discussion of the translation practices of communities on the Internet, the image of motivation that emerges is quite specific. Hartley (2009), in his discussion of collaborative translation on the Internet, states that the main force driving these practices is to meet the needs of communities requiring the availability of online content in different languages. Similarly, O'Hagan (2009a) suggests that the objective of fans subtitling a variety of media content is to provide it in linguistically accessible versions for other enthusiasts of the same material. This exemplifies the wish to do something out of selfless regard and for the benefit of others. Initiatives such as those described by Munro (2010) and Cavalitto (2012) emphasise altruistic attitudes of the involved translation contributors in the context of humanitarian relief. Désilets and van der Meer

(2011) only discuss the specific aspect of translator motivation very briefly but identify it as a critical issue in the organisation and management of crowd translation. This allows for some initial assumptions on the motivation to contribute to translation crowdsourcing to be formed. However, the amount of research investigating specifically what drives contribution in translation crowdsourcing remains scarce. Lenihan's study (2011) is concerned with language ideologies present in the discourse of Facebook users working on its translation into Irish. Based on her observations, she offers some insight into the motivation to provide an Irish translation of Facebook. According to Lenihan (ibid.), philanthropy is the main factor driving the contributions in the Facebook initiative, while the opportunity to gain "symbolic capital", not only in the form of actual submitted translations but also through the contribution to the discussions on the produced translations, is also of importance. In this way the contributors present their linguistic fluency and expertise to the whole community of user-translators working in the same language.

Kageura et al. (2011), from the perspective of the designer of a translation crowdsourcing platform, provide an account of the factors motivating the volunteers contributing to their three collaborative translation initiatives in Japan: Minna No Hon'yaku (MNH) and its two spin-off projects Ryugakusei Network @ MNH (RNMNH) and Kotoba no Volunteer @MNH (KNVMNH) (see Chapter 2 for more details). While RNMNH is a commercial system facilitating the translation by foreign students in Japan of documents provided by real-life clients for a payment, MNH and KNVMNH are freely available online collaborative translation platforms. In the case of MNH, which is often used by non-governmental organisations (NGOs), who upload their documents requiring translation, Kageura et al. (ibid.) maintain that the motivation of volunteering translators is to disseminate information and support the mission of a particular NGO submitting a translation request. KNVMNH functions as a platform where terminology and expressions considered being useful in disaster and post-disaster situations are collected and shared. The contributors here are motivated by their commitment to the mission of KNVMNH and the opportunity of multilingual communication. By comparison, the main motivation of the student-translators in RNMNH is understood to be financial gain.

A number of studies have recently been published on the topic of motivation in voluntary translation initiatives performed for non-profit organisations, NGOs or with the aim of supporting particular missions represented by an organisation or other non-commercial entity, and for which no financial remuneration is offered to the contributors. The issue of such volunteer translator motivation was addressed in the study by O'Brien and Schäler (2010) in a not-for-profit context,

where Internet users provide translations for The Rosetta Foundation (TRF). TRF is a charitable organisation devoted to removing language barriers by providing an infrastructure for translation and localisation. It was established to “relieve poverty, support healthcare, develop education and promote justice through access to information and knowledge across the languages of the world” (The Rosetta Foundation 2009). The support of the causes to which TRF is committed was found to be the factor most highly motivating the community of TRF volunteers, among whom many are professional translators, to provide translation services. In the above study, a significant share of 139 of the surveyed volunteers also indicated the fact that the contribution of translations is an opportunity to gain more real-world translation experience. When asked about how else they would like to be motivated in the future, the majority of the respondents declared obtaining feedback on their work – either from translation recipients or professional translators – as the most significant. The motivating factors that were found to be relatively marginal included: receiving gifts, financial remuneration or being ranked on a list of the top ten translators (O’Brien and Schäler 2010).

McDonough Dolmaya (2012) studied Wikipedia volunteer translators to find out about their perceptions on what motivates them to participate in the translation of Wikipedia content, a translation crowdsourcing initiative in a non-profit context. She compares Wikipedia translation to free and open source software (FOSS) development as in both cases, projects rely on the skills of participants involved in problem-solving tasks. Consequently, she based her framework of analysis on the findings of comparable motivation surveys carried out in the domain of FOSS. Based on Lakhani and Wolf (2005), she distinguished intrinsic motivators (enjoyment, self-improvement) and extrinsic motivators (personal benefit from the participation, financial reward) as possible factors influencing the motivation of Wikipedia translators. Adapting the study undertaken by Ghosh (2005), McDonough Dolmaya (2012) further divided motivations into four categories: social (learning or developing skills, sharing knowledge), career/ monetary (providing job opportunities, earning additional income), political (limit the power of large software companies) and product-related (to provide software to tackle a specified problem, realise an idea).

McDonough Dolmaya (ibid.) developed an online questionnaire in which she asked her survey participants to specify four reasons for their participation in Wikipedia and other translation crowdsourcing initiatives (which she defined at the beginning of the survey as indicating voluntary initiatives such as Wikipedia translation as well as translation for commercially-oriented Facebook). She found that intrinsic motivators were of greatest significance for her 75 respondents.

Making information available in other languages and supporting the mission of the organisation launching the initiative were indicated most often, with many additionally indicating that they found translation crowdsourcing projects intellectually stimulating. Those who were employed as translators in their professional life also perceived their participation in Wikipedia translation as a way of attracting more clients and a practice enhancing their reputation as translators. Another extrinsic motivator, which also scored highly among the survey respondents, was to gain more translation experience and improve their translation skills through feedback received from others. On the basis of the collected responses, McDonough Dolmaya (ibid.) concluded that in general there is more than one factor that motivates an individual to participate in translation crowdsourcing. Furthermore, both the aspects characterised by her as intrinsic as well as extrinsic were found to be relevant. Commenting on the fact that the desire to provide content in another language was most frequently mentioned as a motivating factor, McDonough Dolmaya (ibid.) compares the perception of the practice of translation crowdsourcing expressed by her respondents to how activist translators view their practices. She indicates that in both cases translation appears as a means of rectifying inequalities in the way that information is offered to various language groups.

The study completed by McDonough Dolmaya (ibid.) further found that translation crowdsourcing projects may not be perceived as equal with some initiatives being seen as of higher status or value than others. One of the Wikipedia translators indicated that he ruled out his participation in a similar project because the quality of translation there was poor and may negatively affect his reputation. Some openly stated that they only work for open source projects and do not want to provide free labour to profit-making companies. Still, almost 25% of all the respondents did not express any ideological objections to translation crowdsourcing as proven by their participation in translation crowdsourcing for for-profit companies such as Facebook.

Emphasising that there is little research contributing to the sociological and psychological understanding of motivation to voluntarily contribute translation, Olohan (2013) set out to investigate the online initiative of TED Open Translation Project. TED, a non-profit organisation, publishes videos of talks on technology, science, business, the arts and the global issues delivered by top thinkers and instigators. Transcripts of the talks are made available in English and TED asks Internet users for their voluntary translation to provide the videos with multilingual subtitles. Olohan (ibid.) specifies that for TED, voluntary translation is one of the ways to help the organisation fulfil its mission, which is to disseminate “ideas worth spreading”. She indicates that

TED recognises the importance of incentivising translators by crediting the work done by individuals, identifying the most active translators and awarding contributions with numerical scores. Furthermore, TED emphasises the role of volunteers in bringing the talks to speakers of different languages and spreading the worthy ideas globally, thus incentivising purely altruistic attitudes to generate public good.

In her study, Olohan (2013) analysed 11 blog entries published by TED with the aim of introducing some of its volunteer translators. They were interviewed by TED and asked to respond to four questions, one of them being “Why do you translate?” Olohan (ibid.) examined the motivations for volunteering translation in TED Open Translation Project based on the responses the volunteers provided to this particular question. She coded both stated and implied motivations revealed by the volunteers and assigned them into six categories: (1) sharing TED benefits, (2) effecting social change, (3) deriving warm glow, (4) participating in communities, (5) enhancing learning and (6) deriving enjoyment.

Olohan (ibid.) indicates that providing better access to TED and enabling others to benefit from what TED offers is the most frequently observed motive driving the volunteer translators, which she further specified to be a reflection of the overall mission of the TED initiative. The translators’ statements point out that through their contributions the volunteers wish to bring about social changes which emphasises the altruistic attitudes of TED translators. Olohan (ibid.) also found that the translators contribute for the sense of satisfaction and feeling good (‘warm glow’) associated with helping others and receiving positive feedback for their work in the initiative. In their statements, the TED translators further expressed their desire to be part of a community where they can interact and make friends with others. The fifth motivating factor identified by Olohan corresponds to the opportunity to learn through watching and translating TED videos, which the translators described as opening up the world of knowledge. The final motivator observed by Olohan is associated with the enjoyment that the activity of translation provides the volunteers with. She indicates that the translators perceive their TED translation experience as fun and exciting, bringing inspiration and, as defined in one case, “a favourite hobby” (Olohan 2013: 10).

Olohan’s study (ibid.), similarly to those by O’Brien and Schäler (2010) and McDonough Dolmaya (2012), emphasises the strong support for the mission of a particular organisation requesting translation as a particularly important factor driving volunteers to contribute their translations. It further implies similarity between TED translators and Wikipedia translators who all appear to be strongly motivated by intellectual stimulation. On the other hand, unlike in the studies by O’Brien

and Schäler (ibid.) and McDonough Dolmaya (ibid.), Olohan (ibid.) did not find any indication of TED translators as motivated by the opportunity to improve their linguistic and translation skills in the process. She also observed that the statements she analysed emphasised more the importance of enjoyment derived from contribution to TED translation than was the case with The Rosetta Foundation and Wikipedia translators.

Olohan (ibid.) compared her six categories of motives driving volunteer TED translators with the six-function model of volunteer motivation as offered by Clary et al. (1998) (see section 4.1.2). She specified that the motives she categorised as related to sharing TED benefits and effecting social change can be associated with Clary et al.'s (ibid.) values function and the motive of experiencing "warm glow" as correlated with the understanding function (Clary et al. ibid.). She further found Clary et al.'s (ibid.) model to be highly relevant for the study of volunteer translators' motivation as a means to compare motives driving volunteers in different translation environments and settings.

Olohan's study (2013) also highlights the lack of research on motivation in translation initiatives such as TED and emphasises the complex nature of translation activities in such scenarios. Similar to McDonough Dolmaya (2012), Olohan (2013) stresses that overall the volunteering translators are simultaneously motivated by a number of different factors and calls for an interdisciplinary study of motivation in voluntary translation which is still new to translation studies.

With regard to online translation exemplified by TED Open Translation Project, The Rosetta Foundation, Wikipedia translation or Minna No Hon'yaku and Kotoba no Volunteer @MNH projects, the findings on translator motivation as reported in the studies on each case may have a limited applicability to translator motivation investigated in this research. All discuss motivation to provide translation in initiatives organised by a non-profit, with some being strongly associated with the organisational ethos of providing humanitarian aid. However, as explained in Chapter 2, translation crowdsourcing as a commercially-oriented practice performed at the request of a for-profit entity should be distinguished from such forms of online translation. Similarly, the studies on motivation in crowdsourcing in general (see section 4.4) identified a number of motivating factors common to all the discussed crowdsourcing initiatives, however, they also revealed that some of the driving forces were closely correlated with the nature of the crowdsourced task and the overall setup of the initiative (e.g. the joy of solving a challenge specifically in the case of InnoCentive, the remarkably strong attachment to the community in the case of Threadless or the immediate monetary remuneration offered in the Amazon Mechanical Turk initiatives (Brabham

2008b, 2010, Kaufmann et al. 2011)). This was found as a strong support for the claim that the motivation to contribute to translation crowdsourcing in for-profit scenarios calls for a separate study.

Additionally, the studies by Olohan (2013) as well as by O'Brien and Schäler (2010) can be categorised as rather small in scale as the former was based on only 11 short blog entries by TED translators and the latter analysed the motivation among some of the TRF translators on the basis of the responses they provided to two survey questions. This indicates considerable scope for a more detailed and in-depth investigation which would consider to a greater extent the specificity of each translation initiative, the environment in which it occurs and the behaviours of the contributing individuals. Furthermore, none of the reviewed studies considered the particular translation platform incorporated in each of the analysed initiatives as a factor possibly affecting the motivation of the volunteers to contribute their translations. This particular focus on the platform and its influence upon the user-translators' motivation as well as the for-profit context of the studied translation crowdsourcing initiative is what differentiates the present research from the existing studies. Consequently, the present research is innovative and contributes to knowledge on motivation to collaborate in online translation.

Nevertheless, the presented studies – those on motivation in online collaborative translation as well as those on motivation in crowdsourcing in general – have provided the researcher with an extensive array of factors driving the individuals online to contribute to initiatives similar to the particular example of translation crowdsourcing studied in the present research. The reviewed studies have informed the design of the research procedure; especially, the use of an online questionnaire to learn from the individuals about their motivation was found as an efficient method and the surveys incorporated by Lakhani et al. (2007), Brabham (2008b) and O'Brien and Schäler (2010) have been revised to guide the formulation of questions to be asked by the researcher in her community of Polish Facebook user translators also through the method of online surveying (see section 6.2.2 in Chapter 6 for more details).

#### **4.6 Motivation and Technology in Translation Crowdsourcing**

The review of literature on research into human behaviour provided earlier in the chapter emphasised that the understanding of motivation can only be inferred from how it is manifested in the observable behaviour of a given individual. The study of motivation thus implies the need to examine the actions of an individual to understand what directs and stimulates them to perform

these actions. As indicated in previous chapters, crowdsourcing relies on technological advances which facilitate the collaboration of a large number of Internet users on specific tasks. In translation crowdsourcing collaborative translation platforms (see also sections 2.4 and 2.5 in Chapter 2) constitute a core element of the translation environment enabling networked individuals to engage in the activity of translation. Translation crowdsourcing thus by default requires a participating individual to interact with a particular translation platform enabling a given translation crowdsourcing initiative. In line with O'Brien (2012), the translation actions which these crowdsourcing initiatives imply can be clearly categorised as a form of human-computer interaction (HCI), further exemplifying computer-supported cooperative work (CSCW) (see Introduction for more details).

The second research question which guides the present study calls to question whether and how technologies involved in translation crowdsourcing affect the actual translation processes and the perception of the given translation crowdsourcing initiative as a whole, to further ascertain the possible implications for the motivation of those who contribute. It thus justifies the need to analyse the role of technologies in the translation actions in translation crowdsourcing to evaluate their potential impact on motivation as elements of the environment in which translation crowdsourcing occurs. For this purpose, the following sections review research in the domain of translation studies interpreting translation as a human action, which in turn leads us to adopt some concepts from activity theory (AT) (Leontiev 1978), which has been demonstrated as a valid theoretical framework for the investigation of technologies in the context of human practice (Kaptelinin and Nardi 2006) and a foundation in the design of interactions between humans and digital technologies (Bødker 1991, 1996, Nardi 1996, Kaptelinin 1996, Kaptelinin and Nardi 2006, 2012). AT has also been incorporated into research concerned with different aspects of computer-mediated work within the domain of Computer Supported Cooperative Work (CSCW) (e.g. Kuutti and Arvonen 1992, Halverson 2002, Fjeld et al. 2004).

Activity theory is complex and thus the researcher is claiming to draw only on some of its aspects. That said, the incorporation of AT's core concepts relevant to studies on technology will augment the framework for the interpretation of translation actions in translation crowdsourcing supporting the discussion on the interaction between a collaborative translation platform and its users contributing translations in translation crowdsourcing. This in turn will further help to evaluate the impact of the technologies in translation crowdsourcing on translation behaviour and the motivation of the contributing Internet users.

#### *4.6.1 Translation as an Action*

In translation studies, the framework of a functionalist approach to translation considers translation as a human action. The functionalist approach as a model of translation criticism, which emerged in the late 1970s, shifted the discussion on linguistic equivalence as the ultimate objective of translation to indicate that the aim and purpose of translation is determined by the needs and expectations of the readers in their culture (Reiss and Vermeer 1984 in Williams 2013: 52-53). Vermeer, a foremost functionalist translation scholar, interpreted translation as a communicative transfer between languages and thus a form of human action. As such, in his view, translation is an intentional and purposeful behaviour embedded in a given situation and culture (Vermeer 1983 in Nord 1997: 12). In his theory, translation is directed at the target audience, which has culture-specific knowledge, expectations and communicative needs. As he explains, to translate means “to produce a text in a target setting for a target purpose and target addressees in target circumstances” (Vermeer 1987: 29). Vermeer refers to the purpose, or aim, of translation as ‘skopos’ and specifies linguistic equivalence as subordinate to this skopos.

Holz-Mänttari places even more emphasis on the actional aspect of the translation process. She refrained from using the term ‘translation’ as such, to talk about “translational action” as a process, whose aim is to transfer messages across culture and language barriers (Holz-Mänttari 1984 in Nord 1997: 13). In this intercultural communication, language is a necessary instrument but not an ultimate goal. The works of Vermeer and Holz-Mänttari, as well as later Nord (1988, 1997) changed the perception of translation as a linguistic transcoding to interpret it as an intentional and communicative interaction between people. Specifying that translation is intentional implies that it is intended to change the existing state of affairs, which primarily is the inability of certain people to communicate because of the language barrier (Nord 1997). The person performing translation behaves intentionally and thus (potentially) is able to explain their choice to act in one way or another.

In translation, the communicative interaction is embedded in the specific source and target cultural dimensions and thus translators act as mediators and enable communication across these different dimensions. According to Holz-Mänttari (1984) and Vermeer (1987), the translator is the professional expert in translational action. The translator produces the target text which they regard as functional in accordance with the purpose (skopos) of the translation task commissioned to them and takes responsibility for the final product of their translation process.

Taking a functionalist approach, translation in translation crowdsourcing albeit chiefly not performed by professional translators may be interpreted as a purposeful activity embedded in a particular social and cultural context of a given translation crowdsourcing initiative. In translation crowdsourcing Internet users allegedly take on the role of the key actor in translatorial action which they perform at the request of a for-profit entity. The specificity of translation crowdsourcing, however, is defined by the online environment in which it is performed and the technological tools which are incorporated to facilitate the actual translation processes. Functionalist approaches present the translator as a mediator between the source and target cultures in the action of translation. The present research is particularly interested in this process of 'mediation', as in translation crowdsourcing the individual performing translation needs to interact with specific technological solutions which enable translation actions in the online environment. To this end, the present research adopts selected concepts from activity theory (AT) as a theoretical framework which offers a specific interpretation of human activity as an individual's interaction with other people and the world which is mediated by tools (Kaptelinin and Nardi 2006: 8).

In the context of translation, AT was discussed by Sang (2011) as an approach to translation pedagogy. By presenting translation as a motivated socio-cultural activity, Sang (ibid.) incorporated AT to establish an explanatory framework of translation tailored specifically for translator education. In the present research, however, the focus is on the mediation of translation activity by tools. As will be explained later in more detail, AT discusses tools as artefacts (Kaptelinin and Nardi 2006) which embody peoples' needs and desires. They are material as well as more abstract tools that people have 'appropriated' to empower themselves to achieve the specific objectives of the activities they perform. With the concept of tool mediation AT, stresses the social nature of humans and their interactions, which are shaped by culture, but further emphasises that these interactions are affected by the artefacts developed in this culture (Kaptelinin and Nardi ibid.).

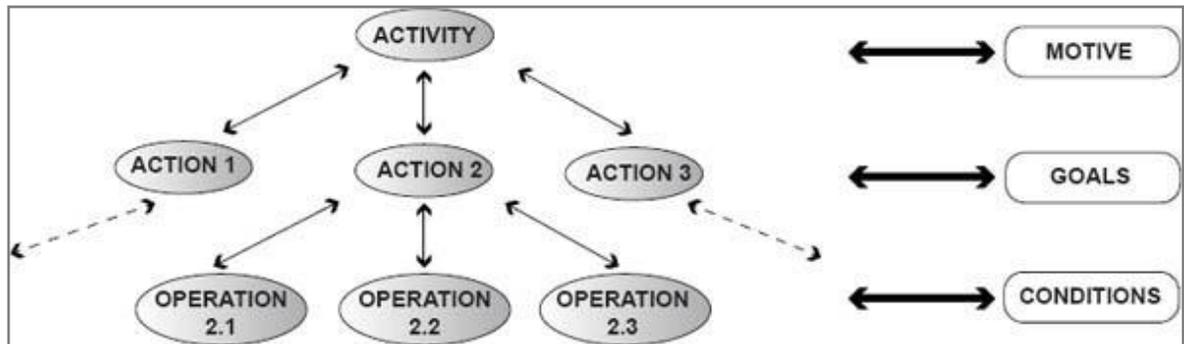
#### *4.6.2 Activity Theory – Basic Concepts*

##### *4.6.2.1 Activity*

When describing human activity, AT focuses on its structure, context and development. AT postulates object-orientedness, which implies that every human activity is oriented towards an object, which is something that exists in the world. Objects give meaning to what people do but in

themselves do not determine activities. As specified by Kaptelinin and Nardi (2006), a social context in which activities unfold transforms both their subjects and the objects.

To analyse the subject-object relationship characterising each activity, AT proposes a hierarchical three-level structure, composed of activity, action and operation (Leontiev 1978) as illustrated in Figure 4.1:



**Figure 4.1 Hierarchical structure of activity (adapted from Kaptelinina and Nardi 2012: 26)**

Activity constitutes the top-level and is undertaken to fulfil a motive – an object which meets a certain need of the subject. AT interprets needs, biological as well as psychological, as the ultimate causes behind human activities. Once a need is associated with an object, it both motivates and directs the subject. With this postulation the framework of AT bridges the gap between motivation and action (Kaptelinin and Nardi 2006: 62). The focus on needs brings AT especially close to self-determination theory, where need satisfaction is proclaimed as defining human motivation.

To fulfil a motive of an activity, a number of goals must be achieved. The goal-directed processes are actions, which are lower-level components of activity. Actions are undertaken consciously and people are aware of their goals. Bødker and Klokmoose (2011: 6) emphasise that subjects are involved in an ongoing evaluation of the actual outcomes of actions against the desired outcomes. Goals can be broken down into lower-level goals to the point which marks a borderline between conscious and unconscious processes. The latter are sub-units of actions known as operations. These do not have their own goals; rather, they are undertaken as a response to current situations – conditions. Operations are actions which with practice have become routine, unconscious processes. This transformation can also work the other way round, with operations becoming conscious actions in situations where “conditions impede an action’s execution through previously formed operations” (Leontev 1974 in Nardi 1996: 38). AT is thus a dynamic structure with up and down movement within the hierarchical structure.

#### 4.6.2.2 Mediation

The principle of AT which is highly relevant to the present research is mediation (Nardi 1996, Kaptelinin and Nardi 2012, Kaptelinin 2013). Mediation in the context of AT specifically refers to mediation by tools (artefacts), broadly defined to include instruments, signs, language and machines, which mediate activity and are created by people to control their behaviour. Tool mediation is the key idea in AT highly significant for the whole framework focusing on human-environment and social interactions (Nardi 1996). AT proclaims that human interaction with reality is mediated and shaped by tools, which evolve to reflect the experience of those who used them in the past and who now, based on this experience, have made the tool more efficient and useful. The experience is accumulated in tools: in their structural properties as well as in the knowledge of how to use a given tool. Consequently, AT emphasises that a tool comes into existence through its actual usage. Thus by using a tool, evolutionary accumulation and transmission of knowledge occurs, influencing the external behaviour of individuals as well as their mental functioning. According to Kaptelinin (2013), tool mediation shapes the whole structure of meaningful, purposeful activities.

Kaptelinin and Nardi (2012) specify that the design and deployment of artefacts embodies the intentions and desires of humans and gives them control over their needs. Artefacts are 'appropriated' by people to empower them to fulfil the motives of their activities and thus meet the needs that they have. Kaptelinin and Nardi (ibid.) further imply that artefacts can be designed to replace human labour at the level of operations and actions, however, unlike human subjects of activity, artefacts do not have needs or intentions. Consequently, in themselves artefacts cannot create meaningful activities.

#### *4.6.3. Activity Theory and Human Interaction with Technologies*

By considering technology as a mediator between human beings and the world, in the late 1980s the postulates of AT were incorporated to reflect on the relationship between technology and people in the context of human practice (Nardi 1996, Bødker 1996, Bødker and Klokmoose 2011, Kaptelinin and Nardi 2006, 2012). In particular, the postulates of AT were found to be helpful in facilitating an analysis of how computer applications are used in empirical settings. This was motivated by the fact that the prevalent cognitive approaches at the time were not sufficient in addressing issues with the design of interactions and artefacts for specific work practice as they failed to consider factors such as qualifications, division of work and work environments which

vary depending on a specific model of work practice that may be put in place in a given situation (Bødker and Klokmoose 2011).

With the concept of human activities as mediated by artefacts, activity theorists aim to address issues particularly with the design of interactions between humans and computers understanding technology as part of the larger scope of human activities. As Kaptelinin and Nardi indicate, AT interprets the use of technology as extending beyond mere information processing and embeds it in a meaningful context indicating that “computer users are not just information-processing devices but individuals striving to attain their goals” (2006: 78). This view facilitates discussions on the appropriateness of tools for certain practices, the role of tools in changing these practices as well as the influence of practice in the evolution of tool use (Kaptelinin and Nardi 2006).

Activity theoretical perspectives have therefore changed how the interactions between humans and the interactive technologies they use are interpreted. Bødker (1991) suggested a new interpretation of the computer as a mediator, an artefact that the user acts through rather than works on or communicates with. Taking a similar stance, Kaptelinin (1996) further suggested interpreting human-computer interaction as a computer-mediated activity. Kaptelinin and Nardi (2006, 2012) specified that from the perspective of AT, people act with technologies which are designed and used in the context of people’s intentions and desires. What this implies is the need to provide tool designs which lead to development of artefacts that work when used by the intended users and which fulfil certain purposes these users have in mind (Bødker and Klokmoose 2011).

#### *4.6.4 Breakdowns*

AT introduces the concept of mediation as crucial for the interpretation of interactions between people and the world and the use of technologies. Bødker and Klokmoose (2011) identify mediators as facilitators of actions on objects of interest which could not be taken up if the mediators were not present. They further emphasise the importance of the quality of mediation stressing that during activity mediation conflicts and contradictions may arise. When defining the ideal mediator, they indicate:

“A mediator that works well allows the user to focus on the object of interest when carrying out the necessary acts supported by the capacities of the mediator. A mediator that does not work well causes breakdowns and draws the user’s focus towards the artefact as such” (Bødker and Klokmoose 2011: 9).

Bødker and Klokmoose (2011) indicate that 'breakdowns' are results of insufficient possibilities or capacities in the artefact. On the other hand, the ideal is to design an artefact which can become a 'functional organ' to the person using it. As defined by Kaptelinin and Nardi (2006), a functional organ combines natural human capabilities with an artefact in a configuration that allows a given individual to attain goals which are not achievable otherwise. They further specify that the distribution of activities between mind and artefacts occurs only within subsystems which have specific functions. Both tool-related and task-related competencies are required of an individual for an artefact to become a functional organ for them. These include the knowledge of the artefact's functionality and the goals attainable with the use of the artefact as well as skills necessary to operate the artefact and to transfer goals into the artefact's functionality.

Continuing their discussion of breakdowns, Bødker and Klokmoose (2011) specify that these can pertain to any of the three aspects associated with artefacts and corresponding with the three levels of activity. Breakdowns at the physical aspect level are related to the physical manipulation of an artefact becoming conscious due to maladaptation to the changing forms and shapes of an artefact. Breakdowns at the handling aspect level result from improper training of the user on the handling of an artefact or incorrect assumptions by its designer. Breakdowns at the subject-object directed level are the result of a mismatch between what the user wants to achieve and what is actually possible with the use of the given artefact (Bødker and Klokmoose 2011).

#### *4.6.5 Activity Checklist*

As specified by Kaptelinin and Nardi (2006:97), AT "facilitates the handling and interpretation of empirical evidence about complex phenomena of the technological mediation of everyday practices." For specialists designing interactions between humans and computers and developing specific artefacts facilitating these interactions, AT provides a broad conceptual framework emphasising the importance of understanding the context in which computer-supported activities take place. However, to support the practical aspect of computer technologies design and evaluation in accordance with the postulates of AT, an analytical tool is required. Activity Checklist (AC) has been developed by Kaptelinin et al. (1999) to address this need. AC intends to illustrate which contextual factors are most important for designing interactions between humans and computers. Its structure reflects the basic principles of AT to focus on the importance of context in the design of the effective use of a technology (Kaptelinin *ibid.*).

AC bridges the gap between the high level of AT framework and the more concrete issues that emerge and need to be addressed in the design and analysis of systems mediating interactions. AC transfers the organised concepts of AT into a set of problems and questions most crucial to interactive technologies design and evaluation – the aspects which can and have been addressed with the help of AT framework. AC was employed in a number of design and evaluation projects (see Kaptelinin and Nardi 2012). In a recent study by Manker and Arvola (2011), AC was used as a tool for structuring and interpreting empirical evidence collected in an interview study of prototyping in game design. However, since AT does not limit itself to any particular domain, AC can be adjusted when being applied to specific research contexts (see for example Fjeld et al. 2004).

Kaptelinin et al. (1999) specify that the two versions of AC, the “evaluation version” and the “design version”, are used as “organized sets of items covering the contextual factors that can potentially influence the use of a computer technology in real-life settings” (1999: 32). The role of AC is to help identify, for example, issues or trouble spots which can be addressed by designers. AC focuses on the actual use as a critical part of design process and thus is intended to be applied in analysing how people will use (or already use) a computer technology in question. Consequently, the AT’s principle of tool mediation is strongly emphasised throughout AC, which addresses the main aspects of the use of the evaluated technology. For each of the considered aspects, AC provides a set of sample questions which can be adapted to form a basis for the assessment of a particular technology in a particular context of its use.

Table 4-1 maps the four aspects with their correlated sample questions (adapted from Kaptelinin et al. 1999):

**Table 4-1 Sample questions in Activity Checklist for the evaluation of a technology.**

Aspect of technology use	Sample questions
<b>The extent to which the technology is able to facilitate (or constrain) the achievement of different goals set by the user</b>	<p>Are all target actions actually supported?</p> <p>What are the basic limitations of the current technology?</p>
<b>How the technology integrates with the environment in which it operates</b>	<p>Is the technology integrated with other tools and materials?</p> <p>Are characteristics of target technology consistent with the nature of the environment?</p>
<b>How the technology supports internalisation of ways of action and externalisation (articulation) of mental processes</b>	<p>Does the system provide problem representations in case of breakdowns so that solutions can be found and requests for help be formulated?</p>
<b>How the tool components undergo developmental transformation</b>	<p>Did the system require a large investment of time and effort in learning how to use it?</p> <p>Did the system show increasing or decreasing benefits over the process of its use?</p> <p>Are users' attitudes toward the system becoming more or less positive?</p> <p>Are there negative or positive side-effects associated with the use of the system?</p>

#### **4.7 Activity Theory and Tool Mediation in Translation Crowdsourcing**

With the concept of tool mediation, AT emphasises how technological solutions devised to facilitate interactions with the world significantly affect humans and their ability to perform different activities while pursuing their objectives motivated by specific needs. Consequently, AT

has been found to be enriching for the theory of artefact design in the domain of HCI and technologies in general. Halverson (2002) indicates that the theoretical commitment of AT to examine the broader socio-cultural-technical system, which is necessary for the computer-supported collaboration between individuals, has much appeal for CSCW researchers. While Kuutti and Arvonen (1992) used the AT concept of the structure of activity to study routine and emergent features of cooperative work situations, Fjeld et al. (2004) incorporated AT specifically to explain the design of an application for computer-supported cooperative planning. As already implied in the Introduction, the present research draws on research in CSCW and adopts the view of O'Brien (2012) by characterising the studied activity of Facebook translation crowdsourcing as a form of human-computer interaction (HCI). Consequently, AT is applied to help interpret the role of the *Translations* application and its collaborative translation platform purpose-built by Facebook to facilitate interaction with the translation module on Facebook. This interaction is crucial for individual translation-related actions which contribute to the overall activity aimed at providing translated versions of the specified Facebook content.

With this in mind, in the present research the process of translation crowdsourcing organised by Facebook is interpreted as an activity oriented towards a specific object which motivates and directs this activity. This object is to offer a target language version of the Facebook user interface. It has a status of a motive as it meets the needs of the community of the involved Facebook user-translators and is the ultimate cause behind their activity. The activity consists of a number of actions which have their individual goals and are completed by the user-translators (for example, translation of individual strings, voting on translations provided by others, etc.). The automatic processes of operations corresponding to these actions include submitting the proposed translations into the system by typing where indicated or clicking on different buttons to vote an available translation up or down (see Figures 3.2 and 3.3 in Chapter 3). All the translation actions on Facebook are mediated mainly through the collaborative translation platform which supports the translation module on Facebook and constitutes the core of the Facebook *Translations* application. The platform is thus the artefact which shapes the interaction between the user-translators, the Facebook translation module and the environment in which the interaction takes place.

The design of the collaborative translation platform was investigated in the present research through observation of its actual use by Polish Facebook user-translators in action. This was done to find out whether as a mediating artefact the platform allows its users to perform the

translation-related processes on Facebook in accordance with their intentions, so that the overall object of their activity is successfully achieved. In activity-theoretical terms, the mediating role of the artefact facilitating specific actions (Kaptelinin and Nardi 2006, 2012) within the initiative of Facebook translation crowdsourcing was tested. The quality of mediation was also assessed through the evaluation of the artefact from the perspective of breakdowns (Bødker and Klokmoose 2011) it caused when used on Facebook.

The activity theoretical interpretation was carried out to indicate that an artefact which does not mediate actions in accordance with the desires of its users may prevent the successful attainment of individual goals and in consequence the overall object towards which the activity is oriented. Should this occur, the specific needs that the subject wants to fulfil with the activity will not be satisfied. At this point, a reference can be made to the postulates of SDT, which presents need-satisfaction as a prerequisite for human intrinsic motivation to perform certain tasks. Thus by combining the tool mediation aspect of activity theory with SDT, the artefact of the collaborative translation platform and its translation system, if found to prevent the desired mediation of the translation actions on Facebook, may negatively affect motivation of the artefact users as it will impede the need-satisfaction potential of the initiative of Facebook translation. Similar assumptions were also reflected in the discussion of the importance of successful mastery of interface controls in game environments to facilitate their need-satisfying potential, as proclaimed by Przybylski, Rigby and Ryan (2010) also with regard to SDT (see also section 4.8). The postulates of AT as well as SDT in game contexts indicate that the interaction between humans and computer interfaces in computer-mediated activities depends on the mediating artefacts, their design and functionalities. The quality of the mediation affects the need satisfaction experienced when engaging in an activity and as a consequence has a potential to influence human intrinsic motivation to pursue the given activity.

For the purpose of the study, the the Activity Checklist (Kaptelinin et al. 1999) and the concept of breakdowns were incorporated to guide the researcher's focus during observation of translation actions performed by the study participants and also to guide the discussions which followed (see section 6.2.3 in Chapter 6 for details). The sample questions from the Checklist (see Table 4-1) were adapted with the most prominence being given to the considerations on how the tested technology corresponded to the specific goals of its users. This helped to address how effective the collaborative translation platform is in supporting the target actions of the user-translators on Facebook.

#### **4.8 Motivation and Game Elements in Facebook Translation Crowdsourcing**

The present research is concerned with the factors driving a particular form of human behaviour, which is translation in translation crowdsourcing. The previous sections explained that human motivation is affected by the environment in which the individual behaves and thus the interpretation and understanding of an individual's motives to perform a certain activity should include the analysis of the qualities of the environment which enable an individual to perform this activity. To this end, a framework for the analysis of the collaborative translation platform as a core element of the translation crowdsourcing environment on Facebook has been established.

Considering the overall infrastructure of Facebook translation crowdsourcing environment, Chapter 3 specified that some of its elements may be considered as game-like and thus have the potential to afford this translation crowdsourcing initiative the quality of a gamified, fun experience. As reported in the chapter, many studies on motivation in crowdsourcing as well as translation crowdsourcing consider enjoyment, satisfaction associated with problem solving and experience of fun as factors likely to motivate the contributors in different crowdsourcing and online collaborative translation initiatives (Lakhani et al. 2007, Brabham 2008a, b, 2010, Kaufmann et al. 2011, McDonough Dolmaya 2012, Olohan 2013). This section thus reviews literature on gamification which argues how integrating game-like components into non-game activities can induce meaningful behavioural change and affect motivation to perform these activities (Ryan, Rigby and Przybylski 2006, Rigby and Ryan 2007, Przybylski, Rigby and Ryan 2010, Zichermann and Cunningham 2011). This discussion will serve as an analytical framework for the interpretation of the Facebook translation crowdsourcing environment and its impact on the motivation of Facebook user-translators.

##### *4.8.1 Gamification and Motivation*

As indicated by Zichermann and Cunningham (2011), games are experiences which have the potential to evoke specific emotions in humans. Gamification aims to primarily draw from video game design so that by including elements of games in non-game activities, it becomes possible to produce the desired emotions in the targeted audiences. Gamification is thus based on the assumption that because games in their traditional sense are designed to engage the player, transferring some of their elements to other activities will afford these activities similar properties positively affecting interest in tasks and motivating their completion. To explain how these specific behaviour patterns can be achieved through gamification, the emotional impact of games as

explained both from the perspective of game design and psychological research on human motivation should be explained.

In game design, the appeal of games is broadly associated with their quality of being fun (Koster 2004, Schell 2008, Ventrice 2011). Both Koster (2004) and Schell (2008) perceive games as learning experiences and specify that a fun game should involve problem-solving and present the player with a challenge. With regard to in-game challenges, Ventrice (2011) refers to the concept of flow proposed by the psychologist Mihaly Csikszentmihalyi in reference to an optimal balance between boredom and anxiety as experienced by the individual while performing an activity. In his explanation of the concept, he mentions four prerequisites for an activity affording a state of flow: intrinsically rewarding; aimed at clear, unobstructed goals; accompanied by immediate feedback; providing balance between ability level and challenge. As explained by Ventrice, the objective of game designers is to create a system of interactions between the player and the game that will keep the player optimally challenged and in a state of flow.

However, as emphasised by Ventrice (2011), fun in games goes beyond challenges and problem-solving. Nicole Lazzaro (2010) studied the concept of fun specifically from the perspective of emotions experienced by game players. Consequently, she indicated four distinct types of fun:

- hard fun, experienced in game scenarios that provide the opportunity for challenge and mastery;
- easy fun, where the game satisfies players' curiosity and inspires exploration and imagination;
- serious fun, which concentrates on the outcome of the game, its effect on the player's psychological state and the change in how the player feels, thinks or behaves after the play;
- people fun, where the game is a vehicle for social interaction, team work and building of social bonds with others.

Lazzaro's discussion (ibid.) is strongly correlated with previous research by Bartle (1996), who suggested four player types to indicate how individuals differ in what they seek from a game:

- explorers look for an opportunity to discover something new and to gain experience;
- achievers strive to complete all the challenges that are offered in the game;
- socialisers wish to experience social interaction;

- killers desire to win the game and see as many others as possible lose.

The studies by Lazzaro (2010) and Bartle (1996) emphasise that players' preferences towards emotions experienced in games vary from person to person which further highlights the individualistic approach to the perception of fun in games. Consequently, Zichermann and Cunningham (2011: 20) imply that when building a gamified system it is crucial to learn as much as possible about those who are to be engaged with the system in order to present them with an experience that they will interpret as fun and will thus drive their behaviour in the desired way.

The review of the research on fun reveals that it is a highly complicated concept and there are many aspects to game design which need to be considered to afford it the quality of fun. What is more, as already indicated earlier, a random combination of individual game elements (or game mechanics) does not provide for a successful and appealing game design or a gamified system. Consequently, as implied by game designers and gamification researchers alike, more variables should be included in game design (and thus design of gamified systems), with human psychology being one of them (Koster 2004, 2011, Deterding 2011a, Zichermann and Cunningham 2011).

Interestingly, human psychology research into the motivational pull of video games, their appeal and ability to keep people engaged was not carried out until recently. The most prominent studies have been undertaken by Ryan, Rigby, Przybylski and Deci – all associated with self-determination theory (SDT) of human motivation (see section 4.1.1). Through their research, they have been able to indicate that the need for satisfaction, viewed as the most important aspect in SDT driving human intrinsic motivation, also has an application in gaming contexts. By proving that games have the ability to satisfy human needs of autonomy, relatedness and competence, their research has been found to lend itself to the study of motivation in gamification (Deterding 2011a, Koster 2011, Groh 2012).

Ryan et al. (2006), Rigby and Ryan (2007) and Przybylski et al. (2010) maintain that the appeal of video games lies in their property to elicit in players experiences of inherent satisfaction or fun. They stress that the state of being fun, based on one's individual emotions, is not a psychological process itself but rather an outcome of psychological processes. They explain these with reference to self-determination theory and its consideration of basic psychological needs of competence, autonomy and relatedness which they claim can be satisfied by games regardless of genre, platform or individual player differences in the perception of fun. Consequently, they recognise the three needs as sources of players' motivational energy.

Rigby and Ryan (2007) and Przybylski et al. (2010) explain that within the game environment, competence is realised in game challenges, opportunities to overcome certain problems and solve tasks. A player will feel energised to engage in further action and will also experience high levels of satisfaction once they feel effective in fighting off the challenges in the game, i.e. once the intrinsic need for competence is satisfied. The research indicates that the perceived sense of gameplay competence is related to the player's perception of game enjoyment, and immersion no matter what the game genre is. According to Rigby and Ryan (2007), "the need for competence unifies and explains the energy behind many experiential outcomes coveted by developers such as "optimal challenge" and "flow". What Rigby and Ryan (ibid.) specify as a motivational need stronger than enjoyment and immersion is autonomy. It is more likely for a person to be motivated if the perception of one's freedom to create experiences for the self is greater. Players are known for their eagerness to stretch the limits of games and not infrequently go beyond the intentions of game designers. In gameplay, the most autonomy-satisfying games are open-ended ones, where gamers have more choice in customising as many aspects of their game experience as possible. The third need that comprises the need satisfaction model is relatedness. It has grown in significance especially recently as multiplayer modes have become more popular with massive number of gamers playing together. Relatedness is a feeling of authentic connection with others in a supportive way. In accordance with the research, any opportunity to experience relatedness to other game players –as teammates or social friends – is intrinsically satisfying and further energises behaviour.

With still very little research conducted on motivation in games and the relative newness of the concept of gamification, it is not surprising that as of yet there is very little research specifically looking at motivation in gamification. In discussions on gamification, more consideration seems to be given to the incorporation of game mechanics through which certain behaviour in the targeted groups of users, consumers etc. can be motivated, than to the psychological factors that underlie the experience of fun and enjoyment and the actual behaviour change. However, because of the strong ties between gamification and game design, the theories on game motivation can be applied to investigate motivation in gamification as well.

Two presentations, by Schell (2011) on the impact of gamification on everyday life and by Deterding (2011b) on effective gamification, acknowledge the connection between SDT and motivation in games and further suggest the incorporation of need-satisfaction principles into the design of gamified experiences. Groh (2012) further develops the discussions offered by Shell and

Deterding and provides a more detailed account of how the needs of autonomy, relatedness and competence can be realised in gamified systems. With regard to relatedness, he specifies that the gamified initiative should correspond to the personal interests and passions of engaged users and connect them into communities pursuing goals which are meaningful to them. Describing competence, Groh refers very much to what game designers understand as the core of a successful game: gamified experiences should offer interesting challenges structured so that their difficulty increases while the system is mastered over time – this is in order to provide the state of flow. Finally, feedback on one’s achievements and progression should be clearly and frequently provided. Specifying that games are voluntary activities, Groh indicates that gamified systems should avoid controlling feedback and avoid devaluation of the main activity through extrinsic rewards awarded under strict conditions. The system may offer a number of different ways of obtaining the specified goal with rewards being awarded unexpectedly.

The three discussions by Shell (2011), Deterding (2011b) and Groh (2012) exemplify that to explain the motivational appeal of gamified experiences it is helpful to draw from research in both game design and human psychology. The former indicates the specific game elements and the functions they fulfil in shaping the emotions experienced in games; the latter explains how these emotions affect player motivation. This clarifies the potential to tap into the emotions of people in non-game contexts through gamification of applications and systems they are encouraged to engage with. The data analysis reported in Chapter 8 of this thesis accounts for the implications of gamification as the theoretical basis shedding light on how the dynamics of the activity of translation in Facebook translation crowdsourcing may correlate with the motivation of the contributing user-translators.

#### **4.9 Concluding Remarks**

With regard to the main research question posed in the present research, this chapter began with the literature review on approaches to the study of human motivation with particular emphasis on the role of the environment and external factors on how an individual behaves and perceives their motivation. The influence of need satisfaction upon one’s motivation has been explained with regard to self-determination theory (Deci and Ryan 2000, 2008, Ryan and Deci 2000a, b) and a functional approach to volunteering has been further described to explain how motivation may depend on one’s expectations about the functions – personal as well as social – that a given activity may fulfil (Clary et al. 1998). In this chapter, reference was also made to Kollock’s (1999)

consideration of the specificity of cooperation in the online environment and his characteristics of motivation driving Internet users to work together towards a specific goal.

Further literature review revealed that motivation has not been extensively studied in translation studies, especially with regard to professionals and their perception of translation activity and factors driving them to perform it. More recent studies did focus on motivation of non-professionals participating in a variety of collaborative translation initiatives, however, not commercially-oriented translation crowdsourcing, where translation is performed for a for-profit entity. Nevertheless, as will become evident later, the studies by Kageura et al. (2011), O'Brien and Schäler (2010) and McDonough Dolmaya (2012), as well as studies on motivation in crowdsourcing by Brabham (2008b, 2010) and Lakhani et al. (2007) serve as valuable sources of information on online crowds voluntarily contributing to a variety of initiatives on the Internet and further indicate how studies focusing on motivation in translation crowdsourcing can be conducted.

Considering further the research questions which the present research aims to address, the chapter identified the approach taken to study the impact of technology in translation crowdsourcing on the motivation of Internet users to contribute. A functionalist approach to translation (Vermeer 1987, Nord 1997) has been reviewed to present translation as a human activity, further interpreted as mediated by tools in the form of a variety of translation technologies. The core concept from activity theory – tool mediation (Nardi 1996)– has been discussed to offer a framework for the analysis of the collaborative translation platform facilitating translation crowdsourcing and evaluate its impact on translation behaviour and motivation in the activity of translation in translation crowdsourcing.

With regard to the recurring consideration of enjoyment, satisfaction and fun as factors that positively affect motivation to contribute to crowdsourcing, the potential impact of the incorporation of game-like elements into the translation activity for motivation has also been indicated. Research on game motivation and the ability to affect human behaviour through gamification (Deterding 2011a, 2011b, Shell 2011, Zichermann and Cunningham 2011, Groh 2012) have been cited with reference to the particular design of the initiative of translation crowdsourcing on Facebook. This has signified that that there may be a place for the emerging concept of gamification in the present study.

Overall, the chapter indicated how the study of motivation in translation crowdsourcing implies the need to look at the concept of motivation from different angles and to incorporate a broader

perspective taking into account the environment in which the translation activity occurs and how it is facilitated. Because translation crowdsourcing is a unique type of activity implying a specific form of cooperation of Internet users facilitated by the implementation of purpose-built technological solutions for translation, a lot of consideration needs to be given for the best way to approach the motivation of contributors in translation crowdsourcing initiatives incorporating the impact of the technology-mediated interaction they imply.

The next two chapters are devoted to the discussion of the specificity of research on the phenomenon of translation crowdsourcing and provide a review of existing methods which can be implemented to facilitate a study on the particular aspect of motivation in translation crowdsourcing. Following the description of the methodological approach adopted in the present research, the collected data is presented and interpreted in chapters 7 and 8 with regard to the theoretical considerations discussed in this chapter.

## Chapter 5 Methodological Considerations

The present study seeks to understand what motivates Internet users to contribute for free to translation crowdsourcing solicited by for-profit organisations with Facebook translation as an initiative under study. Despite the fact that the interest in crowdsourcing has been steadily growing both in academia and also outside of scholarly domains, its application to translation has still not been studied extensively enough to provide a solid methodological framework for the investigation of the phenomenon as indicated in the literature review. This chapter considers a number of existing research methods identified as suitable for the investigation of motivation in translation crowdsourcing. It further explains why none of the known methods alone will provide the insight required in the present study and thus justifies the need to develop a mixed methods research design (Tashakkori and Creswell 2007, Creswell and Plano Clark 2012). Following the initial discussion provided in the previous chapters, the chapter identifies two objects of investigation established as primary foci of the research: the online community of Polish Facebook user-translators and the collaborative translation platform used in the community to facilitate Facebook translation crowdsourcing. Sections 5.2 and 5.3 discuss in detail the distinct methods which can enable description and analysis of these two objects of investigation respectively. The application of the described methods into a mixed methods research procedure applied to conduct the present research is then discussed fully in Chapter 6.

### 5.1 Overview

As emphasised by Howe (2008), the potential of crowdsourcing lies in the Internet technology which gathers a large number of people to function together as one powerful unified organism. It has become evident that translation crowdsourcing would not have emerged without the technological advances which have facilitated the shift of translation activities to the realm of the Internet. The discussion in Chapter 2 indicated that crowdsourcing is primarily an online phenomenon which relies on technology enabling collaborative work by a large number of dispersed individuals. Thus crowdsourcing cannot be considered simply a virtual equivalent of any form of social interaction in real life. This poses a number of issues when deciding on a methodological approach and most suitable methods for data collection and analysis to adequately address the research questions pursued by the present study. As indicated in the Introduction, the investigation of motivation in translation crowdsourcing calls for the study of the activity of those who contribute to a particular initiative as well as the translation technology

which interfaces this given activity. The research questions have been formulated to reflect such a stance. Consequently, the key research question asking what motivates Internet users to contribute their translations for free in translation crowdsourcing initiatives for for-profit organisations was supplemented by a second question: what is the impact of technology facilitating translation crowdsourcing on the motivation of volunteers contributing their translations in translation crowdsourcing initiatives?

In the present research, the research questions were then operationalised in terms of two primary foci: the online community of Polish Facebook user-translators and the collaborative translation platform used in the community for the purpose of Facebook translation crowdsourcing. These two objects of investigation were studied to learn about the motivation of the members of the community to participate in the initiative organised by Facebook and ascertain the impact of the incorporated technology on this motivation.

In order to develop a framework that would allow for an investigation of the two different objects identified as the elements of the phenomenon of translation crowdsourcing relevant for this study, due consideration has been given to the existing methods applied in research on online communities as well as incorporated into studies on human activity facilitated by the advances in online technologies. The methods which can be incorporated into research involving communities on the Internet are reviewed in section 5.2. They are discussed from the point of view of their suitability to facilitate the understanding of such communities and also support investigation of activities performed in these communities, as well as interpretation of attitudes and behaviours of community members. In section 5.3, consideration is given to methods which will enable analysis of a particular technology available in a community to facilitate activities corresponding to the objectives set for the community. The focus here is on methods for observation of how technology is used in situ and evaluated by the community members to assess the impact this technology may have on the community members' motivation. The methodological issues explained in this chapter led the researcher to identify methods considered suitable for the investigation of the research questions posed in the present research. To this end, they have been incorporated into a mixed methods research procedure described in detail in Chapter 6.

## **5.2 Studying Communities Online**

The research objectives, specified in detail in the Introduction, entail the need to investigate a specific community of Internet users in its natural online setting to profile the members of the

community, their communication with one another and their performance of translation activities in the community. Kozinets (2010) states that this should be done not only through observation of the activities and interactions in the community but also through interaction with the community members to learn from them about their perspective on the initiative to which they are contributing. The following sections discuss existing research methodologies which address the challenges posed by research on human activity in the online environment. This further leads to justification of the selection of particular methods found suitable for the present study.

### *5.2.1. Ethnography Online*

Creswell (2009) specifies that a strategy which enables interaction with members of a particular community and observation of their everyday activity to study how shared patterns of behaviour develop over time is ethnography. As pointed out by Garcia et al. (2009), in order to most adequately investigate the life of contemporary society and emerging technology-mediated phenomena, the exploration of the main concerns of ethnographic research nowadays requires ethnographers to incorporate into their research the study of the Internet. As implied by Hine (2008), to meet this need, ethnographic methodologies have been evolving, following growing interest in the exploration of social interactions online so that the richness of Internet-based social phenomena could be investigated in line with ethnographic tradition. Hine (2000, 2005) proposed virtual ethnography as a new approach to the study of online settings and social experiences on the Internet, which offers two views of the Internet: (1) as a culture – characterised by a set of distinct norms and practices which ought to be studied on their own, and (2) as a cultural artefact, existing within the broader context of human cultural life (Hine 2000, 2005). However, researchers have challenged this approach to the study of the Internet where it is interpreted simply as either a product of culture or a place where culture is transformed. boyd assumes it as natural to consider the Internet as both, “an imagined space and an architected place” (boyd 2008: 26) because of how closely it has become entwined in human lives and because technological innovations change the structure of the Internet continuously.

Kozinets (2010) further points out some other problematic aspects of Hine’s understanding of online ethnographies. Hine presents them as deficient and less authentic in comparison with traditional ethnographies, as they do not allow for the face-to-face element of interaction. Furthermore, because online ethnographies question the concept of field site, the cultural or communal field which ethnographers enter and work in, Hine believes that it becomes impossible to define any informant or location and thus the studied culture or community as a whole. As a

consequence, online ethnographies in Hine's view remain partial, "almost but not quite like the real thing" (2000: 10). Kozinets (2010) criticises Hine's approach specifying that concepts such as reality, authenticity, faithfulness and reliability, in ethnography or elsewhere, are socially constructed and applicable at a particular time in particular circumstances. In Kozinets' view, sufficiency and partiality of online ethnographies are conditioned by the research focus and the characteristics of the studied social phenomenon or culture rather than the environment in which the phenomenon they investigate exists.

Nevertheless, the specific online environment does raise some significant concerns as to the ethnographic research techniques, mostly because of the unique features of a cultural group existing on the Internet on which the research should reflect. The specificity of online ethnography lies not only in how the fieldwork is defined (what constitutes data?), and how observation and interviews are conducted (authenticity). Specific ethical concerns emerging when researching online environments such as how access to research subjects is obtained and how the researcher's presence is manifested have also been widely recognised and discussed in literature on ethnography conducted on the Internet (see also section 6.4), recently by Hine (2008), Garcia et al. (2009) and Kozinets (2010). The subsequent sections will focus on netnography as a method which was designed as a solution for ethnographic consideration of communities and cultural phenomena online acknowledging the distinct features of the environment in which they exist and are studied and thus found suitable for addressing some of the issues raised above.

### *5.2.2 Netnography - 'New' Online Ethnography*

Kozinets (2010) observes that over recent years new names have started to be coined and applied in reference to online ethnographies in an effort to imply research studies which intended to adapt the traditional ethnographic approach to tackle the methodological issues emerging in the online environment. Prefixing 'ethnography' with 'virtual' or 'digital' has become somewhat of a trend together with researchers describing their online ethnographies with new neologisms such as 'webnography' or 'cyberanthropology'. Kozinets (ibid.) agrees that the conduct of cultural research of online social experiences is critically different from the investigation of experiences in the physical world and thus requires changes to the traditional ethnographic approach. He suggests that if a new type of method was to emerge under a new name it should first and foremost be concerned with providing specific procedural guidelines, a set of steps that the researcher needs to take to conduct ethnography of a community or culture found on the Internet. In his opinion, the existing discussions of online ethnography lacked clarity and consistency in

terms of research methods that need to be put in place. To fill in the gap, Kozinets (1998, 2002, 2010) proposed a set of investigation methods designed to facilitate a study of cultures and communities in the online environment. The method, which is known as netnography, is based on the observation of participants in online fieldwork and leads to the ethnographic understanding and representation of the phenomenon investigated in the online environment. Apart from observation, netnography involves time spent interacting with the online community or culture and uses data gathered through these online interactions allowing the researcher to analyse behaviours and interactions that occur in the community. It pushes the researcher to acknowledge the importance of communication, which is computer-mediated in the case of online communities, and the role it plays in the lives of a community's members.

#### 5.2.2.1 What constitutes data in netnography?

Netnography studies “technologically-mediated social interaction that occurs through the internet and related information and communication technologies (or ‘ICT’)” (Kozinets 2010: 3). The field sites in netnography are “outlets of online connections” (Kozinets 2010: 84) where people communicate, share culture and build community. Prototypical examples of online community interaction spaces include discussion boards, chat rooms, virtual worlds, blogs, wikis and social networking sites (SNSs). As emphasised by Kozinets, these evolve, grow and increasingly into each other. SNSs are such a hybrid form combining web-page, messaging and blogging features with forums and chat room access (2010:87). Netnography collects and analyses: (1) archival data – a record of the communication held in the community which is unaffected by the actions of the researcher; (2) elicited data co-created by the researcher through their interaction (personal as well as communal) with the members of the community; and (3) fieldnote data which is the researcher's own, reflective material regarding observation, interaction and participation in the community. Netnography shifts from traditional ethnographic observation of a person to interpretation of computer-mediated conversational acts which constitute the textual discourse held by the members of the studied community in their online space (Kozinets 2002: 64). Specifying as a unit of analysis not the person but their behaviour or act, netnography considers an individual posting as social and communicative observational data which is relevant and trustworthy in itself (Kozinets *ibid.*).

Data collection in netnography further includes the researcher's participation in the studied community by means of interaction and communication with the members of the community. As

will be also explained later, a netnographer should not remain invisible in the community but rather contribute and be involved in at least some types of community activity. Overall, a netnographer should aim to “balance the reflexive, autobiographical, and subjective mode of the engaged cultural participant with the objectifying precision of the scientific observer” (Kozinets 2010: 97). The fact that the object of analysis exists in the online social environment raises some specific issues related to the ethical conduct of research processes involved in netnography, and online ethnography in general. The following section explains how netnography intends to tackle the most problematic methodological aspects of adapting ethnography to the realm of the Internet.

#### 5.2.2.1 Netnography and ethical research on the Internet

Hine (2008) and also Garcia et al. (2009: 58) discuss the specific nature of observation in ethnographies online indicating that it is possible to keep it completely unobtrusive. Online data can be captured or downloaded without anyone noticing. The researcher can lurk in the community remaining unidentified or even completely undetected. This, of course, has serious ethical implications. Kozinets (2002, 2010) emphasises that in netnography a full disclosure of the researcher’s intentions, affiliation and purpose of his/ her presence amongst the studied community is always required. Under no circumstances should the researcher hide their identity. Netnographers are encouraged to offer information to the community about the aim of the conducted research, seek feedback from the researched community as the research progresses and also report some or all of the research findings to those studied. For this purpose, a separate research web page, blog or other online space can be established and maintained by the researcher to allow open and accurate identification of the research and the researcher, in a manner not disruptive to the normal activity of the studied community.

The specificity of the Internet as the environment from which netnographers retrieve their data for analysis – by and large computer-mediated written discourse published online by the members of the studied community – further gives rise to uncertainty whether to consider this kind of data as private or public. This in turn has implications for the need to seek consent and enabling the community members to make an informed decision about their participation in the research.

Researchers seem to agree that in online research contexts there is no clear-cut boundary between public and private and the ethics of using data available there are yet to be defined (Garcia et al. 2009, Convery and Cox 2012). With regard to discussion boards and chat rooms,

Convery and Cox (2012) point out that data posted there remains accessible for years after it was published. Consequently, they compare it to archived letters and correspondence posted in newspapers and magazines, which serve as legitimate data for historians. Nevertheless, the aspect that needs to be taken into consideration is how the contribution to online spaces is perceived by the contributors themselves. A number of studies (e.g. Hudson and Brookman 2004, Holmes 2009) indicate that those who post on discussion boards or in chat rooms often view their communications held there as private even though these spaces are in general open to anyone with Internet access. With boundaries between public and private in the online environment described as overlapping (Waskul and Douglas 1996), Convery and Cox (2012) encourage a research-specific ethical approach that will consider the particular features of the investigated online community in relation to the selected methodology and questions the research aims to answer.

According to Kozinets (2010), in situations where the identity of the community members with whom the researcher interacts and communicates is not recorded and when the space where the communication is held by the community can easily and legally be accessed exempts the researcher from seeking informed consent from the studied human subjects. Even if a netnographic study goes beyond unobtrusive observation of the community or downloading of archival data and involves some form of researcher's intervention and interaction with the studied subjects, exemption may be sought on the basis of the lack of harm posed by the research to the subjects if the researcher's activity conforms to the norms of behaviour accepted in the community. Nevertheless, in situations where the data collection goes beyond the realm in which the community normally functions, or other investigation methods are incorporated into the netnographic study, the procedures established for research involving human subjects will need to be incorporated to provide for ethical conduct of involved studies.

Irrespective of the research requiring informed consent or not, every netnographer has to decide on the proper ways of citing, anonymising and crediting their research participants. Garcia et al. (2009) emphasise the fact that the technology of the Internet significantly raises the difficulty of providing anonymity to the studied members of online communities. Even if a studied subject does not use their real name when communicating online, quoting their pseudonym may lead to them being easily identified in the community.

Kozinets (2010) indicates that the level of concealment offered to the research participants will very much depend on the nature of the research and the community itself. If the research is

carried out in communities not recognised as inherently vulnerable (e.g. drug use or pornographic communities, support groups for disabled or seriously ill), it is appropriate to directly ask the research participants whether they would like to remain anonymous, or be referred to by their pseudonym or real name in the research report. Nevertheless, if more security for research participants is required, the participants' names or pseudonyms can be changed along with the real name of the investigated community.

#### 5.2.2.2 Data analysis in netnography

In netnography data analysis aims to produce general statements about a phenomenon by interpreting its individual observations. Kozinets adapts qualitative data analysis processes suggested by Miles and Huberman (1994), integrating further grounded theory (Strauss and Corbin 1990) for analytical data coding with hermeneutic interpretation (Arnold and Fischer 1994, Thompson et al. 1994) as two techniques to incorporate into netnographic data analysis. In netnography, the first one involves assigning to particular units of data codes, classifications, names or labels. They mark individual units as belonging to some more general phenomenon and rather than being imposed, they emerge once the process of understanding the data progresses (Kozinets 2010: 119). Hermeneutic interpretation, on the other hand, aims more at data explanation through the analysis of patterns which emerge in the process of coding. The interpretation should go beyond the words to provide indications about the studied phenomenon, a representation of an online community or culture – its ritual practices, their motivations, typical concerns, ways of carrying out communication and maintaining of community.

#### 5.2.2.3 Netnography and other research methods

Kozinets indicates that there are contexts where netnography can serve as a standalone research method; however, it need not necessarily be used as such. Quite to the contrary, branding netnography as a “necessarily multi-method” (Kozinets 2006: 132), he strongly suggests further blending of netnography with other research methods. His first rationale for this is the distinction between research on online communities, which exist solely on the Internet, and communities online, whose presence in the online environment is only one manifestation of existence in the general social sphere. In the case of the former, Kozinets (2010) suggests that netnography alone can be considered as a sufficient primary research method. However, as research on communities online should extend beyond the Internet, netnography should be considered as a supporting

method and supplemented by other kinds of investigation. As methods particularly complementary with netnography, Kozinets (ibid.) identifies online surveys and online interviews as discussed below:

- Online survey

Kozinets (2010: 44) indicates that surveys can help provide answers to questions on the demographics of the members of the studied community as well as to learn about the adoption, patterns and preferences concerning the activities performed in the community. Furthermore, they can inform how these activities influence their daily lives in general. Data obtained through a survey may also help to confirm or verify observations made during the core netnographic investigation.

As specified by Kazmer and Xie (2008), research on Internet-based phenomena such as, for example, online communities should also be conducted online as this is the environment in which the studied participants feel comfortable. In this respect, surveys administered using online formats (see Brace 2004; Bradburn et al. 2004) are a research method that is found to be complementary with netnography, helpful in investigating the members' attitudes towards the community, their activity patterns in the community as well as revealing the members' reflections on their actions in their online community (Kozinets 2010). Online surveys are also much more accessible and easy-to-use with the number of free online surveying tools increasing and being made available on the Internet often for free.

- Online interview

Kozinets notes, that interviewing has been acknowledged as a virtually inseparable part of an ethnographic investigation. Consequently, he recognises it as a method highly complementary with netnography. Just as is the case with a traditional interview, online interviews are a conversation between two people where one assumes the role of the questioner and the other of the answerer. Nevertheless, Kozinets emphasises that interviewing online implies mediation through technology which has implications for the type of collected data – interviewing may involve, for example, sharing of documents – and requires the interviewer to approach data capturing and archiving differently. Kozinets agrees that text-based synchronous forms of communication online which take place, for example, in chat rooms offer “rather rushed and superficial interaction” (2010: 46) of very little value. However, he indicates other online interviewing methods such as exchange of e-mail or audio and audio-visual connections which can

provide extremely valuable insights (see Kivits 2005, James and Busher 2006, Hinchliffe and Gavin 2009). He further indicates that the format of the interview should be decided with regard to the data required by the researcher. As in-depth questioning may be incorporated to provide a detailed description broadening how a particular aspect of the studied community is understood, a simple conversation or a brief exchange of messages with one community member may suffice to inform the particular questions the research aims to address.

### **5.3 Studying Technologies in Use**

The particular aspect of translation crowdsourcing which is of critical importance to the present research is the specific technology facilitating such practice and its potential to affect motivation of those using it to contribute to translation crowdsourcing. In the present research, a research method suitable for investigating the collaborative translation platform on Facebook, enabling further evaluation of the platform when used by the Facebook user-translators is required. The sections below discuss existing methods that are relevant for analysis of technologies when put in practice by their intended users in the dedicated work environments.

#### *5.3.1 Contextual Inquiry*

Amongst ethnographic research methods, contextual inquiry is a field interviewing method which investigates how people act in their particular work environment (Beyer and Holtzblatt 1998). It involves observing people as they perform their tasks and interviewing them about their actions and behaviours. Contextual inquiry has been developed as a part of contextual design, an approach which aims at specifying the criteria for deciding about the design of new technology to support work practices by exploring such practices (Beyer and Holtzblatt *ibid.*). Contextual inquiry is thus a field data-gathering method which entails engaging with people at work and discussing with them the specific aspects of their work practices. It is most commonly done through the medium of a contextual interview, which is a combination of observation, discussion and reconstruction of past events (Beyer and Holtzblatt *ibid.*, Rogers et al. 2011).

Contextual interviews (Beyer and Holtzblatt 1998, Rogers et al. 2011) help develop work models characterising the structure of work in a particular work environment providing the researcher with actual demonstrations of behaviours of interest. Contextual interviews resemble a conversation rather than a questioning session. The interviewer, like an apprentice, tries to build more of a partnership with the interviewee who is seen as a master uncovering the aspects of their work. Performed at the interviewee's place of work, they provide concrete data on the

unfolding work and enable to gain understanding of the observed work experience. In a contextual interview the researcher alternates between observing the interviewee at work and probing about the performed actions so that the interviewee has the opportunity to reveal more details about their work structure. This further allows the researcher to understand the reasons behind the interviewee's actions and reveals the requirements for the design to fit with the existing ways of working.

The increasing interest in workplace-based observational studies has been noticed recently in translation research. Désilets et al. (2009) conducted a study investigating how linguistic resources and translation technologies are used by professional translators to resolve translation problems. They used contextual inquiry in combination with think-aloud protocol (see section 5.3.2.1) to obtain data from eight professional translators observed in their workplace. Contextual inquiry was also incorporated into a study by Karamanis et al. (2010) to investigate the activities of professional translators working for a language services provider and ascertain how deployment of machine translation (MT) could affect their work practices. In the study, individual translators were observed performing translation-related tasks and questioned by the interviewer to explain their activities.

#### 5.3.1.1 Remote contextual inquiry

As already indicated, contextual inquiry primarily aims to define criteria for the design of future software and hardware systems to support work practices as required in specific contexts. English and Rampoldi-Hnilo (2004) adapted contextual inquiry for use in remote settings to allow for investigation of already existing products – in their case it was computer software – once they have been implemented and customised according to the needs of its particular users. Remote contextual inquiry incorporates web conferencing and screen sharing applications to enable the researcher to observe how the product is used in different work places without having to visit any of these places in person. In the scenario suggested by English and Rampoldi-Hnilo (*ibid.*), a particular user of the investigated software shares with the researcher the screen of the computer on which the software is installed. The researcher can then observe and record (with the help of a screen recording application) how the user incorporates the software into their work practices. Consequently, data on the actual use of the software can be collected and further discussed with the user interacting with the software. Remote contextual design further collects information about users' goals and the tasks performed to accomplish those goals, measurement of task

performance, including task completion time and feedback on layout, content, and behaviour in the user interface.

### *5.3.2 Usability Testing*

As indicated by English and Rampoldi-Hnilo (2004), remote contextual inquiry has been designed by incorporating into the method of contextual design techniques characteristic for remote usability testing. Usability testing encompasses a broad set of procedures aiming at evaluating a product by testing users' interaction with the product. It is a part of a product design process which provides information about the actual experience of using the product and provides feedback on the quality of the tested product design (Barnum 2010). Usability testing is a very broad concept and a specialised discipline in its own right and is beyond the scope of the present research to comprehensively discuss it here. However, considering the recognition of some of the distinct usability testing procedures to conduct contextual inquiry in remote settings (English and Rampoldi-Hnilo 2004), the method is briefly reviewed to reflect on some of its techniques which can be adopted to facilitate the study of the particular technology under discussion in the present research.

As specified by Barnum (*ibid.*), a usability test involves presenting a user with a set of tasks embedded within a specific scenario and framed around the user's goals. While the user performs the specified tasks, their interaction with the tested product is observed and the user is encouraged to share their reflections on the use of the product. This differentiates usability testing from contextual inquiry, where instead of presenting the users with a specific set of tasks, they are observed while engaging in their normal work activities. Advances in technology have significantly changed the methods and practices that support usability testing which is now being performed in many different environments and under many different conditions. However, the observation of user-product interaction – i. e. users' incorporation of a product to perform tasks they find meaningful – remains the baseline for any usability evaluation study (Barnum 2010). Tulis and Albert (2008) identify think-aloud protocols as an effective way of investigating what led the participant to take specific actions, how confident did they feel about them and what were they trying to achieve.

### 5.3.2.1 Think-aloud protocol in usability testing

Think-aloud is a method where a participant is asked to speak out loud the thoughts that form in their mind while they are performing a certain task or activity. The standard theoretical framework of think-aloud protocol (TAP) was introduced by Ericsson and Simon (1993) who further identified two basic types of think aloud: concurrent TA (CTA) and retrospective TA (RTA). In the former the study participants verbalise their thoughts while they perform a given task. In the latter the participants verbalise their thoughts after the task is completed.

Thinking aloud can be incorporated as a method in usability testing to help better understand users' emotions of using the product once they are able to articulate them and share with the researcher. Thus, the observational part of usability testing informing about how a given product is used can be implemented with the users' own expression of why they use the product in certain ways and what they think about it (Barnum 2010). Fernandez et al. (2011) report that thinking aloud has been found to be one of the most frequently applied methods for researching the usability of a product, application or website in relation to the user interface.

At the outset, Ericsson and Simon already indicated that concurrent TA may affect how the given task is handled by the study participants (1993). Van den Haak et al. (2003, 2007, 2009) in their studies compared concurrent and retrospective think-aloud protocols focusing on whether the second type of TA is helpful in overcoming the drawbacks of concurrent TA. In RTA, the participants can perform a task in their own manner and pace and without any distraction. Instead of commenting on the product while using it, they can reflect on the use of the evaluated product after they have finished. As a drawback of RTA, van den Haak et al. (2003) mention the duration of an individual session which is usually longer than in case of CTA. This may often lead to the participants forgetting some specific aspects of the use that occurred during the session. However, a stimulus helping the participants recall their thoughts, for example a video recording of the process they went through during the session may reduce this problem. On the other hand, their studies indicated that thinking aloud negatively influenced task performance; nevertheless, the overall numbers and types of problems detected by the test users were similar for both methods. They described CTA verbalisations as producing a few more problem detections while RTA verbalisations were found to be more substantial. They concluded that CTA more faithfully represents task-oriented usability tests while RTA sessions provide more detailed data on user reactions.

### 5.3.2.2 Remote usability testing

Traditionally, a usability test would be carried out in a special testing laboratory, where some recording equipment would be installed to register the test participant while they use the evaluated product. A separate room would also be prepared for the researchers observing the participants and their behaviour (Rogers et al. 2011). However, with the recent advances in technology, usability tests no longer need to be performed in specialised laboratories and the researchers need not be physically present with the participant during the test. A special mode of usability testing that is put in practice especially when it is not possible for the participants to travel to the place where the test laboratory is located is remote usability testing (Bartek and Cheatham 2003, Andreasen et al. 2007, Barnum 2010). Unlike in the conventional laboratory-based tests, in remote testing the test participant and researcher are separated in space and on occasion also in time. Remote usability testing allows the researcher to experience how the tested product is used in the authentic environment for which it is intended, for example the participant's home or work, their computer, or web browser etc. while also providing access to a broader pool of geographically dispersed specialised users. Remote tests are carried out with the help of online software and web applications. These are online meeting tools and screen sharing software with features such as Voice over Internet Protocol (VoIP) for verbal communication, online chat for written communication and video conferencing providing visual means for conducting a test. Many purpose-designed applications will further allow the facilitator to share their desktop with the participant or access the participant's desktop to record their activity within the application (Barnum 2010).

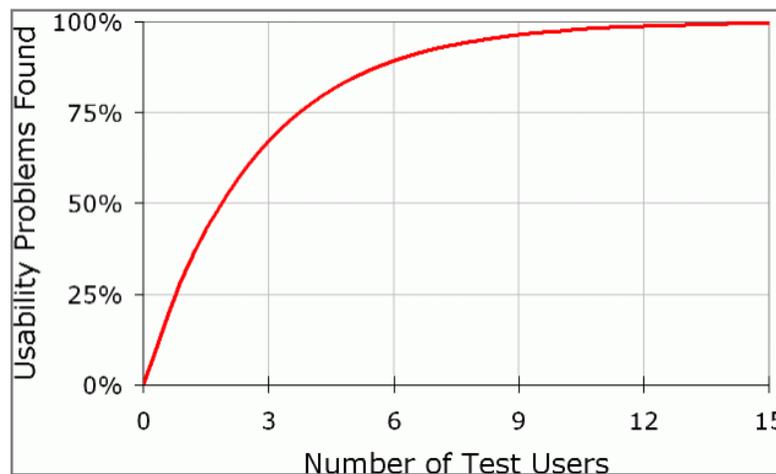
Think-aloud protocol as a method for usability testing can also be incorporated in remote test settings. As reported by Andreasen et al. (2007), in most cases it is performed by video and audio connections together with remote desktop sharing. Their survey comparing conventional TAPs administered in laboratory settings and synchronous remote think-aloud usability tests found both methods to be virtually identical in the results generated in the corresponding usability tests (2007: 1412).

### 5.3.2.3 Sample size in usability testing

Specifying the number of participants for a usability study is a recurring source of debate (Macefield 2009). Research in usability testing carried out in early 1990s revealed that effective

testing could be done with small numbers of test subjects. The studies carried out by Nielsen and Landauer led them to determine the cost-benefit ratio for affordable yet effective usability testing. They specified that having as small as five test participants allows for the optimal return of 85% of the findings to be uncovered. They even suggested stopping further testing after the results from the fifth test subject are obtained as from that point onwards the findings will start repeating themselves (Barnum 2010). Thus it can be concluded that even with a small number of subjects involved in a usability test will allow to uncover as much as 85% of the findings from a particular test. This however, should not be confused with the usability findings for the entire product - to evaluate usability of a product as a whole many different usability studies may need to be employed.

Nielsen and Landauer presented their cost-benefit ratio as a curve:



**Figure 5.1 The rate of findings provided in a usability test with regards to the number of test users (adapted from Nielsen 2000)**

When explaining the curve, Nielsen (2000) specifies that the most notable observation that can be derived from it is that if the number of test users is zero, there are no insights into the usability of the evaluated design. However, the insights shoot up as soon as information from a single test user is collected. According to Nielsen, at this stage almost a third of all that there is to know is learned. He further notes that people are different and thus the second as well as the third test user will add something new to the evaluation but not as much as the first test user did. He concludes that after the fifth user, the researcher will start observing by and large the same results repeated again.

Rogers, Sharp and Preece (2011) quote after Dumas and Redish (1999) that five to twelve is generally accepted as the number of participants in a usability test, however, they indicate further that a smaller number may also be sufficient if for example a budget is small or some specific time constraints are imposed. Sometimes even a quick feedback from two or three users may prove critical for a certain design idea.

Hwang and Salvendy (2010) imply that when TA is incorporated as a usability evaluation method, small numbers of test users will provide good qualitative data. Similarly Macefield (2009), based on literature on usability testing implies that a group size of as little as 3 participants can be considered valid with groups of 5-10 participants considered as a sensible baseline range. However, he points out that the majority of research on the number of participants for a usability study focuses on problem discovery as a rule for specifying the test group size, which he considers as problematic for a number of reasons. Usability testers are known to decide the sample size for a test based on an estimate of problem discovery rate across participants in similar studies done in the past (Hwang and Salvendy 2010). Macefield (2009) emphasises that the number of discovered problems often depends on the complexity of the study, the degree of diversity across the test user group and the training (if any) received on the tested system by the study participants. He suggests that the numbers should be increased along with the complexity of the study and the criticality of its context. However, Schmettow (2012) concluded that because different studies vary in how usability problems are identified, it is not possible to specify the exact number of study participants required in any particular case.

#### **5.4 Concluding Remarks**

The chapter has provided a review of existing research methods which are considered relevant to the present study. These can be applied to support the scientific investigation of the contemporary online social world where communities and cultures emerge and maintain their presence in the online environment, as facilitated by the affordances of Web 2.0 technologies. The methods presented in the chapter allow for investigation of the activities performed by the members of such online communities with the help of dedicated technologies that are made available to them. They enable the researcher to evaluate the technological solutions employed to facilitate the activities in the community.

In the present research, the Facebook users involved in the process of Facebook translation crowdsourcing are treated as an online community which has been provided with a purpose-built

translation technology facilitating collaborative translation activities from within the social networking service of Facebook itself. The chapter specified that netnography adapts the principles of ethnography to the realm of the Internet but in itself does not offer a means for evaluating the role that the technology incorporated into the activities of the studied community. To this end, in the present research, netnography has been complemented with two online surveys and an observational study inspired by the methods of contextual inquiry and remote usability testing to first learn about the community of Facebook user-translators and the activities performed in the community and then ascertain the role of the translation technology in affecting these activities and the perceptions and behaviours of the community members. The mixed methods research design adopted in the present research reflects the two-tiered approach where two distinct objects of enquiry have been specified and studied and is explained in detail in the next chapter.

## **Chapter 6 Methodology and Mixed Methods Research Design**

On the basis of the methodological considerations in Chapter 5, this chapter discusses the research design and explains the operationalisation of research methods for the purpose of conducting the research described in this thesis. Because of the interdisciplinary nature of the present study, which delves into psychological aspects of participating in translation crowdsourcing but also investigates the technologies incorporated into the practice, no single method alone was found sufficient to provide the insight required to meet the research objectives. As a consequence, different research methods were combined, resulting in a unique mixed methods research design. Section 6.1 provides the rationale for the choice of individual methods as well as the sequence of their incorporation into the research design. Next, section 6.2 introduces each of the employed methods individually. This is followed by the description of how the methods were implemented as well as what kind of data they provided to explain their suitability in relation to the research questions.

### **6.1 Justification of the Mixed Methods Research Design**

Before making an attempt at addressing the specific questions on the motivation of Internet users participating in translation crowdsourcing, it was necessary to gain a sufficient understanding of the community of Polish Facebook user-translators, the practices they perform when providing translations on Facebook and also to understand their use of the translation technology which facilitates the translation activity on Facebook.

As described in Chapter 3, the present research focused on the Polish community of Facebook user-translators so as to narrow down the scope of the study and ensure the feasibility of the research in terms of available resources while still allowing for the collection of a sufficient body of data. On the basis of the typology offered by Kozinets (2010), the groups of user-translators working on Facebook translation are examples of 'online communities' – they have been formed on the Internet for a particular purpose and in the present research their translation activity is treated as confined within the online environment. This would indicate netnography to be a sufficient investigation method for the present study (see 5.2.2.4). However, in relation to the objectives of the present research, the incompleteness and partiality of using netnography alone as a sole research method became more evident in the course of the study. As this research progressed it became apparent that the technological aspects of the process of Facebook translation is likely to have an influence on how the initiative is perceived by the involved user-

translators, further affecting their behaviours as well as their intentions to contribute, hence their motivation. This highlighted the need for a more detailed analysis of the translation platform on Facebook and how it functions when it is used in practice by the Facebook user-translators. The research questions made it necessary to probe much deeper into the characteristics of the activities undertaken by the members of the Polish community who contribute to translation crowdsourcing on Facebook. The profile of the community members drawn on the basis of the observation of behaviours manifested in the community, observation of communication held there and interaction with the community members did not provide data specific enough to be clearly linked to their use of technology which affords their contribution to translation crowdsourcing. It was therefore found necessary to directly approach the community members and question them about their perception of motivation in relation to the role of the mediating technology.

As explained by Kozinets (2010) the methods incorporated into one's research should be selected on the basis of their potential to provide access to data relevant for the discussion of the questions the research aims to address and suggests triangulating netnography with other methods. Following this line of thought, it was found necessary to identify and incorporate into the research additional methods that would enable: (1) the observation of the community members while they are actively engaged in their practice of contributing into the initiative of Facebook translation, (2) investigation of the particular instance of translation crowdsourcing on Facebook, (3) characterisation of those actively contributing to the initiative, (4) the underlying motivation to do so and (5) the role of the purpose-built technology in affecting this motivation. To consider technology as a factor affecting motivation in translation crowdsourcing implied the need to shift the object of inquiry of the research from the community of Facebook user-translators to the technology supporting them to perform their translation activities enabling translation crowdsourcing. This further implied the need to search for other research methods. Two more data collection methods were subsequently introduced into the research design – an online survey and an observational study – to expand the body of research data and support the analysis of the investigated case of translation crowdsourcing.

## **6.2 Mixed Methods Research**

Tashakkori and Creswell defined mixed methods research as “research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or a program of enquiry” (2007: 4). Creswell

and Plano Clark (2012) specify that mixed methods research aims to provide a better understanding of the researched problems than if either qualitative or quantitative approach had been used alone (2012: 5). The main objective of applying the technique is to enable mixing the different types of collected data together. Depending on whether the data is collected in stages (sequentially) or all at the same time (concurrently) and also on whether the different types of collected data are of equal importance or inform one another, a number of different mixed methods strategies can be applied (Creswell 2009, Creswell and Plano Clark 2012).

As illustrated in Figure 6.1, in the present research, data were collected and analysed in three stages by adopting two different mixed methods strategies (stage I and stage II) with a final observational study (stage III) incorporated to deepen the type of data and support the observations made after stages I and II were concluded. From the perspective of the object investigated, stages I and II constituted part 1 of the research procedure where the object of investigation was the community of Polish Facebook user-translators. Stage III constituted part 2 of the research procedure where the object of investigation was the translation platform offered to the community members for the purpose of Facebook translation. The shift in the object of investigation is further reflected in the choice of methods incorporated in each of the two parts of the research procedure. Figure 6.1 depicts the methods applied in the research in relation to the chronological progression of the study with further detail shown in Figure 6.2.

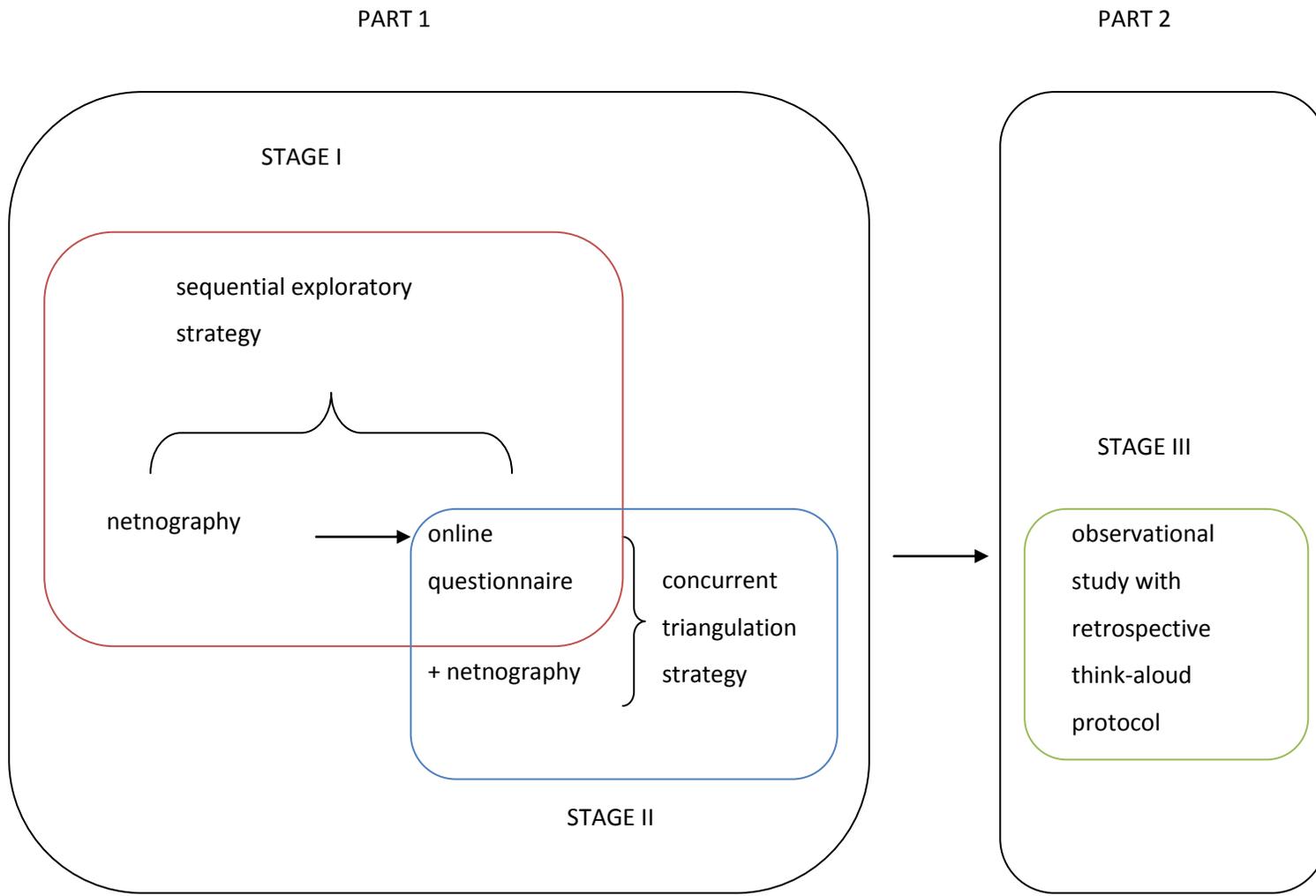


Figure 6.1 Research design based on mixed methods illustrating different stages in the two-part research procedure

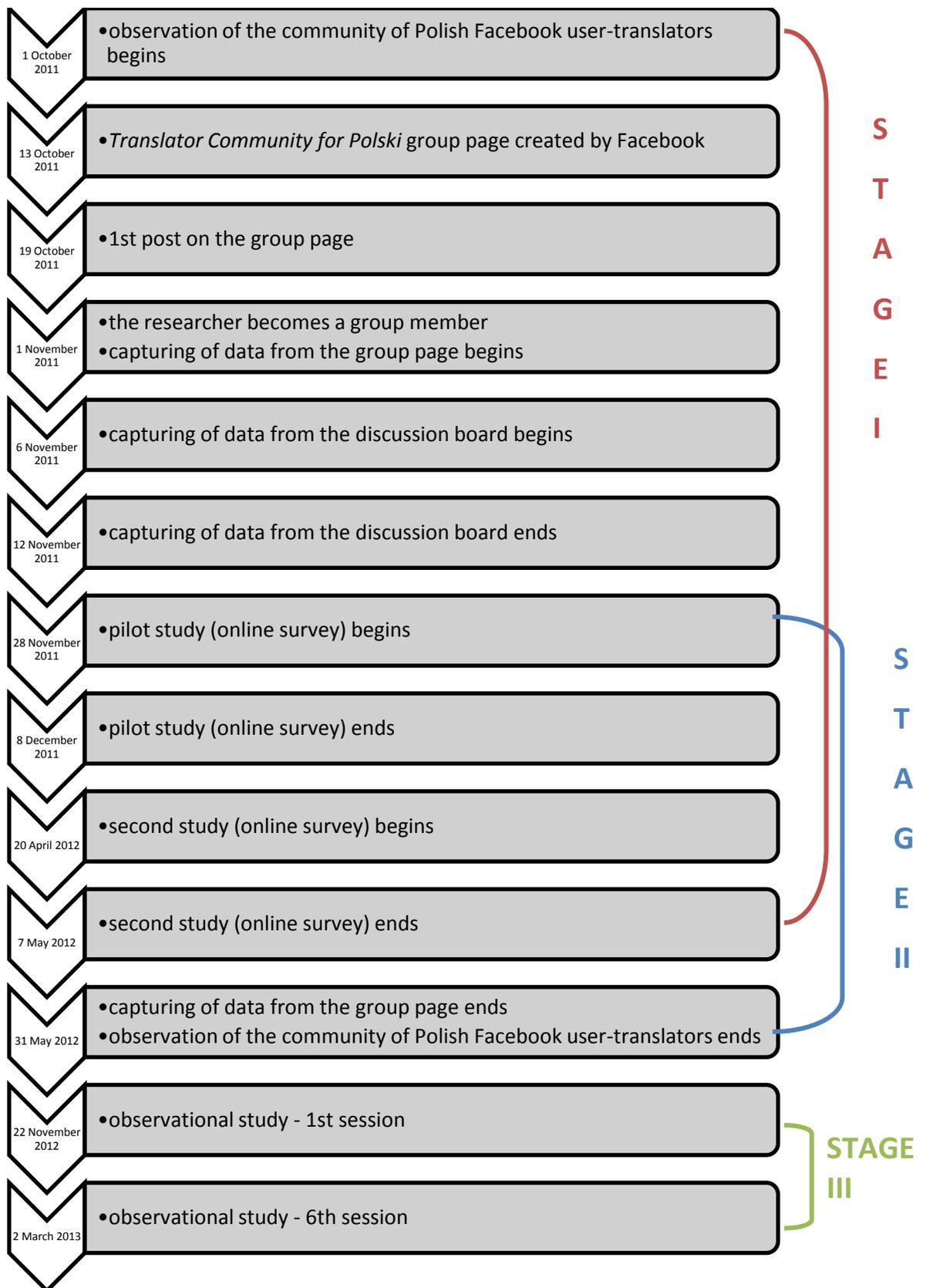


Figure 6.2 Timeline of research and data collection procedures

Stage I adopted a sequential exploratory strategy (Creswell 2009). Here the qualitative data obtained through the initial netnographic observation of the community of Polish Facebook user-translators allowed for the design of online questionnaires as tools administered to the sample population to obtain quantitative data. Simultaneously with the administration of the online surveys – carried out in two steps, first as a pilot and then as a main study, the netnographic observation and interaction with the observed community continued. These processes continued onto stage II of the research procedure, forming a concurrent triangulation strategy (Creswell 2009), which provided integrated quantitative and qualitative data. Stage III was developed on the basis of the interpretation of the results obtained in stages I and II and was designed specifically to assess the analysis after stages I and II were completed. The mixing of all the data collected in the three stages of the research, i.e. data triangulation (Creswell 2009) allowed the researcher to compare and seek convergence across the data sources further adding to the validity of the whole study.

The aim of applying the qualitative component of netnography (see section 5.2.2 in Chapter 5) was first to capture the dimension of the phenomenon of translation crowdsourcing and its cultural context in order to: (1) learn about the experiences of the individuals in the community of Polish Facebook user-translators and (2) gain understanding of the practices involved in translation crowdsourcing on Facebook. Through the netnographic observation and analysis of communication held on the discussion board, it became apparent that the Polish Facebook user-translators very rarely made direct reference to why they decided to participate in the initiative of Facebook translation, what motivated them to offer their contribution or whether there were any aspects of the initiative that they found encouraging or discouraging. Thus, following the first stage of netnography, an online questionnaire as a quantitative research tool was incorporated into the research design.

The role of the online survey (see 5.2.2.4 ) was to understand the variables about demographics, performance, behaviour, feelings and perceptions related to the process of translation on Facebook with a focus on the user-translators' motivation. Through the two surveys administered online, it was possible to collect data complementing the netnographic observation but also revealing new information on the psychological aspects of participation in translation crowdsourcing. Specific information on factors perceived as motivating the user-translators and also the characteristics of their participation in the initiative, collaboration etc. were obtained which helped to draw a provisional profile of a Polish Facebook user-translator as an individual

with a particular perception of their motivation to contribute to the initiative. The first survey conducted between 28 November – 8 December 2011 (see Figure 6.2) was a pilot study designed on the basis of the initial analysis of data collected in the first stage of netnography. The second survey conducted between 20 April – 7 May 2012 (see Figure 6.2) was a revised version of the pilot study, whose analysis indicated which sections or individual questions could have been expanded to delve deeper into the issue of motivation of Internet users contributing to translation crowdsourcing.

The netnography continued to the point where the data collected in the two questionnaires was analysed, marking the end of stage II (see Figure 6.1). Triangulation of data collected in stages I and II revealed that there were some specific issues related to the translation module and the functioning of the Facebook application that negatively affected the experience of Facebook translation into Polish. The problems with the inability of the translation module to accept Polish translations structured in a way that is grammatically, lexically and semantically correct were identified as a main source of discontent and frustration among the user-translators who expressed their dissatisfaction with the quality of the produced translation. This led to the assumption that the design and functioning of the dedicated translation platform on Facebook may also influence motivation, further emphasising the need to carry out yet another, qualitative observational study specifically aimed at providing data on the use of the technology facilitating translation processes on Facebook to assess its impact upon the motivation of translators.

Thus to investigate how the *Translations* application functions when used in practice by individual user-translators and to record what problems arise during its use, an observational study was designed and implemented in stage III of the research procedure (see Figure 6.1). The focus of the research and the object of investigation were shifted to the technology facilitating translation on Facebook in order to evaluate its impact upon the individual translation actions and motivation of those who use this technology. The study design was inspired by the method of remote contextual inquiry and incorporated elements of usability testing and a retrospective think-aloud protocol (see 5.3.2). The study was organised with six Polish Facebook user-translators who agreed to participate in the study. They were given the opportunity to reflect on their practical usage of the *Translations* application by thinking aloud while the recorded session of their own interaction with the *Translations* user interface - the collaborative translation platform - was being played back to them. Prior to these sessions, a pilot study with one member had been conducted primarily to evaluate the technological setting for performing the translation sessions on Facebook, establish

the timeframe of each of the individual sessions and assess the design of the study from the perspective of the data which the researcher intended to collect.

- Research data quality

Teddlie and Tashakkori (2009) indicate that regardless of data collection procedures and research design, it is necessary to evaluate two basic aspects of data quality: (1) validity of measurement/ credibility and (2) reliability of measurement/ dependability. The first aspect requires that the research measures the actual concept that is intended to be captured and is credible to the studied subjects. The second aspect relates to the consistency and accuracy of measurements and recorded information to ensure that any variation in a phenomenon can be tracked and/ or explained consistently. Teddlie and Tashakkori (*ibid.*) specify that incorporating multiple mixed measures in mixed methods research affords a much better opportunity to assess the overall quality of the collected data by triangulation of sources and methods as well as theories. Similarly, Hunter and Brewer (2003) imply that multimethod research by definition has all that is necessary to assess the validity of research specifying that when obtaining similar results by applying diverse methods the validity of the findings is increased.

In social and behavioural research, securing measurement validity/ credibility is the more problematic aspect. This is because it is often difficult, if not impossible, to observe directly the degree of correspondence between a construct (in this case motivation) and the data obtained about it. It is also difficult to ensure that the research captures the concept as it is perceived by the study participants and not how the researcher understands the concept. To avoid relying on 'face validity' only (i.e. the validity based on what the data collection procedure 'looks like' it measures), Teddlie and Tashakkori (2009) indicate that some additional strategies can be employed.

For the quantitative strand of a mixed methods research they suggest that consulting others (peers, experts in the researched field/ concept) may help to assess the content validity to ensure that the instrument incorporated into the study measures the concept it is supposed to measure. In the present study, the design of the online questionnaires administered to the Polish Facebook user translators were based on a number of questionnaires incorporated into studies on motivation to contribute to online initiatives (Lakhani et al. 2007), including humanitarian-oriented translation crowdsourcing (O'Brien and Schäler 2010), and crowdsourcing in general (Brabham 2008a, 2008b 2010). Teddlie and Tashakkori (*ibid.*) further specify that reliability of the study results can be checked by evaluating how consistent the results are when repeatedly administered

to the specified test group. To this end, the surveying part of the research involved a pilot study which preceded the second study, with both surveys administered in the same community of Polish Facebook user-translators albeit resulting in a different set of respondents. As the data analysis in Chapter 7 will reveal, the data collected in these two studies is extremely consistent, especially with regards to the concept of motivation to participate in the crowdsourcing initiative organised by Facebook which these studies intended to measure in the first place.

Considering the qualitative strand of mixed methods research, Teddlie and Tashakkori (ibid.) indicate trustworthiness as a single concept encompassing the four aspects of measurement validity, credibility, reliability and dependability. They emphasise that the data captured in qualitative studies is always in the form of study participants' interpretations. To secure trustworthiness of such data they suggest prolonged engagement with the studied subjects and persistent observation of their activity in their social environment to provide sufficient understanding of their culture, contextual factors affecting them and their activity. They further suggest performing member checks, i.e. asking the studied participants to verify observations of behaviours and phenomena made by the researcher in their study. To this end, the netnographic observation of the community of Polish Facebook user-translators lasted for a period of seven months (between 1 November 2011 and 1 May 2012) and included analysis of archival data as well as data produced in the community at the time of the observation. As will be explained below, no specific permission was sought to obtain this data, however, the researcher disclosed her presence and intentions prior to netnography. Furthermore, the researcher actively interacted with the community to consult about her observations on their translation activity on Facebook, both via the community group page and a research blog. One of the community members further acted as a 'key informant' (Kozinets 2010: 107) providing the researcher with a better insight into the functionality of the collaborative translation platform on Facebook and the nature of the translation activity in which the Polish Facebook user-translators are involved. His expertise was sought prior to data collection at all the consecutive stages of the research procedure and a pilot translation session preceding the observational study was carried out with the key informant as well. This helped the researcher to improve the study design. Chapter 8 provides more details on this pilot session.

The final stage of data collection added to the trustworthiness and overall validity of the research by enabling the researcher to confront her interpretation of motivation to participate in translation crowdsourcing based on the analysis of netnographic data and quantitative data

measuring the user-translators' own perception of motivation to contribute to such initiatives. The data collected through the observation of the Polish Facebook user-translators while working on Facebook translation provided more experiential insight into their actual actions and behaviour in translation crowdsourcing as well as provided insight into the impact that the technology facilitating translation crowdsourcing has on these actions and behaviour. By using these different data sources in the study the researcher proceeded with the data triangulation, which took place after all the studies were completed. Sections 6.2.1 – 6.2.3 of this chapter present in more detail each of the methods incorporated into the research procedure providing some explanation for their choice and particular sequence in the research.

- Research ethics

In line with Convery and Cox (2012), the conversations held on the discussion board and on the community group page were assumed to be public and thus no consent was sought from the Polish Facebook user-translators for the capturing and analysis of this data as required in netnography (see also 5.2.2.2). Nevertheless, as suggested by Kozinets (2002, 2010) the researcher did disclose her presence in the community of Polish Facebook user-translators; the community was informed in a blog post and also on the group page about the intentions of the researcher and the intended data capturing procedures, which involved archiving the messages posted on the discussion board and on the group page. As there were no objections raised by any of the community members the data collection proceeded. The excerpts of the discussions on the discussion board and the group page used to illustrate the data analysis in Chapter 7 have all been anonymised and translated by the researcher into English. The discussion participants are identified as contributor 1 (C1), contributor 2 (C2) etc. to identify unique discussion contributors, indicate their number in a given discussion and the sequence in which they contributed to it.

It was necessary to seek ethical approval from the host institution for the purpose of implementing the online surveys. Once the approval was granted, both surveys were annotated with a statement specifying that by proceeding to participate in the survey the respondent agreed for their answers to be interpreted for the research purposes and published, informing also that the data would be collected anonymously. The approval is available in Appendix A1.

Similarly, application for the approval of the observational study was submitted to the Research Ethics Committee. Once granted (see Appendix A2), consent was sought from every one of the members of the community of Polish Facebook user-translators who were willing to participate in

the study. Because the activity of translation on Facebook is embedded within a user-translator's personal Facebook profile, a lot of attention was paid to securing anonymity and confidentiality of the collected data. The study participants are identified as user-translator 1 (UT1), user-translator 2 (UT2) etc. with the pilot study participant referred to as UT0. The recordings were securely stored on the researcher's external drive and not accessible to anyone else. As stated in the application for the study approval, a gift voucher with the value of 10 EUR was offered to each of the study participants to compensate for the relatively lengthy time committed to participating in the study.

### *6.2.1 Netnography of the Community of Polish Facebook User-Translators*

Incorporating the method of netnography, the archival messages posted on the Polish Facebook user-translators' discussion board were collected for analysis first. This constituted the first qualitative stage of the research procedure which informed the design of the questionnaires subsequently administered online to the community of user-translators in stage II. The netnography continued in the second stage of the research procedure, during and after the implementation of the two online questionnaires, and encompassed the analysis of the communication held between the community members on their dedicated Facebook community group page. As suggested by Kozinets (2010), personal and communal interaction with the community members was held. The researcher posted to the community page and created also a publicly available research blog. The community members were invited to interact with it but in fact, they rarely commented on the posts on the blog. Instead, they shared their reflections on the Facebook community group page. One of the community members expressed a particular interest in the research and took on the role of a key informant. The researcher also archived the leaderboard rankings and kept reflective fieldnotes in the form of annotations to the data collected for analysis through netnography. The software package used for archiving and annotating the data was Evernote, available under a freemium licence. Evernote comes with an extensive set of help documentation files and the Evernote Customer Support Portal is available online so that it is possible for Evernote users to self-teach how to use the software. The software captures whole web pages or selected webpage excerpts in the form of electronic 'notes'. It was used to archive the posts on the discussion board, the conversations held on the group page and the leaderboard rankings. The electronic Evernote 'notes' can be tagged, annotated and given comments. The process of coding the collected data thus was performed in Evernote as well; the fieldnotes were stored in Evernote as comments to the content of the archival data in Evernote.

Furthermore, the researcher made an attempt at contacting Facebook to seek more detailed information about the translation crowdsourcing initiative. Specifically, the aim was to enquire about some statistical data on the translation of Facebook into Polish and the translation activity of the Polish community of user-translators, with a hope to further engage in conversation on the pitfalls of the collaborative translation platform and Facebook's seeming ignorance of the problems with its functioning specified by the Polish user-translators on the discussion board and their Facebook community group page. The Facebook-employed member of the Polish community (see 7.1.2 in Chapter 7 for more details) was the first point of contact, however, he was not authorised to reveal any more specific information himself. Nevertheless, he offered to communicate the researcher's queries to language managers in Facebook using the company's internal mailing lists. While waiting for his reply, the researcher decided to contact another Facebook employee who was mentioned on the Facebook Developers Blog<sup>34</sup> as a person involved in the development of the *Translations* application. He also specified that my requests should be forwarded to a Facebook language manager and provided an email address to one of them. The researcher contacted the manager outlining her research and the wish to obtain more information about the translation crowdsourcing initiative and the Polish community of user-translators. From the outset, the language manager made it clear that only publicly available information would be shared with the researcher. However, after providing the manager with a list of specific queries, the researcher did not hear from him again. The researcher decided to contact again the Facebook-employed member of the Polish community after almost a month of waiting for the manager's response. In his reply email the Facebook employee addressed only some of the researcher's questions as per the instructions he received from the language manager indicating that the company could not comment on any other issues. The researcher has thus been left with the impression that while some of the Facebook employees were initially willing to provide help, those who were authorised to engage in conversation about the initiative of Facebook translation would not reveal more than already publicly available<sup>35</sup>.

The content that has served as netnographic data in the research consisted thus of archival data, elicited data and fieldnote data as specified below:

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<sup>34</sup> <https://developers.facebook.com/blog/> [last accessed: 10 January 2014]

<sup>35</sup> The contacted Facebook language manager in his only email message addressed to the researcher suggested visiting <http://www.socialbakers.com/facebook-statistics/poland> to find more statistical data although the service does not provide any information about the initiative of crowdsourcing translation into Polish.

- the archival interactions of the community of Polish Facebook translators held on the Polish Facebook user-translators' discussion board. The material retrieved from the board between 6 and 12 November 2011 covered the data generated on the board by the community in the period when the discussion board was active and operational on Facebook. The first post was published on the board on 28 March 2008 and the last one on 26 September 2011<sup>36</sup>;
- the data available in the form of chat room-like instant messages (synchronous and textual) posted by the members of the community and the researcher on the Facebook group page for the community of Polish Facebook user-translators. The group page has been operational from 13 October 2011. The researcher was added as a community member on 1 November 2011. From that day until 31 May 2012 the communication held on the group page between the community members was followed; the researcher also contributed to the ongoing discussions;
- the data from the leaderboard rankings specifying the numbers of votes and translations provided by individual user-translators in a given week and month. This data was being captured on a weekly basis in the period between 1 November 2011 and 31 May 2012;
- the research blog<sup>37</sup> written by the researcher containing the purpose of the research and the methodology incorporated. The first blog entry was posted on 18 November 2011. The researcher also indicated her affiliation and published links to her academic presentations and publications there. The blog served also as a space where the subsequent stages of the data collection processes were introduced and through which participants for the surveys and the observational study were recruited;
- researcher's personal communication with one of the Facebook Polish user-translators held on Facebook via the messaging system available there. This user-translator was the key informant who helped in understanding the intricacies of the translation system on Facebook. His opinion was sought before conducting any of the research studies requiring the participation of the wider community of Polish Facebook user-translators and he was

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<sup>36</sup>The discussion board was removed as a feature of Translations in early November 2011 (see Chapter 3 for more details).

<sup>37</sup><http://ftmprojekt.blogspot.ie/> [last accessed 6 November 2013]

consulted with regards to the design of the final, observational study and participated in the pilot for the study;

- observational and reflective fieldnote data; the observation of the community started on 1 October 2011. The 'lurking' phase lasted for one month, which allowed the researcher to familiarise herself with the organisational structure of the community, the channels of communication and the translation system put in place by Facebook. The fieldnote data were the researcher's comments on and interpretation of the material collected in a-c above.

All the data collected through the method of netnography was in Polish; at all times the researcher interacted with the community of Polish Facebook user-translators as well as its individual members in Polish, which is the mother tongue of the researcher and the greatest majority of the members of the studied community of Polish Facebook user-translators<sup>38</sup>.

All the individual topics posted on the discussion board as well as the threads contributed to the group page were analysed. The data were annotated and coded with categories corresponding to the recurring themes. Some of the codes included: 'mistranslation', 'lack of contact with FB', 'translation module – issues'. Apart from the conversations relevant to the topic, there were also many discussions not in any way related to the process of Facebook translation or translation in general. This is specifically the case with the messages exchanged on the discussion board. These were all marked as 'off-topic' and removed from the analysis.

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<sup>38</sup>One of the community members, who participated in one of the surveys and also contributed to the discussions held on the community group page, is a native speaker of English. See section 7.1.2 for more details.

Three major themes were identified as recurring in the conversations held on the discussion board and on the group page. Table 6-1 specifies the themes and their corresponding codes which were used to describe the individual discussion board topics and group page threads to group them into the three themes. 'EN' stands for English language, 'FB' stands for Facebook, 'UI' stands for user interface and 'UT' stands for user-translator.

**Table 6-1 Themes of the discussions held by the Polish Facebook user-translators on the discussion board and on the community group page**

Theme	Corresponding codes
Theme 1: Polish language and its usage	'absurd translation', 'dialects', 'glossary', 'help request', 'linguistic resources', 'linguistic issues', 'mistranslation', 'style', 'terminology';
Theme 2: the translation module on Facebook and its functioning	'approved mistranslation'; 'resigning from participation', 'restriction of participation', 'switching to EN FB UI', 'translation module – functioning', 'translation module – imposing structure', 'translation module – improvement suggestions', 'translation module – issues', 'translation module – lack of knowledge on use';
Theme 3: issues related to the process of Facebook translation and to translation crowdsourcing in general	' from FB representative', 'lack of contact with FB', 'from FB employed UT', 'lack of guidelines', 'translation module - lack of knowledge', 'motivation', 'collaboration', 'on Facebook', 'other translation crowdsourcing', 'rewards'.

### 6.2.2 Online Surveys

Online surveys have been incorporated into netnographic research carried out, for example, by Chan and Li (2010) to study consumer-to-consumer interactions in virtual communities. Janta (2011) reports on the use of netnography together with online survey and interviews in her study of Polish migrant workers in the UK hospitality industry. Brabham used online surveys (2008b) and online interviewing via Instant Messenger (2010) in his research on motivation in crowdsourcing.

An online survey was incorporated by Lakhani et al. (2007) in their study on the same topic, as well as to investigate the reasons for participation in Open Source movements (Hars and Ou 2002) where similarly to crowdsourcing practices, a large number of Internet users are involved out of their own free will. O'Brien and Schäler (2010) conducted a study where their survey specifically targeted translators volunteering translation in the initiatives organised by the Rosetta Foundation.

The objective of the online survey was two-fold: (1) to gain understanding about the volunteer Polish Facebook user-translators in reference to the type of translation-related activities they perform while participating in the Facebook translation initiative as well as their use of the collaborative translation platform, and also (2) to gain insight into the factors most likely motivating the volunteering translators to offer their translations. The primary goal of the pilot study was to assess the feasibility of the research design in which an online survey is incorporated as a quantitative data collection method complementing a qualitative research method of netnography. On the basis of the pilot study the second study was developed and conducted with the members of the same community of Polish Facebook user-translators. Based on the analysis of the responses gathered in the pilot study, the design of the second questionnaire was slightly altered – some sections were expanded and questions reformulated, mainly to obtain more specific responses to relevant questions. Both questionnaires – delivered to the community of Polish Facebook user-translators in the pilot study and in the second study – were provided in Polish. Their original versions together with their translations into English (produced by the researcher) are available in Appendix B.

It was important to supplement the research with information on the demographics of the members of the user-translator community as well as to learn about the adoption, patterns and preferences of usage of the technology behind the translation system operating on Facebook. The aim of the surveys was to find out how the community members join the Facebook translation initiative and then consequently how they participate in the initiative, how often, which translation mode do they prefer and how they use the collaborative translation platform available there. The structure of the questionnaires and the questions they included were being developed while the netnographic observation of the community progressed and the data available from the discussion board was being collected and analysed by the researcher. The important aspects of the process of providing translation on Facebook and the questions to be asked specifically about the usage of the platform and character of participation in Facebook translation were logged in the form of annotations to netnographic data in Evernote. The design of the structure of the online

questionnaires – particularly the sections enquiring about user-translator motivation – was adapted from the following studies (each of which was described in more detail in Chapter 2):

- studies of motivation in crowdsourcing which investigated the practices of contributors to the initiatives of InnoCentive (Lakhani et al. 2007), iStockphoto (Brabham 2008b) (online surveys) and Threadless (Brabham 2010) (online interviews);
- study of motivation in open source software movement (Hars and Ou 2002, Lakhani and Wolf 2005) (online survey);
- O’Brien and Schäler’s (2010) study on motivation of volunteer translators contributing to the crowdsourcing initiatives of The Rosetta Foundation (online survey);
- the study of motivation in three translation crowdsourcing initiatives discussed by Kageura et al. (2011): Minna No Hon’yaku (MNH) and its two spin-off projects Ryugakusei Network @ MNH (RNMNH) and Kotoba no Volunteer @MNH (KNVMNH);

The analysis of the above studies led the researcher to identify a number of motivators common in the initiatives of crowdsourcing in general, as well as those specific to translation crowdsourcing and helped draft some initial survey questions. Additionally, upon the review of literature on human motivation in Chapter 4, the framework of self-determination theory (SDT) and its discussion of intrinsic and extrinsic motivation (Ryan and Deci 2000a, 2000b, Deci and Ryan 2008) were incorporated into the design of the questionnaires to find out about the motivational potential of the participation in Facebook translation to satisfy Facebook user-translator’s needs of autonomy, relatedness and competence. Similarly, the questionnaires aimed to reflect Kollock’s perspective on factors motivating collaboration online (1999) together with the functionalist perspectives on motivation for volunteering proposed by Clary et al. (1998). Furthermore, by interpreting Facebook translation crowdsourcing as an initiative with game-like features (and thus potentially a gamified experience – see Chapter 3), the questionnaires aimed to assess the ‘fun’ aspect of the participation in the initiative which could further support need satisfaction processes outlined in SDT. Thus the findings of research into motivation in games and in gamified experiences (Ryan, Rigby and Przybylski 2006, Lazzaro 2010, Ventrice 2011, Zichermann and Cunningham 2011), were also incorporated to guide the design of the questionnaires.

On the basis of the literature, the factors most likely motivating the Facebook user-translators to contribute their translations have been specified as follows:

- to experience satisfaction of needs of competence, autonomy and relatedness;
- because the contribution has the values function, the social function, the career function, the understanding function, the enhancement function;
- to experience self-efficacy, because of the attachment to the group, because of the belief in mutual exchange and reciprocity, and to maintain (or gain) reputation online;
- to experience 'fun'.

The table below identifies the surveys' questions (available in Appendix B) which probe each of the specified factors drawn from the motivation theories composing the theoretical framework adopted in the present study and discussed in detail in Chapter 4.

Table 6-2 Motivating factors and the probing questions in the surveys

Theoretical framework	Motivating factor	Probing questions	
		Pilot study	Second study
<b>SDT</b>	Experience of competence	IV.1.c,d; IV.4.b;IV.5.c;	IV.1.b; IV.1.f; IV.2.d; IV.3.d; IV.5.c; IV.6.c
	Experience of relatedness	IV.2.b; IV.5.f	IV.4.b; IV.6.a
	Experience of autonomy	III.4; III.5; III.6	III.4; III.5; III.6
<b>Functional approach to volunteering</b>	Has the values function	IV.1.e; IV.3.b,e; IV.5.c	IV.1.h; IV.2.b,e; IV.3.e;
	Has the social function	IV.3.a	IV.2.a
	Has the career function	IV.3.c	IV.2.c
	Has the understanding function	IV.3.d	IV.2.d
	Has the enhancement function	IV.3.d,f; IV.5.a,d	IV.2.d,f; IV.5.a,d
<b>Online cooperation</b>	Experience of self-efficacy	IV.1.c,d; IV.4.b;IV.5.c;	IV.1.b; IV.1.f; IV.2.d; IV.3.d; IV.5.c; IV.6.c
	Group attachment	IV.2.b; IV.5.f	IV.4.b; IV.5.f; IV.6.a
	Belief in mutual exchange and reciprocity	IV.2.c; IV.5.e	IV.1.g; IV.4.a; IV.5.e; IV.6.b
	To maintain (gain)online reputation	IV.1.f; IV.3.f,g; IV.5.b,d	IV.1.b; IV.2.f,g; IV.3.f; IV.5.b; IV.6.d
<b>Gamification</b>	Experience of 'fun'	IV.1.a,b	IV.3.a,b

The quantitative data collected in these two studies was analysed by applying a descriptive strategy for interpretation of statistical data (Coolidge 2006, Teddlie and Tashakkori 2009).

Coolidge (2006) explains that the purpose of descriptive statistics is to offer data measurement using tables, graphs and basic number descriptions such as means and averages to provide a conceptual picture of a group of numbers enabling comparisons to be made, causes and effects to be argued about, etc. Descriptive statistics help document the sources of statistical data and its characteristics, demonstrate causes and effects and make appropriate comparisons. In the present study descriptive statistics were used so that the attributes of the studied population of the Polish community of Facebook user-translators, their behaviour and the attributes of their motivation as the main phenomenon under study could be explored. The descriptive approach allowed for patterns and trends to be discovered and then summarised in easily interpretable ways helping to understand the nature of the variables and their relationships. Different types of graphs were used to illustrate frequency of occurrence and distribution of considered variables. Measurements of tendencies were provided as median averages of a given group of observations to represent the midpoint of a distribution in a given case (Coolidge 2006). The statistical analysis of data was performed in Microsoft Office Excel 2003, available for use at the host institution. A summary of the survey results was presented to the studied community in a blog post.

#### 6.2.2.1 Questionnaires design

The pilot study questionnaire (see Appendix B1) was composed of 37 questions grouped thematically into six sections. The first three pertained to the respondents' demographics, their use of Facebook and their experiences of participation in the Facebook translation initiative. The fourth section contained questions addressing the issue of the users' motivation to participate in the initiative, to collaborate, to submit new translations, and to vote on translations provided by others. The last three sections included general questions on crowdsourcing, participation in other similar translation by crowdsourcing initiatives, and prior experience in translation.

The vast majority were closed questions including multiple-choice, categorical and numerical questions. All of the questions in the motivation section used Likert scales, where the respondents were asked to specify, with regards to their Facebook translation experiences: (a) the significance of the offered statements (from 0 – 'completely insignificant' to 4 – 'extremely significant'), or (b) to evaluate to what extent they agreed with them (from 0 – 'I completely disagree' – to 4 'I completely agree').

The questionnaire was provided in Polish. It was designed in Google Forms, part of free Web-based suite for the creation and editing of documents online available from Google<sup>39</sup>. A blog post was written to inform the readers that the link to the questionnaire would be put on the *Translator Community for Polski* Facebook group page. The link was made available on the group page rather than on the blog to ensure that the respondents will be the members of the Polish translator community and not random readers of the blog which is accessible to the wider public. There were 33 members in the community at the time when the first survey was announced. This number increased to 63 when the second survey was carried out six months later.

The additional questions incorporated into the second questionnaire required the respondents to specify the reasons why they use Facebook in the first place and, for those who do not use Facebook in Polish language version, why this was the case. The question probing into the motivation of the user-translators to participate in the Facebook translation initiative was split into two so that the respondents were asked separately about the reasons why they decided to start their participation in the initiative and what they perceive as reasons motivating them now to continue with their efforts of contributing to the process of Facebook translation. The respondents were also given an opportunity to specify whether they feel that the right to provide/ edit/ vote on translations should be limited only to pre-selected individuals with proven skills and experience of doing so on Facebook (as indicated, for example, by a high number of good quality contributions made, high ranks in leaderboards etc.). An additional question asked the respondents whether the best/ most active user-translators should be rewarded by Facebook to a greater degree and - if yes - how. Finally, the user-translators were asked about their perceptions of themselves as members of the community and contributors working with others towards a common goal. In total, the second questionnaire was composed of 44 questions grouped into six thematic sections just as was the case with the pilot study (see Appendix B2).

For the multiple choice questions in the motivation section, Likert scales were used again. The procedure for administering the questionnaire to the community was also the same as in the case of the pilot study – Google Forms were used to create and publish the questionnaire online. The

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<sup>39</sup>Google Forms is part of Google Drive (<https://drive.google.com> [last accessed 6 November 2013]) Google Forms assigns a unique link to the created questionnaire, which then can easily be made available on the Internet. Furthermore, once the respondents submit their questionnaire on the Internet, Google Forms automatically inputs the responses into a spreadsheet generated automatically for ease of analysis. Documents created in Google suite are protected from unauthorised access by using SSL protocol and are by default available only to the Google account holder utilising a particular Google suite product.

study was announced in a blog post and the link to the questionnaire was made available on the community group page.

Over the period of 8 days when the pilot questionnaire was open to accept responses (between 28 November 2011 and 8 December 2011) it was filled in and returned by 19 of Polish Facebook user-translators. The second study was conducted over a period of 18 days from Friday, the 20th of April 2012<sup>40</sup>. The full-scale study gathered 20 responses in comparison to 19 collected in the earlier experiment. Nevertheless, as indicated by the demographic information provided by the respondents, many of those who responded in the second study did not take part in the pilot experiment. As a consequence, the main study has allowed to put in perspective the data obtained in the pilot study and further added to the discussion on the initiative of Facebook translation and motivations for volunteering in it.

### *6.2.3 Observational Study*

The final data collection method was organised as an observational study aiming to capture the translation activity in situ on Facebook as performed by individual user-translators to further gain insight into their actual use of the *Translations* application. In particular, the interest was in their interaction with the application's main user interface, which is the collaborative translation platform. The study design was based on the principles of contextual inquiry and usability testing applied in remote settings for the observation of work practices mediated by technologies. A retrospective think-aloud protocol was further incorporated to supplement observational data with the user-translators' own thoughts on the interaction with the studied technology.

While the method of contextual inquiry brought into focus the actual sequences of actions performed by the user-translators in the dedicated environment of the Facebook application, the approach based on usability testing supported the interpretation of the observed actions for the understanding of the role of the technology used to undertake these actions. However, the purpose was not to detect particular errors and issues in the functioning of Facebook or any of its components; it was rather to observe the user-translators' behaviours and capture their responses as manifest in their actions while interacting with *Translations*, and further correlate these with the overall functioning of the application, also in situations where some usability issues occurred. As the verbalisations in retrospective think-aloud were found to be more substantial and

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<sup>40</sup>A reminder was posted also on Sunday, the 30th of April, just before a long May bank holiday in Poland. The study closed midday on Monday, the 7th of May 2012.

providing more information on user reactions (van den Haak et al. 2003), the user-translators in the study were asked to reflect on their actions after their individual sessions of interaction were finished.

To allow for the observation of how the translation activity is performed in the environment of Facebook, the researcher approached the community of Polish Facebook user-translators to participate in the observational study and show the researcher their actual translation actions on Facebook. Specifically, a ten-minute display of interaction with the Facebook application and the collaborative translation platform was requested so that the actions of translation, editing of existing translations or voting on translations could be observed first hand by the researcher, recorded and then commented upon by the study participants themselves.

Prior to their sessions, the participants were presented with an experiment protocol created in Polish by the researcher to secure the study consistency. The protocol, available in Appendix D together with its English translation, identified the course of action during the session and provided information on the software used to record the sessions. Figure 6.3 illustrates the study setup. Skype<sup>41</sup>, a freemium voice-over-IP application, was used to set up a voice connection with a given participant. Through the use of a screen sharing application TeamViewer<sup>42</sup> the participants' translation-oriented actions on Facebook were observed and recorded. The study was thus unobtrusive and secured the most authentic work environment as the study participants worked from their homes in Poland as they typically would when translating for Facebook (see [1] on Figure 6.3). Next, each study participant had their translation session replayed to them as a cue for the retrospective walkthrough of the actions they performed. While observing their own recording, a study participant was asked to explain the use of the platform in relation to the task at hand, as well as reflect on the functioning of the platform throughout the session. These reflections were also recorded with the help of BB Flashback Express<sup>43</sup> (see [2] on Figure 6.3). They were supplementary data which helped the researcher to confirm the observations made in the live sessions rather than unveil new data critical for the evaluation of the platform.

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<sup>41</sup><http://www.skype.com> [last accessed 6 November 2013]

<sup>42</sup>TeamViewer (<http://www.teamviewer.com> [last accessed 6 November 2013]) is a free software package for remote control, desktop sharing, online meetings, web conferencing and file transfer between computers.

<sup>43</sup>BB FlashbackExpress ([http://www.bbsoftware.co.uk/BBFlashBack\\_FreePlayer.aspx](http://www.bbsoftware.co.uk/BBFlashBack_FreePlayer.aspx) [last accessed 6 November 2013]) is a free screen recorder.

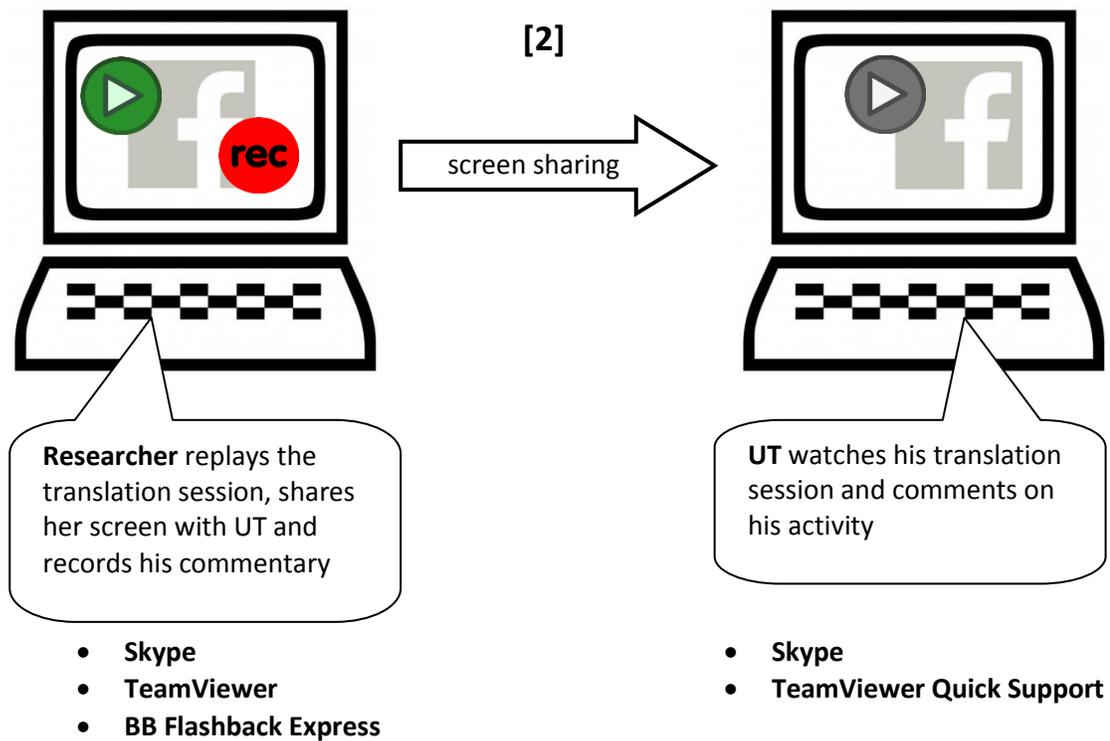
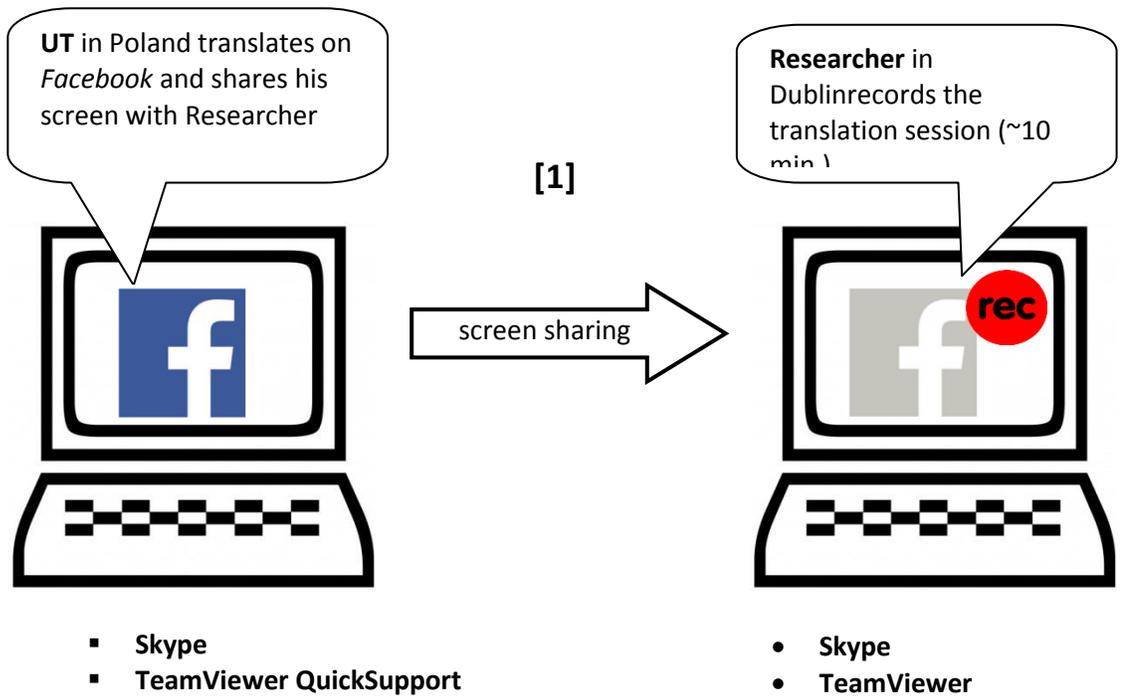


Figure 6.3 Observational study setup

The relevant comments made by the study participants in their retrospective analysis are incorporated into the discussion of each individual session in Chapter 8 and are also indicated in the 'Comments' column in Appendix E, which is a log of actions recorded for each study participant in their session (see below and also section 8.1 in Chapter 8 for more details).

The study was carried out with six of the Polish Facebook user-translators individually. It was preceded by a pilot session with the key informant which helped to identify the time necessary to set up the session and connect with a participant as well as the time that should be allocated for the actual translation activity to be recorded (see section 8.1.1 for a detailed discussion of the pilot session). The researcher decided that each individual session should not take longer than 60 minutes to ensure the comfort and attention of the participants. Based on the pilot session, a participant's ten-minute display of interaction with the *Translations* application on Facebook provided rich data which took around 25-30 minutes to be retrospectively explained by the participant. It was thus concluded that the translation activity of each participant should take around ten minutes not to exceed the one-hour timeframe for an individual session.

The study design was inspired by the method of usability testing where the findings on the number of participants needed in a usability test are very much inconclusive; however, there is a body of research which supports validity of studies involving small groups of test users (see section 5.3.2.3 in Chapter 5). Considering the response rate recorded for the two online surveys which had targeted the same community of Facebook user-translators, the intention was to conduct ten individual observational sessions. In the end seven sessions were carried out as it proved to be difficult to recruit more study participants. The study was designed for ecological validity and ensured participant anonymity according to the DCU research ethics guidelines. However, because the study took place on Facebook and involved the recording of translation activity which takes place on a participant's personal Facebook profile, it is believed that there may have been some hesitation to expose one's private profile page and information available there, even if just to the researcher promising strict confidentiality.

Though there is the possibility that a few additional sessions could have further added to the study validity, it is believed that the analysis of the conducted sessions has enabled the researcher to draw well grounded conclusions on the functioning of the evaluated *Translations* application and the behaviours of the participants, as will be further argued and presented in Chapter 8. The data collected in the study provided empirically supported insight into the actual use of the features of the Facebook application and the collaborative translation platform as well as the functioning of

these technologies and the underlying translation module. It further shed light on their role as tools mediating the activity of Facebook translation. The data determined the problems experienced by the user-translators when using the Facebook platform and enabled the researcher to observe how these problems affected the translation activity of the user-translators. In this way the objectives set for the study were met.

The collected data was analysed from the perspective of activity theory (AT) on the mediating role of tools incorporated by humans into their activities. In one of its tenets adopted into the present research, AT (discussed in more detail in Chapter 4) posits that tool mediation has an impact upon the behaviour and mental state of an individual using a given tool to perform a goal-oriented action. In the present study, the performance of each participant was analysed as a sequence of actions leading the user-translator to attain a conscious goal: to contribute a new translation, translation suggestion or vote for a selected string. These actions were further the components of the overall translation activity on Facebook oriented towards the motive of providing a Polish version of Facebook.

The actions were coded in order to elicit patterns of interaction with the collaborative translation platform as the main user interface of the *Translations* application and also the interaction with external resources (materials and other applications online supporting the Facebook user-translators in their translation actions). Appendix E is a log of the coded actions performed by the individual study participants in the recorded sessions. The codes emerged inductively mainly on the basis of the analysis of the activity recorded for the key informant in the pilot session. They were refined and further expanded for the interpretation of the activity recorded for each of the subsequent six study participants. The sequences of actions were grouped (1) to identify the original English string (quoted in the appendix as s1, s2 s3 etc.) on which the actions were performed and (2) to indicate the type of the performed action and the attained goal (i.e. to translate, to edit or to vote). The *Translations* application displays the strings at random and the user-translators can further be selective in the choice of strings they want to act upon. The strings are thus numbered for each user-translator individually (i.e. s1 acted upon by UT1 ≠ s1 acted upon by UT2).

Tables 8-2 – 8-7 in Chapter 8 illustrate the discussion of the sessions recorded with the individual study participants and additionally list the original English strings attempted by each of the study participants. The tables in Chapter 8 and in Appendix E also include the time stamps to determine the duration of the sequence of actions for the purpose of comparison between different strings

and user-translators participating in the study. The seven recorded sessions (the pilot session with UT0 and six sessions with UT1-UT6) are provided as video files in AVI format on the CD attached to this thesis as Appendix F.

As indicated in Chapter 4, AT offers an Activity Checklist explicitly for the evaluation of computer technologies mediating human activities. This framework was applied to guide the researcher's evaluation of the mediation afforded by the Facebook collaborative translation platform. For this purpose the sample questions listed in Table 4 were adapted and formulated as follows:

- Does the platform support the translation activity efficiently?
- Is the platform sufficient to accomplish what is intended? Are there any limitations of the platform which prevent the translation from being performed as intended?
- Is there any feature of the platform which is redundant?
- Are there any actions related to Facebook translation which the platform does not support but should?
- Does the platform allow for easy access to external resources and materials used to support the translation activity?
- Is the user's attitude towards the platform and how it functions more positive or negative?

With some of the study participants these questions were asked when probing them to verbalise their thoughts on the technology they use for the purpose of Facebook translation. However, in many cases the study participants themselves addressed at least some of the formulated questions without a specific prompt. The researcher considered these questions further when analysing the collected observational data. Furthermore, the assessment of the platform involved the investigation of the occurrences of breakdowns (Bødker and Klokmoose 2011) when mediating the translation activity on Facebook. Section 8.2.1 discusses the use and functioning of the Facebook platform as guided by the questions raised in the Activity Checklist and the analysis of the observed breakdowns.

### **6.3 Concluding Remarks**

This chapter explained the mixed methods research design devised for the purpose of the present study providing the rationale for the choice of the specific methods and their incorporation into the three distinct stages of the research procedure. Previous chapters focused on the specificity of the environment in which translation crowdsourcing is performed, on the particular crowd of

Internet users who participate and also on the potential of the translation technology put in place to affect the behaviour of the participants and their perception of the initiative. In this chapter the aim was to identify a research design that would allow for an in-depth investigation of all these aspects characteristic of translation crowdsourcing initiatives to provide the researcher with reliable data on this phenomenon, its participants as well as their motivations. To ensure the objectivity and validity of the whole study, three different data collection methods were incorporated and a variety of data sources was used. As a consequence, the results of all the performed studies could be integrated to offer a broader perspective for the interpretation of the issue of motivation in translation crowdsourcing.

The next chapter opens the final part of the thesis which is devoted to the presentation of the data gathered in each stage of the research procedure described in this chapter. The collected material is analysed with regards to the theoretical framework established for the present study. The findings of the research are discussed to address the research questions.

## **PART III: Data Analysis and Research**

### **Findings**

## Chapter 7 Community of Facebook User-Translators

This chapter introduces the data collected through netnography and the two online surveys (the pilot study and the second study), which constituted part one of the research procedure where the Polish community of Facebook user-translators was the primary object of investigation. On the basis of these three studies, sections 7.1 and 7.2 characterise the community and its members, their translation activity and the perception of the Facebook translation initiative. Implications for the motivation to contribute are drawn with regard to the theoretical framework established in Chapter 4.

For the timeline of the above studies' data collection procedures refer to Figure 6.2 in Chapter 6.

### 7.1 Netnography of the Community of Polish Facebook User-Translators

In the present research a netnographic study was carried out to profile the individuals participating in Facebook translation crowdsourcing and to capture their activity in some detail (see Chapter 6). This shed light on the translation challenges with which the user-translators were faced and how they solved them. It further helped to form an initial understanding of the functioning of the translation module and other features of the *Translations* application on Facebook and guided the design of online surveys used to explore the problem of user-translators' motivation.

Over the period between 28 March 2008 and 26 September 2011 when the discussion board was made available to the Polish Facebook user-translators there were 1970 individual posts published in 192 discussion threads. Of these, 110 threads (i. e. 922 individual posts) were found to be irrelevant to the interest of this research. These were coded as 'off-topic' and excluded from the data set and further analysis following Kozinets (2002: 67). In the remaining 82 relevant threads, three of them were initiated by a representative of Facebook Translations Team. From 13 October 2011 the Polish Facebook user-translators have been continuing their discussions on their dedicated community group page.

The researcher archived the discussion threads, both from the discussion board and the community group page, in the form of electronic 'notes' (see section 6.2.1 in Chapter 6) until 31 May 2012. The excerpts from these discussions illustrating the analysis in this chapter and labelled as Notes 7.2 – 7.18 are all the researcher's translations of the original messages posted in Polish on the discussion board and the community page. These original posts are often written in an

informal and even non-grammatical way which is reflected in the provided translations. The original Polish messages are available in Appendix C. As mentioned in Chapter 6, and illustrated in Table 6-1, three themes were identified as recurring both in the conversations on the discussion board as well as on the community group page. Table 7-1 provides more detail on the particular topics of discussions in each of the three thematic categories in the case of the two communication channels available to the community of Polish Facebook user-translators. The next three sub-sections provide detailed interpretation of the material collected through each of the channels with regard to the identified themes to reflect upon the activity of Facebook translation and the attitudes of the participating translators.

**Table 7-1 Thematic categorisation of discussion topics on the discussion board and the community group page by the Polish community of Facebook user-translators**

Theme	Topic	Discussion Board	Group Page
<b>Theme 1: Polish language and its usage</b>	<ul style="list-style-type: none"> <li>▪ the choice and consistent use of the most appropriate Polish language words and phrases corresponding with the terminology and style used originally on Facebook</li> </ul>	✓	✓
	<ul style="list-style-type: none"> <li>▪ the capitalisation, spelling and inflection of the second-person forms of possessive and personal pronouns as well as proper nouns, nouns describing months when used in constructions representing dates</li> </ul>	✓	✓
	<ul style="list-style-type: none"> <li>▪ the use of correct punctuation in order to adhere to the rules of Polish grammar</li> </ul>	✓	✓
<b>Theme 2: the translation module on Facebook and its functioning</b>	<ul style="list-style-type: none"> <li>▪ the drawbacks and limitations of the translation module which prevent a grammatically, structurally and stylistically correct Polish translations of the original English strings from being provided</li> </ul>	✓	✓
	<ul style="list-style-type: none"> <li>▪ methods of overcoming the shortcomings of the module by using specific 'generic' sentence structures without reflecting gender differences</li> </ul>	✓	

	<ul style="list-style-type: none"> <li>requests for instructions on how to remove the <i>Translations</i> application from their profile in order to terminate their participation in the initiative of Facebook translation</li> </ul>	✓	
	<ul style="list-style-type: none"> <li>strings translated with the use of 'generic' sentence structures and their transformation once new features of the system became available</li> </ul>		✓
	<ul style="list-style-type: none"> <li>inability to retranslate strings once they are approved by Facebook as they disappear from the translation system</li> </ul>		✓
	<ul style="list-style-type: none"> <li>being able to vote on strings but not edit them</li> </ul>		✓
	<ul style="list-style-type: none"> <li>appropriate use of the 'variations' feature which allows the variability in word forms in Polish depending on their inflection be accounted for and thus makes it possible to provide a number of Polish translations for a single original string</li> </ul>		✓
	<ul style="list-style-type: none"> <li>switching the language of Facebook user interface from Polish to English, and (reported in later posts) resigning from active translation as a result of growing dissatisfaction with the available translation</li> </ul>		✓
<b>Theme 3: issues related to the process of Facebook translation</b>	<ul style="list-style-type: none"> <li>insufficient knowledge of some of the user-translators on how to properly make use of the mechanisms and features of the translation module which leads to a number of awkward, incorrect translations being produced</li> </ul>	✓	✓

<b>and to translation crowdsourcing in general</b>	<ul style="list-style-type: none"> <li>▪ lack of interest from Facebook representatives or members of its Translations Team concerning the progress with translation and its quality; failed attempts to bring to the attention of Facebook representatives the most annoying problems with the translation process or the translation module</li> </ul>	✓	
	bringing issues concerning the functioning of the translation system to the attention of one user-translator who works for Facebook and the engineers responsible for implementing changes to the translation module		✓
	exchange of experiences in providing translation in other crowdsourcing initiatives, open-source or commercial software and game translation, subtitling and other translation projects online		✓

### 7.1.1 Discussion Board

- Theme 1: Polish language and its usage

The majority of discussions on the Polish language and its usage were the earliest of the posts on the discussion board. The user-translators were concerned with the most appropriate terminology that should be used for the English words and phrases which in many cases referred to Facebook-specific features or concepts. The user-translators discussed some suggestions for terms such as ‘dating’, ‘relationship status’, ‘friends’, ‘tag’ or ‘poke’. The user-translators would often indicate in their discussions that the standard translations of these terms as found in Polish dictionaries were inappropriate for the unique social network realm of Facebook. The user-translators thus tried to come up with a number of different suggestions for the community to choose from.

The user-translators also pointed out mistranslations and linguistically incorrect phrases and sentences in Polish translation that they started to come across while using Facebook with Polish as the UI language. Most often they emphasised the issue of noun declension and conjugation of verbs in Polish as in many cases the translation module would not allow the user-translators to reflect properly the number, gender or verb form of the translated words<sup>44</sup>. For example, it was not possible to provide two separate translations of a phrase containing a verb so that the phrase could be displayed differently when used with a female subject and a male subject (see Chapter 3). The user-translators decided (not without a dispute) that in the case of verbs, a ‘generic’ structure used in Polish when the gender of the subject is unknown, should be incorporated in such situations. This implied specifying the masculine form of the verb/ noun followed by the ending of the feminine verb/noun form in brackets as in the following examples:

Example 1: ‘a fan’ = *fan(ka)*, where *fan* = ‘a male fan’ and *fanka* = ‘a female fan’;

Example 2: ‘has become’ = *został(a)*, where *został* = ‘he has become’ and *została* = ‘she has become’.

The problem of inflection would also be mentioned in discussions on strings containing tokens. As explained in Chapter 3, the translations of tokens are stored in the translation module in the nominative case while their appropriate use within a sentence in Polish often requires them to be inflected. Thus the user-translators would be faced with a challenge to either construct

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<sup>44</sup>At the time when the discussion board was in operation, the variations feature was not supported by the translation module (see Chapter 3 for details).

translations where a given token could be used in the nominative or risk ending up with a rendering of the original string awkward both in how it looked and sounded to the reader as illustrated in Note 7.1:

[posted 13 April 2008]

#### **Feminine and masculine gender of nouns**

**C1** On Facebook there is no such option (or maybe there is but I'm not aware of it?) to inflect the verbs on the basis of gender, which we chose in the profile settings. I mean here stories from the mini-feed such as "Jan \*dodał\* zdjęcie".

In such a case it would be good to specify a universal way which we all will put into practice everywhere. Should we write:

- dodał(a)
- dodał/a
- dodał/dodała
- or maybe any other way? [over a year ago · Report](#)

**C2** from what I can see, the majority is written with the endings in brackets at the end, so this is why I write it in this way myself. [over a year ago · Report](#)

**C3** the topic has already been discussed. it looks the prettiest with a dash and brackets at the end: napisal(-a). this was suggested by a person who had had influence on publications which I used to read so I respect this person :)).

facebook sometimes inflects and sometimes it doesn't. often there is a notification that "subject is female". if there is no such notification you can find a way out by writing "user {user}..." – even if it will refer to a woman it will be more neutral. [over a year ago · Report](#)

#### **Note 7.1 Infection of verbs in Polish translations to represent gender differences**

Nevertheless, later discussions on the board imply that when the translation module started to offer contextual information about some of the strings (for example information was given whether the subject of the sentence was male or female so that the appropriate verb form could be used) not all of the user-translators paid attention to this kind of information and kept providing 'generic' forms for such strings.

The discussion on the board addressed this problem and its consequences (see Note 7.2).

[posted 14 April 2008]

**Subject gender!**

**C4** Pay attention to annotations such as "Subject sex is female" etc. Already a few times I have come across such situations that a sentence annotated in such a way was translated : (they) deleted, (they) posted etc.

Of course those who know how to read most probably won't make a mistake ;) [over a year ago](#) · [Report](#)

**C4** PS I think the topic has been repeated but if the problem keeps repeating itself it is worth reminding about it. [over a year ago](#) · [Report](#)

**C5** If only had I seen this once...!

I think it is as if someone simply mistook 'male' for 'female' and continuously kept repeating their mistake... [over a year ago](#) · [Report](#)

**C6** And what about more general translations. Translations for [sentences described as having] general subject. I don't want them to address me as 'he'. [over a year ago](#) · [Report](#)

**Note 7.2 Inflected vs generic verb forms in Facebook translation**

The user-translators also agreed on inflecting the noun Facebook in order to express it in different cases as necessary to construct grammatically correct Polish sentences. This was not an obvious decision for some as in Polish there are nouns that refer to foreign names of brands (for example Sony) which are never inflected (see Note 7.3).

[posted 29 April 2008]

**[there is no] Facebook, [about] Facebook etc. \_grammatical cases**

**C7** I suggest we don't inflect but use [a noun] in Nominative. Everywhere FACEBOOK. It is a proper name. In this way we can avoid quarreling when there is different inflection in some situations [over a year ago](#) · [Report](#)

**C8** There was a long discussion on the topic. Search the forum. [over a year ago](#) · [Report](#)

**C7** I assumed there might have been and this is why I did not elaborate [in my post]. Unfortunately as many others I have no time to search through hundreds of posts. [over a year ago](#) · [Report](#)

**C9** You can't change anything. some insist on inflecting everything. It will sound horrible but as soon as the translation is finished I'm switching to the EN [English language] version [of the Facebook user interface] – at least I won't have to look at it:) [over a year ago](#) · [Report](#)

**Note 7.3 Inflection of proper names**

The use of capital letters with personal pronouns was also a subject for debate. In official written Polish it is customary to capitalise personal pronouns as a sign of politeness. However, many of the

user-translators suggested that Facebook is designed for casual conversations and thus these pronouns should not be capitalised. Many user-translators also pointed out that some adjectives are wrongly capitalised - in Polish this part of speech is not capitalised unless at the beginning of a sentence. Another language-related issue reported by the user-translators on the discussion board was incorrect inflection of nouns referring to months in constructions representing dates. A correct Polish translation should use the noun referring to the month in the genitive case while instances were found of the noun used in the nominative.

For the issues with translation into Polish related to proper inflection of nouns and verbs, the user-translators considered a number of most appropriate methods for addressing such issues. It has to be emphasised here that those who decided to start a discussion on such a topic on the discussion board often identified themselves as having some professional experience in translation or a very good knowledge of Polish grammar and stylistics. They would often refer to well-known authoritative sources such as dictionaries, grammar books or online language advice portals which they had consulted prior to posting their suggestions on the discussion board for others to consider. When specifying why they think a string was wrongly translated they would offer an explanation so that others could analyse for themselves where the problem with the mentioned string/ translation resided.

In the case of threads with discussions concerning the choice of the most appropriate Polish translations for Facebook-specific terms (e.g. 'poke', 'friends', 'like'), it would usually be an exchange of suggestions followed by a short explanation supporting one's choice. For example, in the case of 'poke', one of the discussion participants summarised the topic which was the discussion of the translation of this term and listed 22 different translation suggestions offered by the discussion participants. In general, this topic gathered 146 individual posts posted by 106 different discussion participants. Discussions such as this one were not infrequent and the final selection of the best translation, which would usually be also incorporated into the glossary by Facebook for use by all, was often preceded by a heated debate.

When offering some suggestions for a correct way of translating into Polish, the user-translators would often support their claims quoting specialists in Polish language contacted via an online portal offering advice on the correct Polish language usage. For example, the portal *Poradnia*

*językowa*<sup>45</sup> is run by a state publisher *Państwowe Wydawnictwo Naukowe PWN*, well-known for their publication of different types of Polish language dictionaries. The portal allows its users to post their queries concerning the usage of Polish and receive a response from Polish language scholars.

- Theme 2: the translation module on Facebook and its functioning

At the point where almost 90% of the Facebook application was marked as translated, some of the active user-translators were denied the right to provide new translations or vote on them. The error message they were receiving each time they tried to provide a new translation indicated that they did not have enough experience of using Facebook to do so. Nevertheless, for the majority of the rejected user-translators that was not the case as they often emphasised that they had been using Facebook for years and contributing to its translation since the initiative started.

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<sup>45</sup><http://poradnia.pwn.pl/> [last accessed 6 November 2013]

No Facebook representative ever responded to these complaint messages posted on the discussion board to explain the situation (see Note 7.4).

[posted end of 2010]

**"You have been on Facebook for too short"**

**C10** Hello.

Since today I have been getting a notification window when I make an attempt at translating, voting, evaluating anything in the Translations application:

"You have been on Facebook for too short. To use the Translations application you need to have been using Facebook for a specified period of time. Please come back later".

Does anyone know, maybe can point me to some source, where it would be clearly defined what "later" means and where does it say what my "period of time" of using Facebook is? And how to reach the required "period of time" [of using Facebook]?

I don't understand it that until now I was using Facebook for the required period of time but not any longer Maybe I have been degraded? Hehe  
If yes then I quit.

Cheers,  
C10

over a year ago · [Report](#)

**C11** I got the same information today, so far I voted for translations :) strange information :P over a year ago • [Report](#)

**C12** Maybe we are on Facebook too long?

They either changed something or something broke down because I have the same problem. over a year ago • [Report](#)

**C10** This is it! ;)

We have been on FB for too long :D hehe

Honestly? If I got a message entitled "You have been on Facebook >too long<" etc. etc. then I would remain quiet because this is the truth.

Or maybe we did something wrong? over a year ago • [Report](#)

**C13** Has someone flagged this problem? I have the same. over a year ago • [Report](#)

**C14** I can't translate either, and I already have three awards over a year ago • [Report](#)

**Note 7.4 Translation rights denied for some user-translators**

There were instances of discussion threads where a number of user-translators would ask for help with removing the *Translations* application from their Facebook profile altogether. The main reason for doing so was because they were annoyed with the quality of translation and wanted to resign from participating in the initiative. Other user-translators would offer instructions on how to do it; however, in some cases the application would remain installed to a user-translator's profile even though s/he took all the steps necessary to remove it permanently.

- Theme 3: issues related to the process of Facebook translation and to translation crowdsourcing in general

The user-translators most actively participating in the discussions held on the discussion board were also concerned with the lack of awareness by other contributors with regard to the guidelines concerning the appropriate translation style, use of terminology and application of specific structures for the translation of strings requiring noun or verb inflection in Polish which were collaboratively established in the discussions on the board. They expressed their concern that it was only those discussing translation solutions on the discussion board who were familiar with why, when and how to apply the rules and follow the guidelines. Thus the lack of consistency was also one of the frequently mentioned problems with the quality of Facebook translation that could be provided by the community of Polish user-translators.

There were only three threads started on the discussion board by the representatives of FacebookTranslations Team. In the first of those posted on 29 March 2008 the representative noted that a number of agreed translations for terms in the glossary were incorrect and asked the user-translators to investigate them and introduce changes. Then he informed the user-translators about a new functionality to report problems with translations or issues concerning the use of the application itself. He suggested this new reporting feature to inform Facebook about any issues with the translation instead of posting problems on the discussion board where it is difficult to find them among other posts. In the second thread posted on 2 July 2008 a different representative started a discussion on 'fine-tuning Facebook in Polski'. She asked the user-translators to report translation issues, translation errors and suggestions on how to eliminate them in the thread. She also mentioned that the thread would be reviewed by Facebook representatives frequently as a means of feedback from the community of user-translators. However, there were no more contributions to the 'fine-tuning Facebook in Polski' discussion, neither by the members of the community nor the author herself. The last post from a Facebook representative concerned the translations for the terms 'inbox' and 'home' for which the Polish translations suggested and then adopted through voting were considered by Facebook to be too long. The representative offered other translations and asked the user-translators to confirm whether they were acceptable. However, in later posts, the user-translators would mention their attempts at contacting any of Facebook representatives in order to report some more general translation issues never resulted in any reply.

On many occasions, the user-translators expressed their hopes that the final translation would be polished by professional translators appointed by Facebook stressing an extreme lack of consistency in the use of terminology and application of agreed upon structures for translation of strings where gender differences could not be expressed in Polish. The user-translators referred to an official Facebook blog post (Wong 2008) which specified that the Spanish translation of the service was sent to professional translators for proofreading. The Polish user-translators hoped that this would be the case with the Polish translation as well. Nevertheless, while over 90% of the translation was finished and no intervention of professional translators who would be appointed by Facebook was noted, the community of user-translators started to doubt their existence as well as the success of the process of Facebook translation into Polish as a whole. An inconsistent glossary which also contained some minor errors (for example spelling errors) further heightened the suspicion that either the professional translators are not very effective or not involved in the process at all since the glossary was supposed to be reviewed by the professional Facebook translators.

#### 7.1.2 Translator Community for Polski *Group Page*

- Theme 1: Polish language and its usage

As indicated in Table 7.1, many of the discussions held on the group page concentrated around the same issues as those held on the discussion board. The community members would debate on the choice of the most suitable terminology to use in their translations, indicating problems with the rendering of Polish word forms and sentence structures or pointing out general problems with the functioning of the translation module on Facebook. As Facebook kept introducing new features to its social networking service, the user-translators continued to propose different target language equivalents for the newly introduced terms in the original so that the translation solution could be decided in a collaborative manner.

Similarly as on the discussion board mentioned earlier, the user- translators posting on the group page would refer to some external resources offering linguistic advice on the appropriate use of the Polish language so that the provided translations would be grammatically correct (see Note 7.5 and 7.6).

[posted 1 November 2011]

**C15**

Useful articles about translation:

[http://wiki.aviary.pl/GNOME:Wytyczne\\_t%C5%82umaczenia](http://wiki.aviary.pl/GNOME:Wytyczne_t%C5%82umaczenia)

[http://wiki.aviary.pl/Novell:Przyj%C4%99te\\_t%C5%82umaczenia](http://wiki.aviary.pl/Novell:Przyj%C4%99te_t%C5%82umaczenia)

Familiarise yourselves with them, it will surely ease the [translation] work :)

**GNOME: Translation guidelines– Aviary.pl Wiki**

[wiki.aviary.pl](http://wiki.aviary.pl)

The file contains guidelines for the naming of applications, libraries and other objects in the GNOME environment. It aims to standardise their spelling in all the files translated by GNOME PL Team.

Like · Follow post · Share · Yesterday at 16:08

**Note 7.5 Reference to external materials**

[posted 13 March 2011]

**C16**

C17 [...] It would be also great to pay more attention to commas. I know this is just a post and not a translation but I want to highlight this issue because not many remember about it ;) I recommend these websites:

<http://www.prosteprzecinki.pl/>

<http://www.przecinki.pl/>

14 minutes ago · Like

**C17**

C16 thanks. :)

3 minutes ago · Like

**Note 7.6 Reference to external materials with linguistic help – use of commas**

On the group page the user-translators would also ask for advice and help with translation, for example, of terms when used in some specific contexts (see Note 7.7).

[posted 13 March 2011]

**C18**  
Administrator's panel on the timeline for pages. 'No New Likes', do we translate as brak nowych znaczników lubię to [a lack of new tags I like it], or brak nowych polubień [no new likes]? Or how else...

Like · Unfollow post · 13 March at 18:40

**C19** likes this.

**C15** My blood boils when I see "now[e] znaczniki lubię to" ["new tags I like it "]...

16 March at 14:47 · Like

**C15** "Nikt ostatnio nie polubił" ["Nobody has recently liked "]

16 March at 14:47 · Like

#### Note 7.7 Translation of 'no new likes'

Apart from posting messages in text only, on the group page the member user-translators had at their disposal features such as 'add photo/ video', 'ask question' or 'upload file' which supplement the communication within the group (see section 3.3 in Chapter3). The first feature allowed the users to accompany their text message with a graphic object or a video to be displayed in the post (Note 7.8 and Note 7.9).

[posted 15 January 2012]

**C15**  
I think that instead of "Zaczniij" ["Begin"] it would be better to use "Uruchom" ["Run"]. – **FBC**



Like · Follow post · Yesterday at 11:50

2 people like this.

**C20** exactly, it sounds horrible

Yesterday at 11:51 · Like

#### Note 7.8 A graphic object accompanying a post on the group page where the translation of the button label (circled by the researcher) is being discussed

[posted 27 May 2012]

**C21**

Let's vote! :)



Like · Unfollow post · 17 hours ago

**C15** and what is the link to this [string]?

17 hours ago · Like

**C21** <https://www.facebook.com/?sk=translations&hash=65f6055c17514ee3486c23e995dda7a6>

17 hours ago · Like

**C21** and what the result of the voting needs to be for Facebook to accept a new translation?

17 hours ago · Like

**C15** I don't know, I voted down all of them [the translation suggestions] and I will keep doing so until facebook learns that you tag people "na zdjęciach" ["in photos"] and not in "obiektych zdjęcie" ["an object photo"];)

17 hours ago · Like · 1

#### **Note 7.9 A screenshot of a wrongly translated string accompanying a post on the group page**

This added feature was often used by the community members to publish a screenshot which presents a problem with translation (e. g. incoherent, mistranslated, grammatically incorrect or awkward target language structure). This helped to put the problem in context and display the incorrect string to others exactly as it appeared to a given group member while using Facebook. The members would usually describe where and when it was found on Facebook so that others could track the original English string and its Polish translation themselves within the translation module and either vote it down or offer a different translation for it. Thus in a collaborative effort the wrong translation could be identified and changed. Soon the feature started to be used to flag absurd translations in the community and to emphasise the dissatisfactory functioning of the platform which in many cases would not allow any of the user-translators to correct wrong translations.

The 'ask question' feature would often be used to vote upon different translations for a given original English term, specifically those referring to new Facebook features introduced to the system over time (e. g. 'timeline', 'cover') or to decide on one convention for a specific Polish

structure or expression, for example, the use of capital letters with second person personal pronouns (e. g. *Twój* or *twój*) to distinguish the different level of register (Note 7.10).

[posted 6 November 2011]

**C22**

According to a rule in a dictionary, the use of capital letters [with personal pronouns] to express affection and politeness is a matter of the writer's personal preference; also the use of capitalisation expresses the writer's feelings, respect. However, the majority believes that this rule should be applied everywhere and [when writing about] everyone. You can't be too polite, can you? Actually, no, the truth is that this is officiousness. Will we allow Facebook for this?

ty, tobie, ci, ciebie, cię, twój

Ty, Tobie, Ci, Ciebie, Cię, Twój

Like · Follow post · 14 hours ago

**C23** I think that in writings/texts which are more official, capitalisation should be used when addressing the reader, however (I presume that) around half of Facebook users (from Poland) knows our mother tongue to the extent that they will not notice a difference when we write using a capital letter or a letter in lower case. Of course I do not mean here that their vision is impaired but just that it will not make any difference [to them].

8 hours ago · Like

**C24** In my opinion we should fight against this adverse trend. Facebook is not a friend who writes letters to us.

7 hours ago · Like

**Note 7.10 A poll incorporated into a post on the group page to decide upon the spelling of personal pronouns in Polish translation**

The third feature, 'upload file', was incorporated to facilitate collaborative work on documents. One example of the application of this feature is the community's attempt at unifying the terminology by creating an additional glossary (as the internal one could not be amended or improved). The uploaded document could then be edited and supplemented by any of the community members. Figure 7.1 captures a fragment of the document available from the community's Facebook group page:

## Słowniczek (ujednoczenie słownictwa)

By **C17** on Friday, March 9, 2012 at 10:48am

Pamiętamy o polskich cudzysłowach [alt+0132 („) i alt+0148 (")] i zwrotach grzecznościowych (Ci, Cię, Tobie) oraz pilnujemy kropek!

**A**

- activity - **aktywność**
- also - **także** | nie: *również*
- and - **i** | w ostateczności: *oraz*
- article - **artykuł** | nie: *news, tekst*
- ask (a question) - **zadać pytanie** | nie: *zapytać*
- achieved - dokonał? jakieś inne propozycje? **-uzyskał** / :)

**B**

- [post on his] behalf - [publikować w jego] **imieniu** | nie: *jako użytkownik*

**C**

- city - **miejsowość** | nie: *miasto*

### Translator Community For Polski

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**Docs in Translator Community For Polski**

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**RECENT CHANGES**

- C27**  
Updated over a year ago
- C19**  
Updated over a year ago
- C23**  
Updated over a year ago
- C17**  
Updated over a year ago
- C17**  
Updated over a year ago
- C25**  
Updated over a year ago

community members who edited the document

Figure 7.1 An excerpt from a document collaboratively edited by the members of the Polish community of user-translators on Facebook

It must be noted that many of the user-translators posting on the group page never posted to the discussion board as, at the time when this communication platform was available, they were not involved in the initiative of Facebook translation. Also, despite the fact that the number of translators in the community was growing, the group of the most active contributors remained rather stable and unchanged throughout the process of netnographic observation.

- Theme 2: the translation module on Facebook and its functioning

The discussions on the linguistic aspects of Polish translation were very similar on the group page and the discussion board. However, the nature of discussions on the translation module on Facebook was noticeably changed because of the ongoing development of the translation module leading to the incorporation of new features and functionalities. Nevertheless, these new aspects were hardly ever openly brought to the attention of the user-translators by Facebook despite the fact that they would affect the functioning of the module influencing the process of formation of translations to a significant extent. As a consequence, the analysis of the discussions held on the group page indicates a number of new challenges that the community faced when translating Facebook into Polish and how these were addressed.

As a response to these new translation module features (see section 3.2 for details) giving the user-translators a wider opportunity to provide more linguistically and grammatically correct Polish translations, the community members considered retranslation of the strings created in the past with the use of the 'generic' structures.

Some user-translators would post to the group page reminding others that these features are available and that they should be used in order to provide translations that will be of higher quality and more natural than the 'generic' ones (see Note 7.11).

[posted 20 November 2011]

**C28**

A brief comment because the majority of us [here in the group] are men, let's not forget about women:) It is not enough to write a translation "skomentował(a)", "potwierdziłeś(aś)", etc. I would like to remind you that below each [string for] translation, whose meaning depends on the gender of the reading person, or gender of the person referred to in the string you need to translate it [the string] by clicking on this: "Translation depends on the gender/number of curly braced tokens, subject gender or viewer gender? Click here."

By the way, why has the language of the application changed to English... it can indeed make [the translation] work harder for newbies...

Like · Follow post · Sunday at 08:43

**C15** and 5 others like this.

**C17** Well, I have always tried to use it, but sometimes for some strings there is just a blank space, for some strings I could not translate in this way, you also had it like this?

Sunday at 21:32 · Like

**C15** I agree. But I don't understand how English-language application can make the work more difficult. If someone is translating then they know the language ;) C17 yes, I also had it like this.

Yesterday at 08:25 via Mobile · Like · 1

**C23** C15 the knowledge of the language is one thing, but having it [the application] in your own language makes the work slightly easier, and secondly, there can be used some phrases, which not everyone knows so it is better to have it [the application] in your own language.

C17– me too.

19 hours ago · Like

**Note 7.11 A post reminding the user-translator about the variations feature**

Nevertheless, the translation system still would not account for the fact that nouns in Polish inflect also for case and thus different word forms need to be used depending on the syntactic function of a noun in a sentence (for example, verb subject, direct object, or an expression of possessive). Thus the user-translators would often consult the community asking on the group page how to best translate strings with tokens that should be inflected for case as the system would always substitute them with a noun in nominative case. The user-translators would usually try to come up with a sentence structure that would allow the noun to be used in nominative, for example, by using passive voice.

However, this would usually imply incorporating less common word order in the Polish translated sentence, and not the first choice sentence structure (see Note 7.12).

[posted 8 February 2012]

**C18**

Hey, listen, how to translate: "{name1} commented on your {=status update}", where {=status update} is translated [in nominative] as "zmiana statusu"?

And technically, it would be translated "Jan Kowalski skomentował twoją zmianę statusu" [Jan Kowalski commented on your status update], but it sounds... rather awkward.

The only correct form I can think of is "Twoja {=status update} została skomentowana przez użytkownika {name1}" ["Your {=status update} was commented upon by the user {name1} "] so "Twoja zmiana statusu została skomentowana przez użytkownika Jan Kowalski" [Your status update was commented upon by the user Jan Kowalski], but the translation is a bit long so I do not know how to tackle [this problem].

Let me know what you think about it.

Like · Follow post · 8 February at 20:27

**C29** "Twoja {=status update} została skomentowana przez użytkownika {name1}" ["Your {=status update} was commented upon by the user {name1} "] – it is ok because most probably the value {=status update} is also used in other phrases.

8 February at 20:30 · Like

**C26** Your object "{=status update}" can also be used. It sounds a bit awkward but grammatically it is correct and the structure agrees with [the structure of] other phrases [such as] commented upon your photo or your post.

9 February at 09:22 · Like

**Note 7.12 Discussion on word order in the translation of strings with tokens**

In their efforts to retranslate the 'generic' translations the user-translators also faced further difficulties. It turned out to be impossible to do so for many of the strings as the majority of those once translated and approved by Facebook were no longer accessible to the user-translators from within the *Translations* application and therefore no further changes could have been introduced to them.

Over time, the posts contributed to the group page by and large turned into complaints about the dissatisfaction with the functioning of the translation module, low quality string translations and inability to control the already translated strings stored in the module. As mentioned by one of the user-translators, the nature of the conversations changed over time and the group page became a platform where the user-translators would post about absurd translations found when using Facebook in Polish and about which nothing could be done. The translators thus also started reporting their intention to switch back their Facebook user interface language to English and stop

their contribution to the initiative while staying in the community out of curiosity for how the translation into Polish would continue.

- Theme 3: issues related to the process of Facebook translation and to translation crowdsourcing in general

Some user-translators also started reporting the misuse (sometimes apparently unintentional) of the variations feature by user-translators not familiar with the feature itself or less experienced in providing translation on Facebook. As a result unnecessary multiplication of original strings for translation would occur, with some strings marked as depending, for example, on subject gender or number while in reality this was not the case (see Note 7.13).

[posted 19 February 2012]

### **C17**

Who is so silly to add variations depending on [the grammatical category of] number for words which have nothing to do with numbers? Usually only {number} and {count} are numbers, but for some people in phrases such as "{name1} commented on your {=link}" we have to pointlessly check many more translations. What is interesting is that even after unmarking the number category (Number) [in the variations settings] it is not always possible to undo the process [of generating variations].  
Do not discourage others from translating!

Like · Follow post · 19 February at 08:01

C15 and C24 like this.

**C19** I think that the people in this group do not need to hear it... ;) And there is no way we can communicate this to the kids who play around with the application.

13 hours ago · Like

**C30** Out of curiosity: how should it look like then, in the quoted example? Because to me it seems natural that there is a dependency on number and gender. You can have skomentował [he commented], skomentowały [they (female) commented], skomentowali [they (male and female) commented], skomentowały [they (female) commented], skomentowała [she commented]. Unless we avoid this with something like: "Komentarz {name1} został dodany do Twojego obiektu {=link}" ["A comment by {name1} has been added to your object {=link}"].

11 hours ago · Like

**C31** You guys better tell me who jokes around with the translations by inserting quotes from songs or sentences such as "remove my timeline". But the truth is that the review of translations becomes funnier then ;]

7 hours ago · Like

**C19** The best sounding Polish [translation] would be "{name1} skomentował udostępniony przez ciebie {=link}" ["{name1} commented on published by you {=link}"]. (I would like to emphasise [the fact] that we do not write "your, You" but "your, you")

7 hours ago · Like

**C30** "Anna Kowalska skomentował udostępniony przez ciebie {=link}"? ["Anna Kowalska [he] commented added by you {link}"]?

3 hours ago · Like

**C17** Oh, you don't get it, it's visible that you are newbies here. What I mean is that {name1} and {=link} are not numbers. In this case we select only "Gender" for {name1} [in the variations settings], but there are people who select everything and not always you can undo this.

3 hours ago · Like

**C30** that is true, I'm a newbie :) So my question is what do the numbers [category] do? I saw that then you get division into different number intervals... so is it that gender also deals with the plural number?

3 hours ago · Like

**C17** If a variable is a number then you select [number category]. Thanks to this it becomes possible to inflect words for example:

5 jabłek [5 apples], 2 jabłka [apples], 1 jabłko [apple] – do you get it?

Thanks to this we can adjust the translation to specific numbers, because in Polish the inflection is more complicated than in English where it is enough to add "s" or "es" at the end of a word.

I hope I made it a bit clearer what the problem is about.

The same applies to names where we can decide on a translation for a specific gender.

3 hours ago · Like

**C30** When it comes to numbers I have no doubts. I want to know whether [the category of] gender is enough to distinguish with regards to the gender and number [of a word]. Thank you.

3 hours ago · Like

**C17** Gender only distinguishes gender after a [Facebook] user provides this information when creating their account

3 hours ago · Like

**C30** so if I were to select only gender, so for example there will be "X and (4) inne osoby dodał komentarz..." [X and (4) other people added [male, singular] a comment..."], without the possibility to distinguish between "dodały" [they (female) added"] and "dodali" ["they (male or male and female) added"]?

2 hours ago · Like

**C19** For me these forms sound good:

X i 1 inna osoba dodała [X and 1 other person added]

X i 2 inne osoby dodały [X and 2 other people added]

X i 5 innych osób dodało... [X and 5 other people added...]

In other words the form of such translations would depend only on the number of others. The issue of "dodały/dodali" ["they (female) added/they (.male or male and female) added"] does not apply to sentences such as "X innych osób" ["X other people"], because people are always "(female)they". However, I'm not a linguist.

2 hours ago · Like

**C30** true, my mistake. But sometimes there is "X i Y dodały" [„X and Y (female) added"]

2 hours ago · Like

**C19** Oh, so in this case, if the people in the translation are referred to as {name} there is no problem to distinguish between genders. In such case I have never had problems with inflecting after specifying that the translation depends on gender and strenuously I indicated [variations]: M i M / M i F / F i M / F i ? / ? i F / M i ? / M i ? dodali [they (male or male and female) added], F i F dodały [they (female) added]. :)

2 hours ago · Like

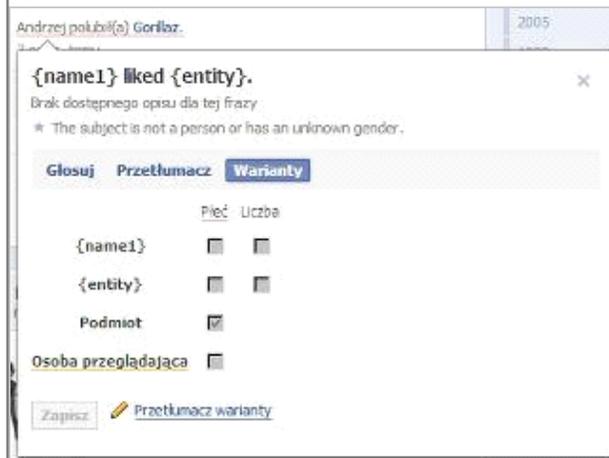
#### Note 7.13 Problems with the use of the variations feature by less experienced user-translators

The user-translators would sometimes admit that they were new to the initiative (see note 7.13) or simply not familiar with the changes in the translation module and thus not fully aware of the role and functioning of all its available components, as indicated in Note 7.14.

[posted 4 May 2012]

**C25**

Congratulations!



Like · Unfollow post · Friday at 16:20

**C18** what is wrong, because I do not see anything.

Friday at 16:22 · Like

**C25** The subject will always have unknown gender. You need to inflect {name1} instead, because Andrzej polubił [Andrzej (male) has liked], and not Facebook [has liked].

Friday at 16:24 · Like

**C18** if I remember correctly, no matter whether you select gender for {name1} or the subject, the result is still the same. The subject is {name1} so it does not matter [which one you select], unless I got something wrong.

Friday at 16:25 · Like

**C25** You got it wrong. Otherwise, why would there be "polubił(a)"? [„he has liked(she has liked“?) I have gender.

Friday at 16:26 · Like

**C18** I have it the same way, I do not know whether this is because of the translation or facebook. Because in other places I see polubił [he has liked] or polubił(a) [he has liked (she has liked), for example. But I talk about the translations because I get 3 variations: The subject is a male, female or is not a person or has an unknown gender, no matter whether I select gender {name1} or the subject.

Friday at 16:28 · Like

#### Note 7.14 Discussion on the appropriate use of the variations feature

The presence of extremely poorly translated strings as well as the inability of user-translators new to the initiative to use the translation module properly led the user-translators expressing their wishes to see Facebook limit the rights by certain user-translators to provide translations. They would like to restrict the translation initiative only to a group of user-translators who have a record of high quality contributions, suggesting the scores they received for the translations and

votes they provided as a criterion. However, the Facebook-employed user-translator (see below) who joined the discussion at one stage indicated that such a selection of user-translators could not have been done. This comment was particularly interesting with regards to the translation restrictions experienced by some of the user-translators as reported on the discussion board earlier (see Note 7.4). Even though there was no clear evidence as to why the translation actions of some user-translators were blocked at the time, it was indeed possible for Facebook to impose such translation activity limitations on some selected individual contributors.

The presence of the Facebook-employed community member made a huge difference for the Polish user-translators by intervening on a number of different occasions. He was able to liaise on behalf of the Polish Facebook user-translators with the Facebook translation team regarding the translation module, and issues with its functioning. Most frequently, he would report incorrect string translations present in the translation module but not available for editing. He first offered his help when the user-translators decided that a different translation is needed for the Facebook feature 'Timeline'.

He mentioned that by being involved in the development of this particular feature he 'owns' the strings and thus can justifiably change their translation (see FBC in Note 7.15).

[posted 23 October 2011]

**C15**

Hello!! Dear all, what do we do about the translation for "Timeline", each time I see "Wehikuł czasu" [time machine] (and I do not know why only Wehikuł is capitalised), my blood boils :) Do you like this translation?

Like · Follow post · 23 October at 07:11 near Katowice, Poland

**FBC** <sorry for the English> I work on Timeline, and I am partially in charge / own the 'text' of the strings for Timeline. If we think that "oś czasu" is better than "Wehikuł czasu" (and I agree, it is), but the translation does not change, I can tell our translators and have them change it directly. (I can read and speak Polish decently well, but I am not good enough to translate).

27 October at 20:46 · Like · 2

**FBC** C15, we are working on improving our declension rules for several languages, including Polish, which should allow for more subtle translations.

27 October at 20:49 · Like · 2

**C15 FBC** that's a very good news! :)

27 October at 20:50 · Like

**C15** Guys! THIS I think is an honour that someone working in FB [Facebook] has contacted us :D

27 October at 20:53 · Like · 1

**C17** FBC so, tell them about this. Maybe they can change it directly or give it to us to re-translate it.

27 October at 20:53 · Like

**C15** C17 you forgot to add "please" :)

27 October at 20:53 · Like · 1

**C17** C15 yes, this is an honour. :)  
FBC oh, sorry, I forgot about a please. So please tell them about this.

27 October at 20:55 · Like · 2

#### **Note 7.15 Conversation with the Facebook employee helping out with the translation**

As evident in this extract, the participation of the internal person provided a morale boost to the group. The user-translators would often post on the group page specifically to the attention of this Facebook contact quoting his Facebook username in the body of the posted message (see Note 7.16 and also 7.8 earlier).

[posted 5 January 2012]

**C15**

"XXX jest dostępny(a) pod swoim numerem telefon[u]" ["XXX is available (she is available) to contact on their telephone"] – I cannot find the original but I think this is not about someone being [available to contact ] on their telephone but is [available to contact] on their mobile device.

Like · Follow post · 5 January at 09:03

**C22** {name} is available on mobile

5 January at 09:19 · Like

**C15** exactly so the translation "pod numerem telefonu" [on their telephone] is wrong. Even more so, that this refers to someone who has Facebook Messenger installed.

5 January at 09:25 · Like

**C22** unfortunately I cannot add a translation for this string

5 January at 09:26 · Like

**C15** FBC can you help?

5 January at 09:28 · Like

**FBC** This is for Chat?

5 January at 16:21 · Like

**FBC** Let me talk with the engineer who added this string - but I agree, it is not correctly translated.

5 January at 16:32 · Like

**FBC** The translation should be something like "{user} is available to chat on their mobile device", but shorter. If you guys come up with something, I can put it in.

5 January at 19:43 · Like

**FBC** It is referring to Messenger, but they [Facebook] want it to be generic to be just 'mobile'.

5 January at 19:43 · Like

**Note 7.16 A message on the group page posted to the attention of the Facebook employee asking for help with translations**

On a number of occasions this Facebook contact person would also indicate that the translation team at Facebook was working on improving the system further so that the process of translation specifically into Polish would be better served (see Note 7.17).

[posted 22 January 2012]

**C23**

I keep wondering, why all the strings such as "{number} other people" are translated as "inne osoby ({number})" [other people {number}]. There is this thing to specify that a translation depends on the value of the given variable ({number}) and thanks to this we can easily translate "{number} innych (inne) osób (osoby)" [{number} of other (other) people (people)].

Like · Follow post · Yesterday at 09:28

**C15** Long, long time ago... I mean, on Facebook someone once translated it like this :)

Yesterday at 09:29 · Like

**C23** And this cannot be changed?

Yesterday at 09:31 · Like

**C15** Well, if you try hard...

Yesterday at 09:35 · Like

**FBC** A system to support things like this is being worked on, and in an internal discussion, this example was brought up (how Polish translations depend on more than just singular/plural, but the exact value of the number). Unfortunately, we can't do it yet :(

16 hours ago · Like · 2

**Note 7.17 Facebook-employed group member on the opportunity to improve the translation module**

### 7.1.3 Leaderboards

Further clues to understand to what extent Facebook users are contributing to the initiative of Facebook translation into Polish on a weekly and monthly basis were obtained through the analysis of statistics offered in leaderboards. These suggest that the number of actual contributors is much higher than the number of members in the *Translator Community for Polski* group<sup>46</sup>. Every seven days the weekly leaderboard would be updated specifying the achievements of individual user-translators depending on the extent of their contribution to the process of translation. The system would list as many as 500 different Polish user-translators, including those with contribution as minor as 12 votes and zero translations.

The number of votes and translations submitted every week also varies greatly as well as the user-translators ranked in recognition for their achievements. In the third week of March 2012, the most active user-translator contributed 439 translations and 1255 votes in that week alone. The user-translator who occupied the first place on the weekly leaderboard from 2 April 2012

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<sup>46</sup> There were 65 community members at the time when the netnographic observation of the community finished on 31 May 2011.

contributed 174 votes and no translations. Not a single user-translator retained the position of the leader for two consecutive scoring periods, neither on the leaderboards of the month nor on the leaderboards of the week. Comparing the monthly leaderboards of the period of the present study (1 November 2011 and 31 May 2012) reveals that the majority of user-translators classified in the top ten in a given month would not be classified on a similarly high position in any of the subsequent months. In many cases, the user-translator would not appear on the leaderboard ever again indicating that their significant contribution was just a one-off situation. This suggests the quick turnover of the contributors who are more likely to come and go as they please than sustain a steady level of contribution over a period of time.

#### *7.1.4 Netnography – Discussion*

The netnographic observation and analysis of the communication held by the Polish Facebook user-translators reveals some characteristic features of how the translation was performed, what kind of activity it involved, what were the most common problems brought to group discussion and how the community collaboratively sought to solve them.

The discussion board was mostly in use at the early stages of the Facebook translation process, when the user-translators debated the most appropriate translations for the terms that constitute the core of the Facebook system and its user interface. Later on the discussions focused on more problematic strings and how to resolve them as the translation module on Facebook was not configured to handle some specific features of Polish language. The user-translators would also often point out mistranslations, errors in translation or a lack of consistency in translation. Soon it emerged that these occur because the user-translators are not always fully familiar with the translation module's features and its capabilities, especially as its functionality was improved by Facebook over time. This is partly due to the fact that these improvements were never announced formally, for example in an official press release or on the official Facebook blog or in a post on the discussion board (or later on the group page) addressed to the user-translators.

The lack of communication with Facebook, Facebook's ignorance of problems with translation raised in the community and the sudden refusal by the translation module to accept translations from some of the user-translators were also common causes of disappointment quoted on the discussion board. The user-translators expressed their confusion as to the nature of supervision over the whole translation process that was supposed to be provided by Facebook in order to ensure the high quality of the final translation product. The discussion board thus served for the

user-translators as a space where they would share their concerns about the process of Facebook translation into Polish and the product of the efforts taken by the volunteering community. They hoped the discussion board would also act as a means of direct contact with Facebook representatives though apart from only a few instances, this was not the case.

Nevertheless, the discussion board was not only a place where complaints would be aired. On the contrary, the user-translators showed their intention to publicly hold discussions with others on how to address the most problematic translation issues and they hoped to put in practice most effective solutions agreed upon on the basis of open discussions and exchange of ideas held on the board. The attempts to indicate the most problematic translation issues and the wish to hold discussions with others on how to solve them signify that the community of user-translators, at least those discussing on the board, was motivated to debate and collaborate through the exchange of ideas online in order to improve the translation of Facebook. The user-translators would most often refer to the deficiencies in the translation module which prevented the input and submission of translations that were grammatically correct in Polish.

The netnographic observation of the Polish community of translators and the analysis of the conversations held by the members on their dedicated Facebook community group page illustrate how the process of Facebook translation has evolved over time and together with the process itself, the problems faced by the Polish user-translators and their attitudes to the whole initiative. The discussions on the choice of terminology, most appropriate style and linguistic aspects of the process as well as dissatisfaction with the functioning of the translation module are clearly visible on both the discussion board and on the group page. However, while the majority of posts on the discussion board are concerned with issues relating to establishing some conventions for the consistent use of terminology and providing advice on grammatically correct structuring of Polish translations, the conversations on the group page concentrate more on the drawbacks of the translation module and reveal growing frustration and resentment among the community of translators. They also show their helplessness with regards to their wish for improvement of the quality of the Polish translation caused by the problems specific to the translation module available to them. As one of the user-translators commented himself, over time the community group page ceased to serve as a platform where the process of translation would be collaboratively discussed and became a place to publish examples of awkward and incomprehensible translations found when using Facebook in Polish.

The discussions on the group page also reveal that the user-translators tried as best they could to contact some of the representatives of the Facebook Translations Team to raise the most prevalent problems and issues with them and to report the most problematic aspects of the activity of translation on Facebook. It was the Facebook-employed member of the community participating in the initiative out of his own interest who was able to help out with the problems the Polish community faced because of the limitations in the translation module. His interventions almost always brought instantaneous response from those within Facebook responsible for the functioning of the translation module on Facebook. In cases where intervention was not possible, he would communicate the problem to the group members. His help was clearly appreciated by the community who otherwise could not reach anyone at Facebook who could help improve the experience of Facebook translation. However, there were situations when even he himself could not explain why the translation module behaved in a way indicated by the user-translators. This highlights the complexity of some of the issues raised by the Polish user-translators and the lack of awareness of the possible cause of these on the side of Facebook.

Finally, the statistics on the user-translators' contributions as provided by means of leaderboards signify how dynamic the environment of Facebook user-translators is and how irregular the contributions from the user-translators can be, both in terms of their frequency and volume as well as turn-over of contributors: the changing names on the leaderboards indicate that the translation of Facebook is a relatively short-term engagement. The analysis of the discussions held on the group page has revealed that many of the user-translators become dissatisfied with the quality of Polish translation and more frustrated with the translation module over time. As time progresses, they become more aware of the deficiencies of the module and the problems they have to face when engaged in translation-related activities. Consequently, it can be suggested that in the long run the drawbacks of the translation system negatively affect the user-translators' commitment to the initiative indicated by the lack of regular, sustained presence in the rankings by any of the contributing user-translators. This suggests that the current technology in place is not effective in sustaining the user-translators' initial motivations to contribute. Furthermore, no official set of coherent guidelines for the use of the *Translations* application exists. With the community of contributing user-translators changing frequently, it becomes difficult to maintain translation consistency. This in turn is a cause of poor translation quality and again leads user-translators to drop out.

## 7.2 Online Surveys

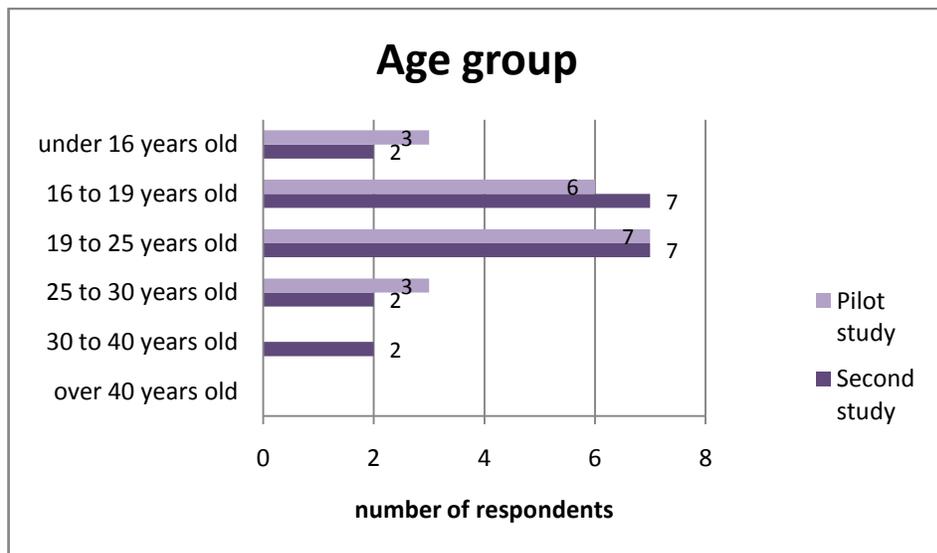
Guided by the netnographic study discussed above, two online surveys were carried out next (see Figure 6.2). The first served as a pilot study to test the use of a survey for the purpose of data collection in the mixed methods research procedure adopted in the present study. The pilot study was successful enabling the researcher to collect a relevant body of data which could be incorporated into the analysis of the practices of Facebook translation crowdsourcing and the respondents' perception on motivation to contribute to the initiative. It also guided the researcher to further access even more specific data revealing more about the particular aspect of user-translators' motivation. To this end, the initial questions used in the pilot were slightly modified in the second survey. The responses collected through the two surveys are discussed in this section. The comparison reveals differences in the personal profiles of the respondents indicating that different members of the targeted community participated in the pilot and in the second survey conducted between 28 November 2011 – 8 December 2011 and 20 April – 7 May 2012 respectively. However, the comparison further illustrates a lot of similarity in the responses to questions probing how motivation to contribute is perceived by the user-translators which further contributes to the validity of the collected data.

The questionnaires used in the pilot study and in the second study (the original Polish versions and their translations into English provided by the researcher) are presented in Appendix B. Table 6-2 in Chapter 6 outlines which of the individual survey questions probe the specific concepts in the theoretical framework adopted in the present research to support the discussion on the motivation of the Polish Facebook user-translators in section 7.2.4.

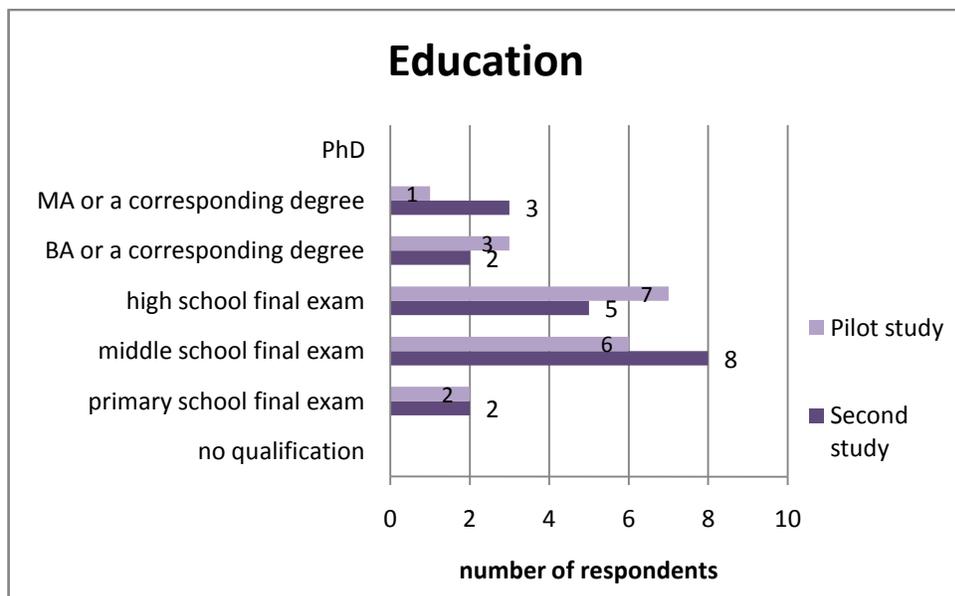
### *7.2.1 Participants' profile*

Of the 19 community members who participated in the pilot study only one was female, which reflects the general composition of the group where the majority of the user-translators are male. One of the respondents was not a native speaker of Polish and lived in an English-speaking country. More than two thirds of the respondents were between 16 and 25 years of age and none of those surveyed was older than 30 years of age. The majority of the respondents were still in education which in general corresponds with their age group. Four respondents have a third-level education either at the undergraduate level (in Poland usually attained at the age of 22) or post-graduate level (usually attained at the age of 24). In the second study, of the total of 20 respondents two were female. This second group of respondents appeared slightly more mature in age with two of

the respondents older than 25 and an additional two over 30. Still none was over 40 years of age. As in the pilot, the majority (14) fell into the category of 16 to 25 years old. All the respondents came from Poland and were native speakers of Polish. 14 declared that they continued their education with the remaining six working. The data in Figure 7.2 indicates the difference in the level of education between the two groups of respondents with the level of education still corresponding with the age group to which a given respondent belongs. Three of the participants held a masters (or a corresponding) degree and additional two a bachelors (or a corresponding) degree (Figures 7.2 and 7.3).

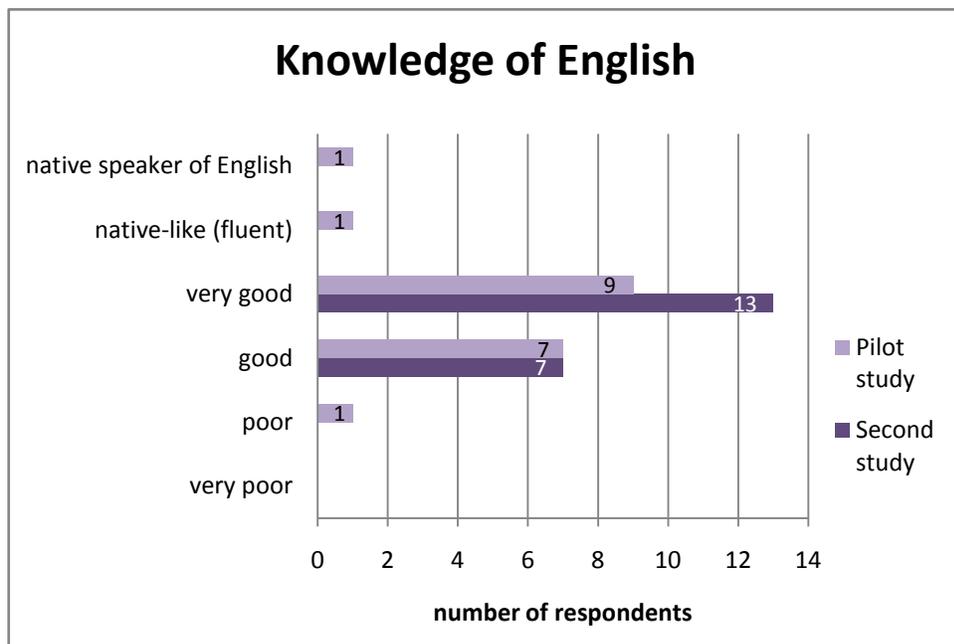


**Figure 7.2** The age of the respondents in the two online surveys with the Polish community of Facebook user-translators



**Figure 7.3 The education of the respondents in the two online surveys with the Polish community of Facebook user-translators**

Those who indicated that they were native speakers of Polish were asked to self-assess their knowledge of English. The respondents could choose from six descriptions of English language proficiency roughly corresponding with the following statements: ‘almost no knowledge of English’, ‘poor knowledge’, ‘good knowledge’, ‘very good knowledge’, and ‘fluent’. In the pilot study, 16 out of 18 participants described themselves as possessing good (7) or very good (9) knowledge of English. Only one respondent described himself to be fluent in English. The second study responses indicate much less variability in the description of the respondents’ perceptions of English language proficiency. All the respondents considered their knowledge of English to be either very good or good with the former being the majority (Figure 7.4). Additionally, two of the respondents in the second study held university degrees in subjects related to the English language.



**Figure 7.4 Respondents’ knowledge of English**

The multiple-choice question concerning the method in which the respondents have learned (or continue to learn) English shows that in most cases the volunteer Polish Facebook translators broaden their knowledge through English language classes delivered as part of the curriculum at school/ university (indicated by 16 and 17 respondents for the pilot and the second study respectively) and also try to improve their competence in this language learning by themselves in their own time (14 and 15 respondents respectively).

### *7.2.2 The Use of Facebook*

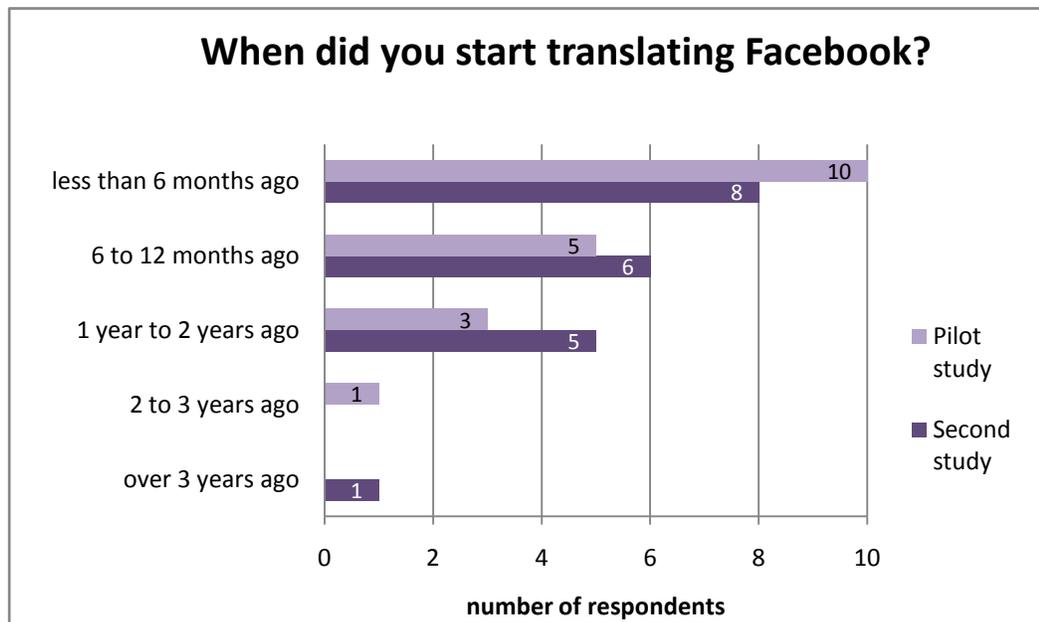
The majority of respondents in the pilot study had been using Facebook between 1 and 4 years. The second study respondents appeared to have had slightly more experience with using Facebook – for the majority it was between 2 and 4 years. The number of applications that the respondents used on Facebook varied, though the majority (12 and 15 respectively) had two or more Facebook applications installed. This indicates that the respondents are reasonably familiar with the concept of extending the functionality of Facebook with additional pieces of software.

In both studies all of the respondents indicated that the ability to communicate and keep in touch with their family and friends was the main reason for using Facebook. Furthermore, in both studies, the most common reason for using Facebook was that it provides information about favourite bands, celebrities, brands and also specifically to participate in the translation initiative.

Of the native Polish speakers who responded to the pilot study, all used Facebook in Polish while two native Polish respondents in the second study stated that they have their user interface set to English. They both specified poor quality of Polish translation as the reason not to use Facebook in their native language.

### 7.2.3 Participation in Facebook Translation

In the pilot study, over half of the respondents claimed to have started their participation in the translation of Facebook into Polish less than six months before the study took place; none of them had been involved in the Facebook translation initiative for more than three years. This implies that the majority did not participate in the very first stages of the translation initiative and joined the community of translators after the Polish version of Facebook was made publicly available in 2008. This seems to hold true also for the second study participants, although as commented before, the latter appear to have slightly more experience of Facebook translation with 12 being involved in the initiative for over 6 months, including one respondent contributing for over 3 years (Figure 7.5).

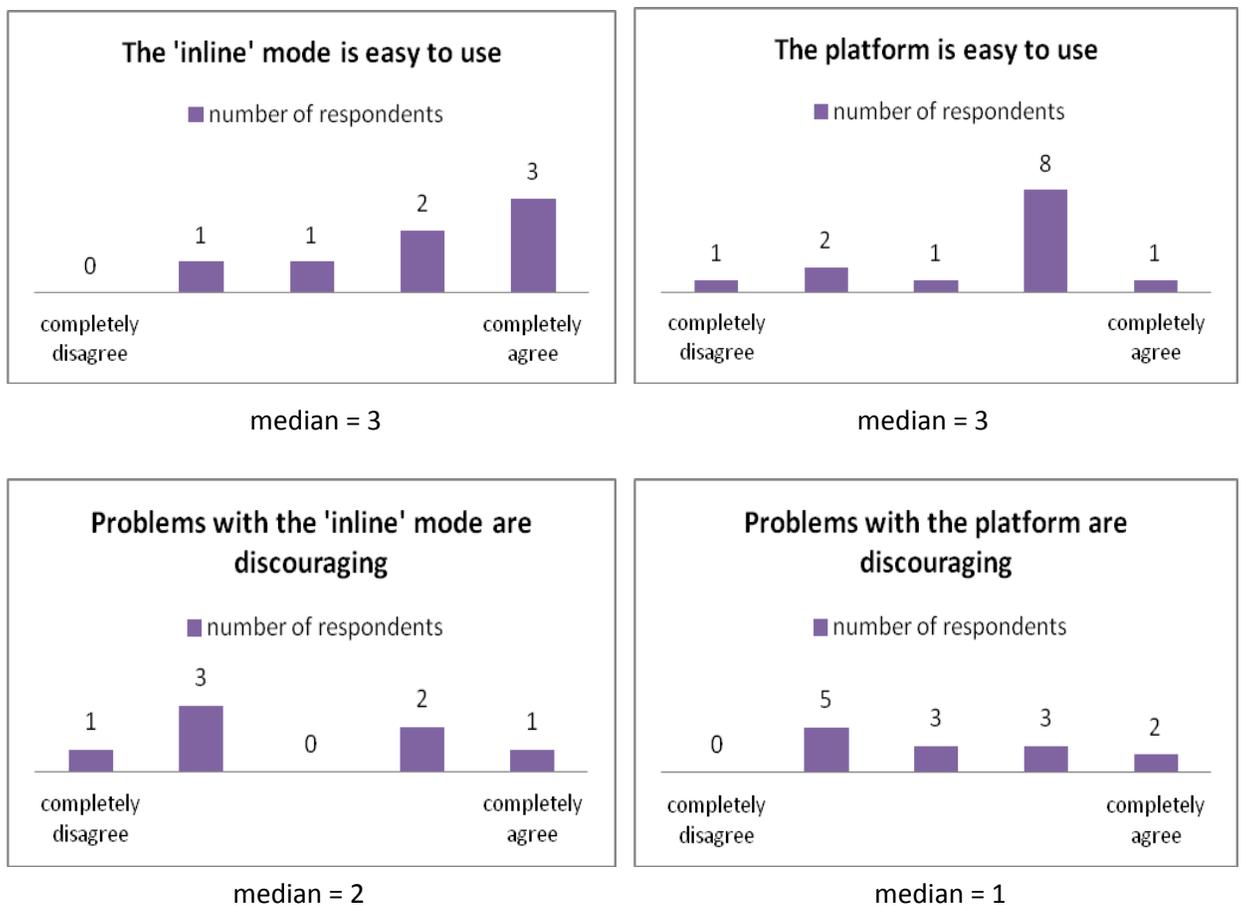


**Figure 7.5 Respondents' participation in the initiative**

The pilot study revealed that the respondents found out about the initiative of Facebook translation mainly after receiving an invitation sent by Facebook or because information about it was mentioned somewhere in online media. In the second study, many respondents specified that they themselves were searching for any translation initiatives online to which they could contribute and then came across Facebook.

The majority of the respondents for most of the time carry out translation with the use of the translation platform designed by Facebook. The 'inline' mode (as seen in Figure 3.9 ), which allows them to translate strings while using Facebook, is less common and preferred only by six out of 19

respondents in the pilot study and seven out of 20 respondents in the second study. Additionally, the second study respondents were asked whether they perceived the selected translation mode to be easy to use (on a scale from 0 = 'I completely disagree' to 4 = 'I completely agree'). Both methods were found to be easy to use scoring median values of 3 each. However, the respondents were unequivocal when asked whether the problems with the 'inline' mode or the translation platform discouraged them from providing translation. With regards to the platform the number of the respondents who specified that they 'disagree' was the same as the combined number of respondents who 'agree' and 'completely agree'. The opinions on the use of the 'inline' mode were similarly divided (Figure 7.6).



**Figure 7.6** Second study respondents' perception of ease of use and problems with use of the collaborative translation platform and the 'inline' mode

Both studies indicated that in general, the respondents participate in the translation initiative from a few times a week to a few times a month (Figure 7.7) and the individual sessions of actual translation-oriented activity on Facebook last no longer than 2 hours (Figure 7.8).

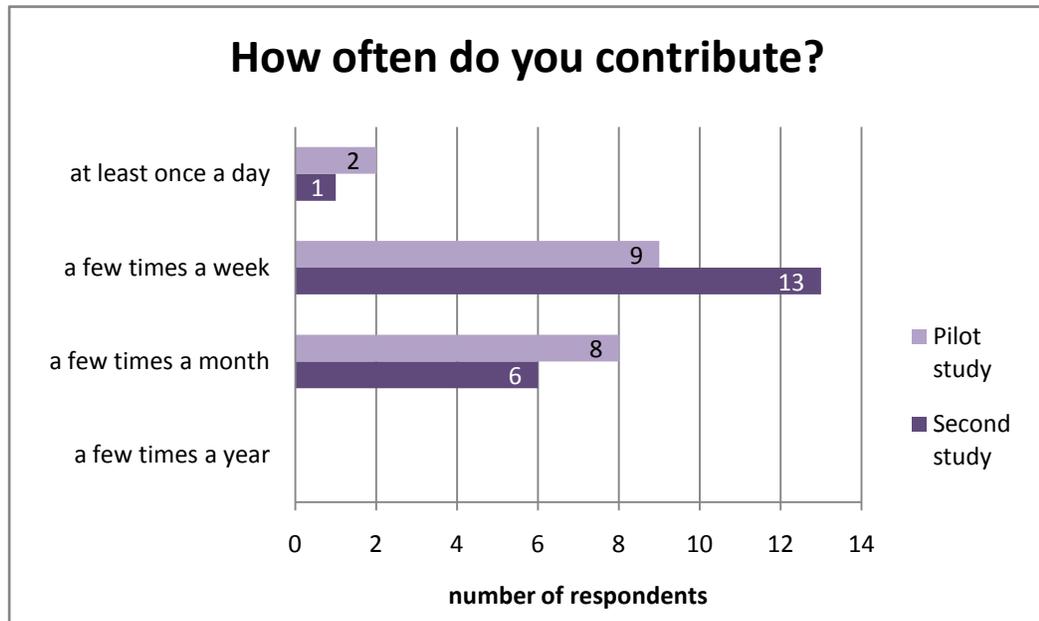


Figure 7.7 Respondents' frequency of contribution to the initiative

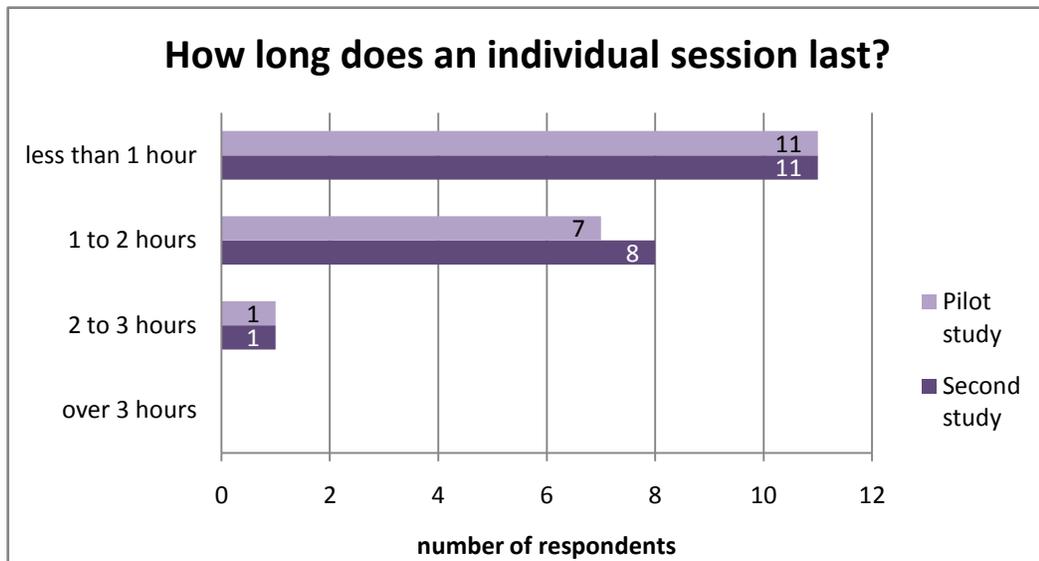
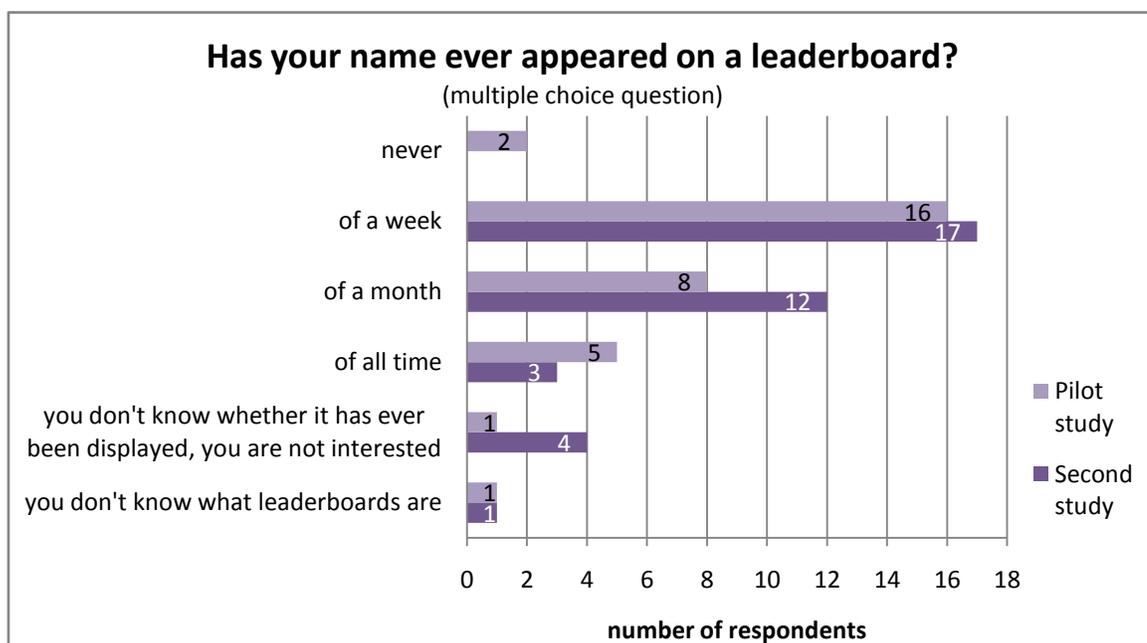


Figure 7.8 Length of individual translation sessions on Facebook

When it comes to the recognition received for their contribution to the initiative of translating Facebook into Polish, almost all of the respondents (16 out of 19 pilot study participants and 17 out of 20 second study participants) were named at least once on a weekly leaderboard (Figure 7.9).

Similarly as was the case with the pilot study participants, many of those who responded to the second study were not familiar with the concept of awards added to a user-translator's profile for their contribution to the initiative of translation and if they were, they never received it. It is possible that many of the surveyed user-translators joined the initiative at a time when these awards were temporarily removed from the system and not offered to the user-translators by Facebook (after the *Translations* application redesign in early November 2011).

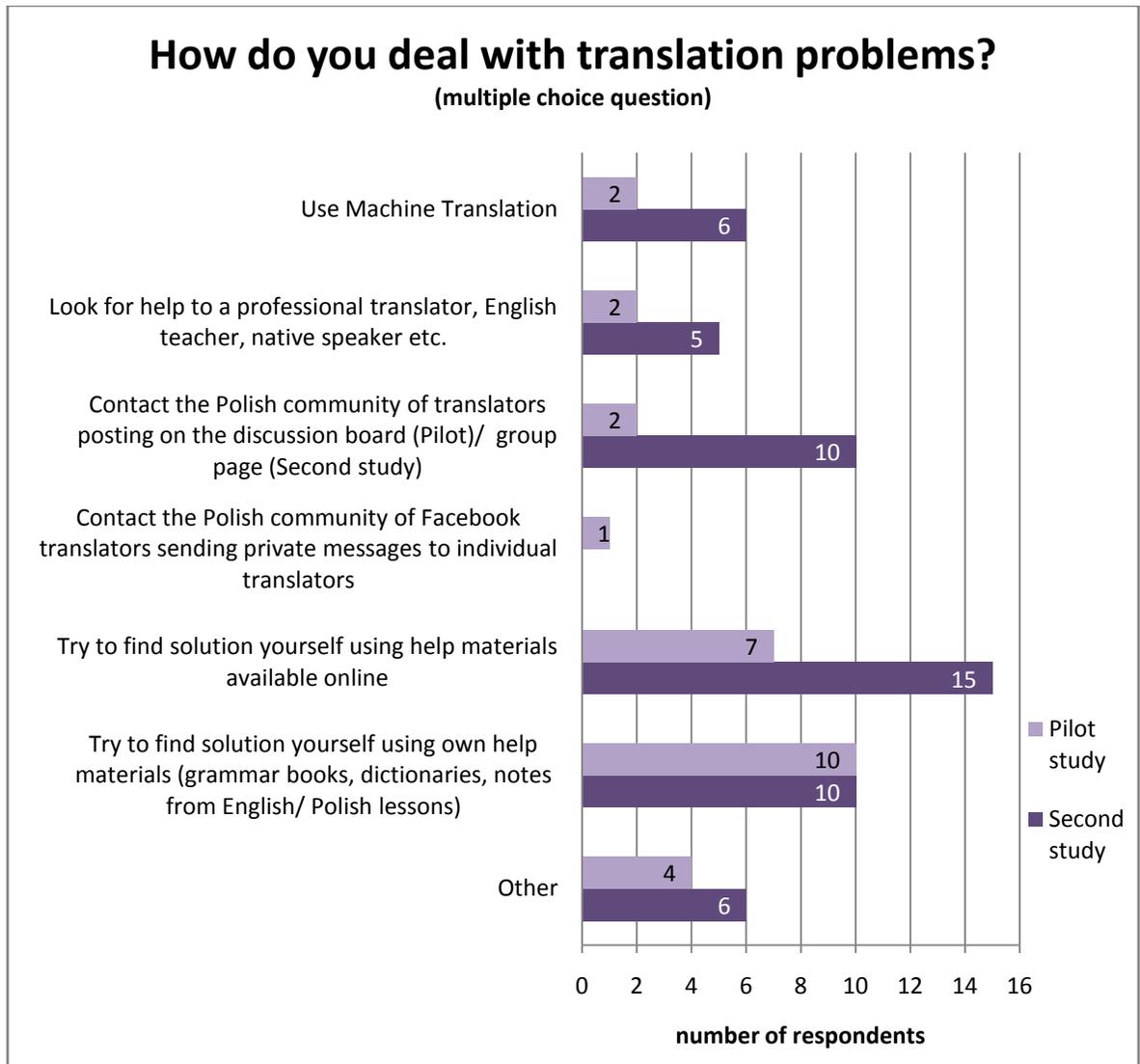


**Figure 7.9 Respondent's appearance on leaderboards**

While 13 of the pilot study respondents specified that they used the discussion board to search or directly ask for help with some of the issues they came across while working on their translations, 14 of the second study participants either never used the discussion board or did not know that

such a forum existed<sup>47</sup>. Over half of the second study participants declared consulting the style guide (see section 3.1.2) at some point while the pilot group was less aware of its existence.

The participants of the two studies were asked to specify what measures they take when a problem arises with the translation of a given word, phrase, or a whole string (Figure 7.10).



**Figure 7.10 Methods for addressing translation problems**

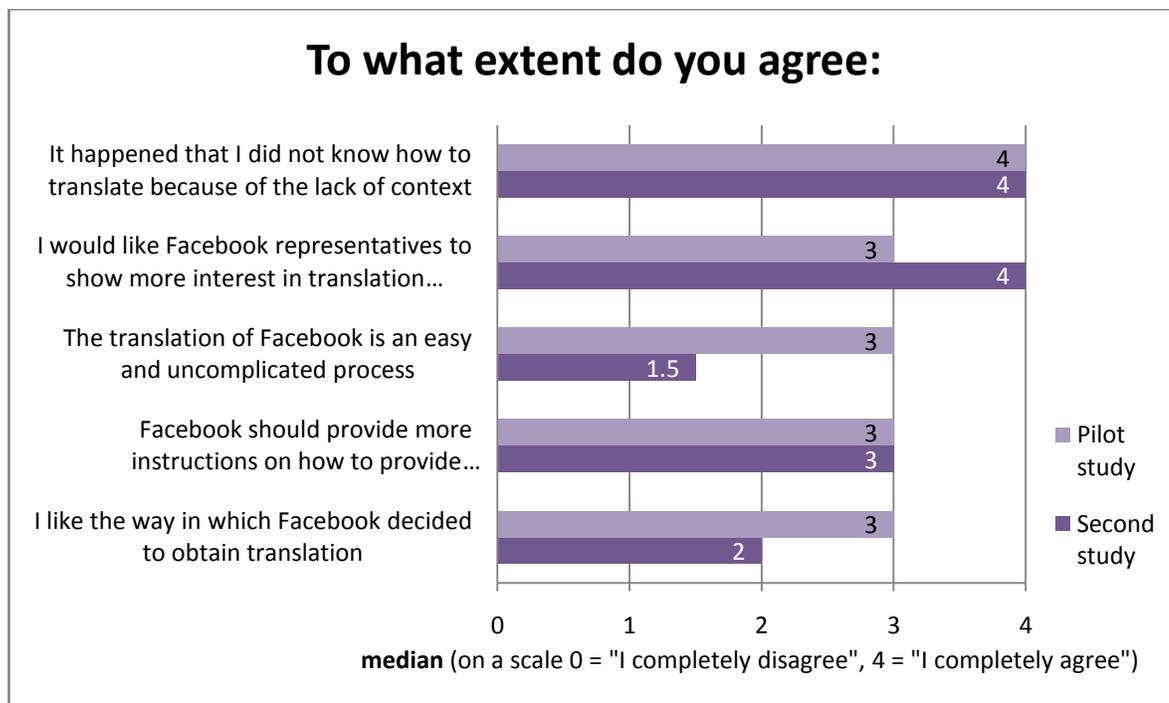
It is evident that the individuals in the second group of respondents incorporate a wider array of procedures to help them find solutions to translation-related issues, with each of the respondents

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<sup>47</sup> The pilot study was announced on the group page at the time when the discussion forum was being phased out and then completely removed from *Translations* by the time the second study was conducted. This explains that some of the second study participants were not aware of its existence.

indicating at least two of the specified methods (resulting in the total of 52 responses for the main study as opposed to 28 in the pilot). Nevertheless, both surveys revealed that the most popular method for problem resolution is by one's own means, typically involving seeking help in either more traditional reference materials (handbooks, dictionaries) or resources available online. Overall, in comparison with the pilot study, the second study respondents are more likely to refer to linguistic resources available online including machine translation. The most striking difference between the two studies is noted in the preference for contacting the community of Polish Facebook user-translators via the dedicated channels on Facebook: the discussion board (in the past) and the community group page (in operation at the time when the second study was performed). The second study responses indicate the use of the group page as the second most often sought method for addressing problems in translation (selected by 10 of the respondents) while the use of the discussion board appeared almost insignificant for the respondents participating in the pilot study (selected by only two of the respondents). Nevertheless, these public channels of communication are preferred to the private one, as sending of a Facebook message directly to any one of the fellow user-translators is almost never practiced.

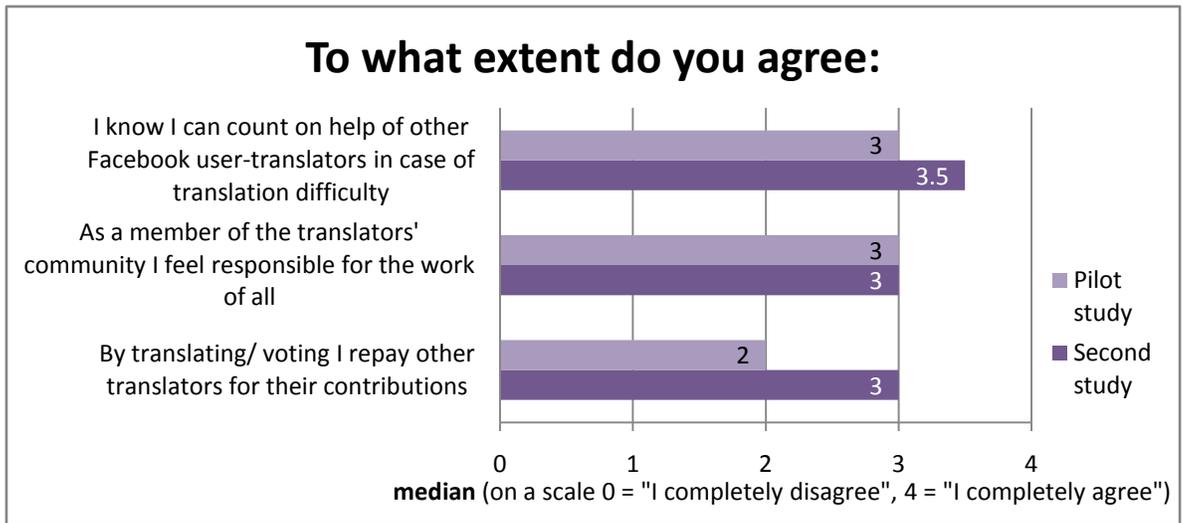
When asked to express their opinions on the overall experience of providing translation in the Facebook translation initiative both groups of respondents equally strongly agree that they experienced problems with translation because there was not enough context provided and also that Facebook should explain more about how to provide translations, votes and edits. Those who responded in the second study are more critical of how the process of translation is carried out on Facebook: they only moderately strongly agree that they like the way in which Facebook is translated and tend to disagree that the process is an uncomplicated and easy task (Figure 7.11).



**Figure 7.11 Respondents' perception on the translation process on Facebook**

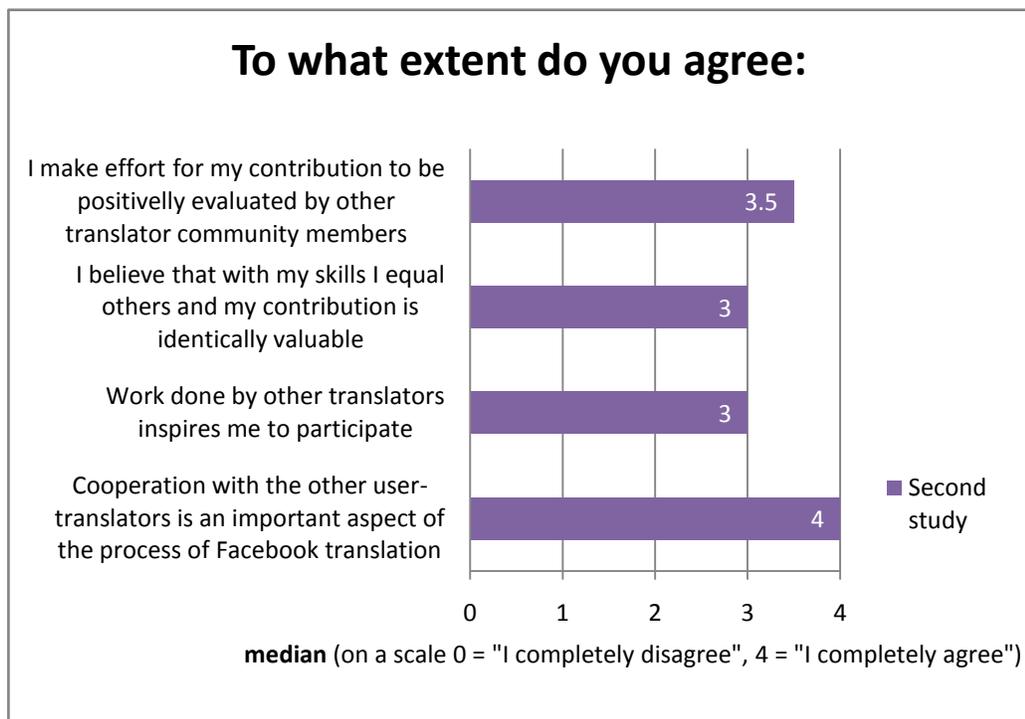
With regards to recognition by Facebook, 16 out of 20 second study participants believe that only selected individuals with a positive contribution record should be allowed to participate in the initiative and 15 further specify that the achievements of those most active should be better recognized by Facebook, for example by badges and other emblems on user-translator's personal profiles, Facebook profile personalisation features, listing in credits on the official Facebook pages or on a Facebook page which would be created specifically to acknowledge the contributors in the translation initiative. This indicates that the user-translators expect Facebook to show their appreciation to the contributors in a more direct and more personal way than just through leaderboard ranks or awards which as for now are visible only to the awarded user-translators themselves (see section 3.1.2).

The respondents of both studies also strongly agree that as members of the community of Polish Facebook user-translators they feel responsible for the work of the whole community and that their contributions are a way of expressing their gratefulness to other community members for the work that they put into the initiative. They also express their belief that they can count on help from the fellow user-translators when experiencing problems with translation (Figure 7.12).



**Figure 7.12 Respondents' perception on the collaborative aspect of Facebook translation**

Furthermore, the second study participants were asked to express their opinion on additional aspects of collaborative Facebook translation into Polish. They very strongly agree that cooperation in the efforts with other user-translators is important and they also find the work of others to be inspiring. The respondents see themselves as equal with other community members when it comes to skills and value of contributions, and they make efforts to provide that their translation-oriented activity on Facebook is positively viewed by others (Figure 7.13)



**Figure 7.13 Respondents' opinion on the collaborative aspect of translation on Facebook**

Of the total number of 39 respondents, the majority is fairly familiar with the concept of crowdsourcing, though still 15 of all the participants (7 in the case of the pilot study and 8 in the case of the second study) stated that they did not know what the phenomenon was and what it implied. Similarly, the majority declared that they never provided translation in a professional context and only 4 respondents admitted that they had experience of translating for monetary compensation.

The second study revealed that the respondents are more likely to have participated in other online translation initiatives for which no payment was offered (Figure 7.14). They further specified the types of initiatives they became involved in. Most often, they referred to *Twitter* translation, subtitling of movies, anime and TV series (e.g. *Dragon Ball*, *How I Met Your Mother*, *Bones*), translation of games (e.g. *LA Noire*, *BloodRaine*) mobile applications (e.g. *Weather Clock*, *Gentle Alarm*, *Go SMS Pro*), software and operating systems (e.g. *Linux Ubuntu*).

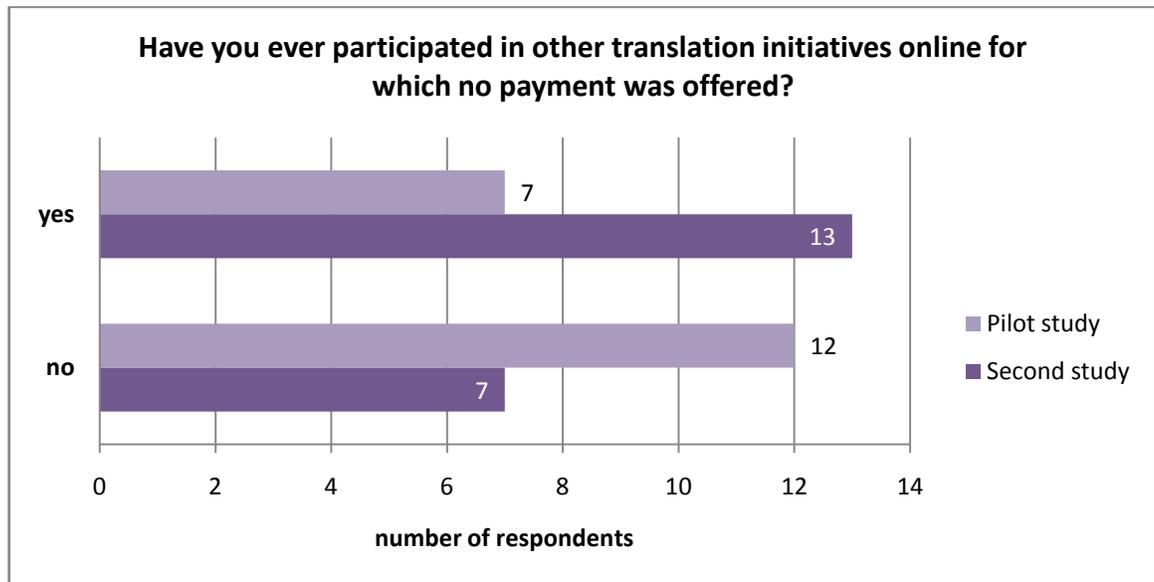
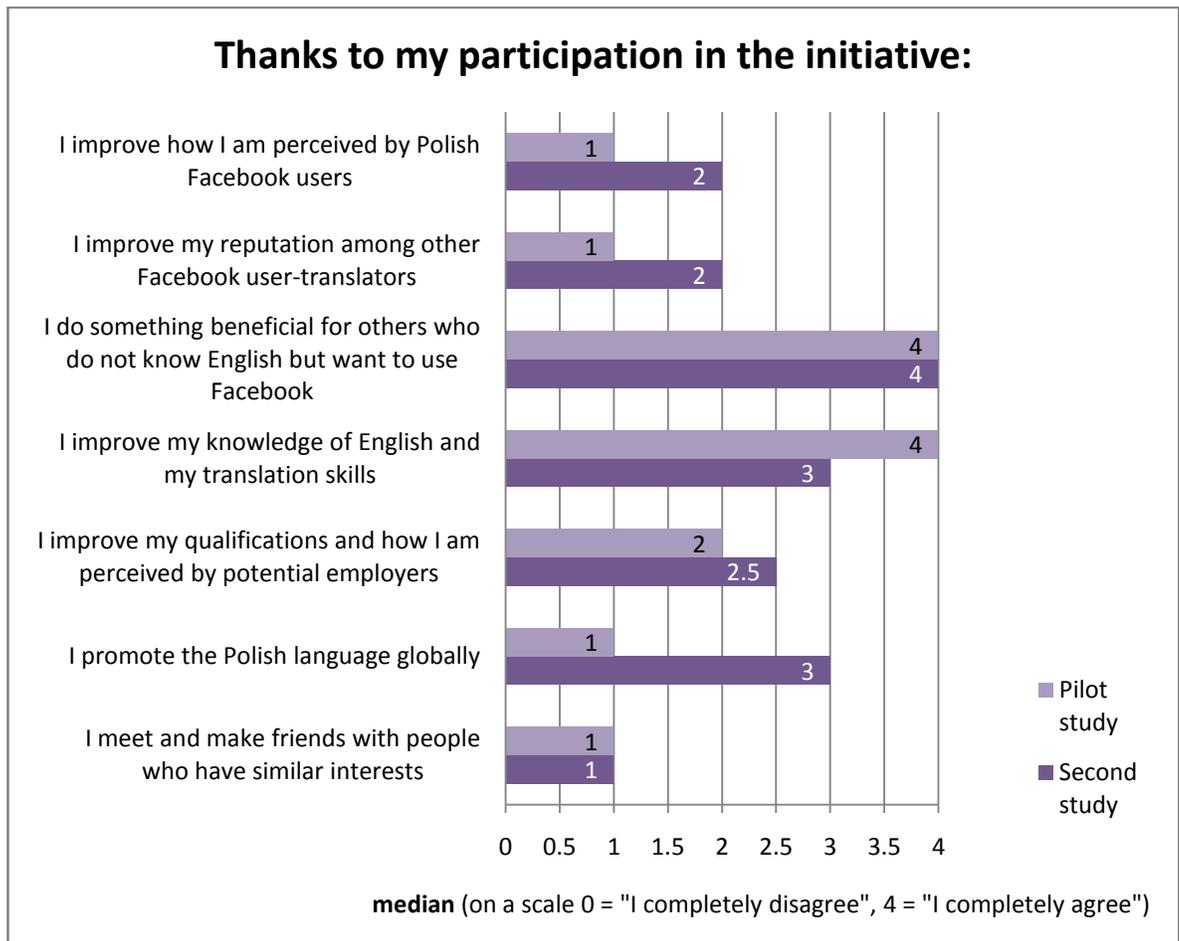


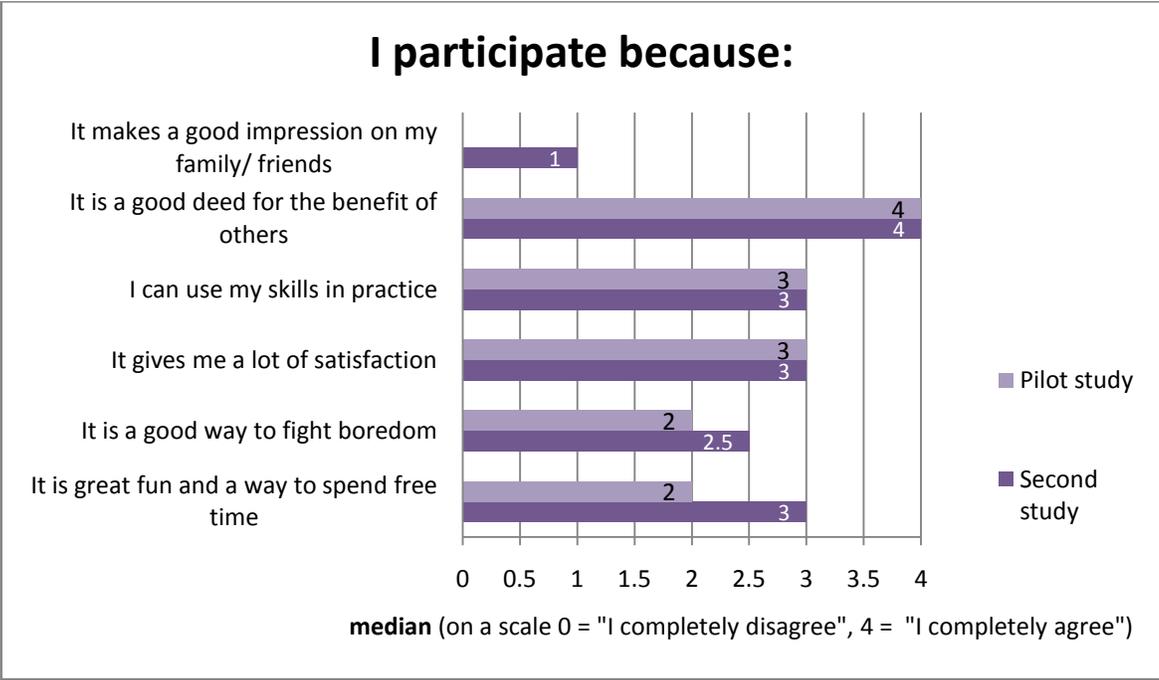
Figure 7.14 Respondents' participation in other unpaid online translation initiatives

### 7.2.4 Motivation

The first observation which emerged from the analysis of the responses provided in both studies is that the factors most significantly affecting the motivation of user-translators to participate in the initiative of Facebook translation overlap in the two groups to a very significant extent. The survey participants perceive their translation of Facebook as an activity which is performed for the “greater good” and which is of benefit to many others. They believe in serving a broadly defined community which includes people who do not know English but would like to use Facebook (Figures 7.15 and 7.16).



**Figure 7.15** Respondent’s perception of benefits associated with their participation in the initiative

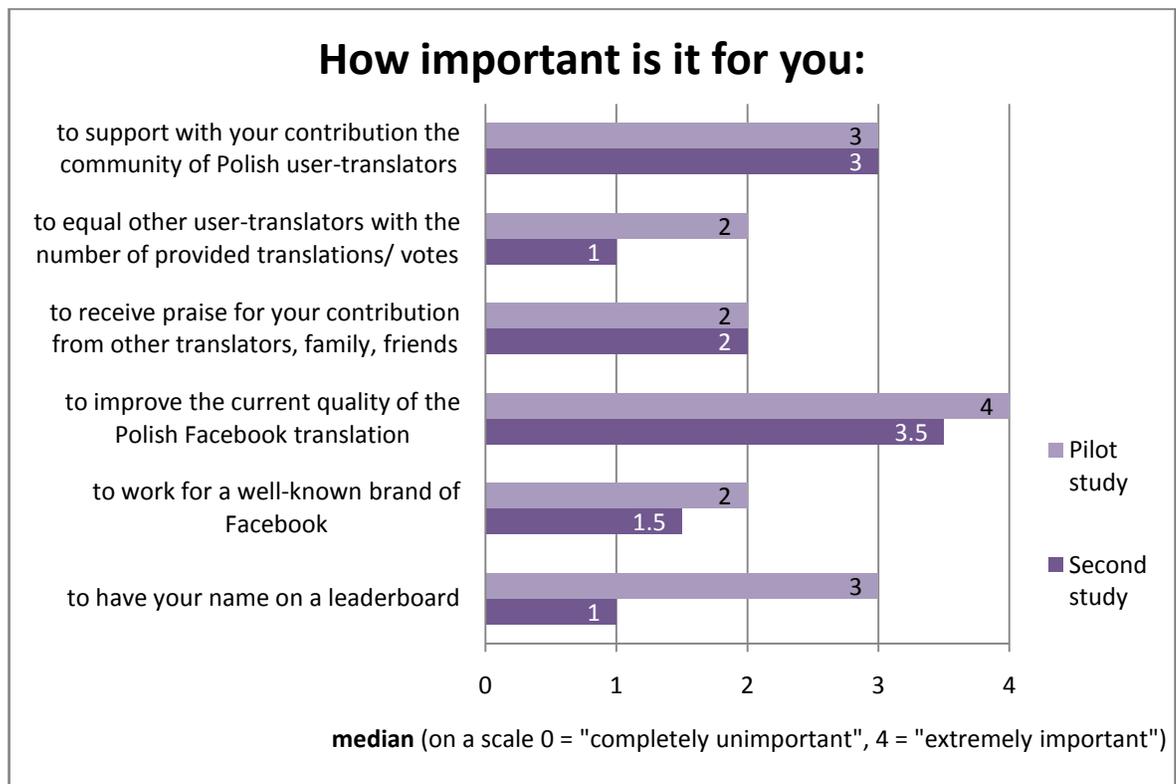


**Figure 7.16 Respondents' opinion on the reasons for their participation in the initiative**

The motivation of Facebook user-translators does not appear to be so much different from the motivation declared by volunteer translators contributing to initiatives related to humanitarian causes or organised by charities and NGOs.

Taking such a stance emphasises the altruistic attitude of the majority of the survey respondents, which was found among the volunteer translators participating in the translation initiatives organised by the non-profit The Rosetta Foundation (O'Brien and Schäler 2010) as well as those providing translations for NGOs in MinnanoHon'yaku or contributing to the mission of KotobanoVolunteer @ MinnanoHon'yaku (Kageura et al. 2011), or in the case of Wikipedia translation as reported by McDonough Dolmaya (2012) and TED Open TranslationProjectstudied by Olohan (2013) (for broader discussion of motivation in these cases see Chapter 4).

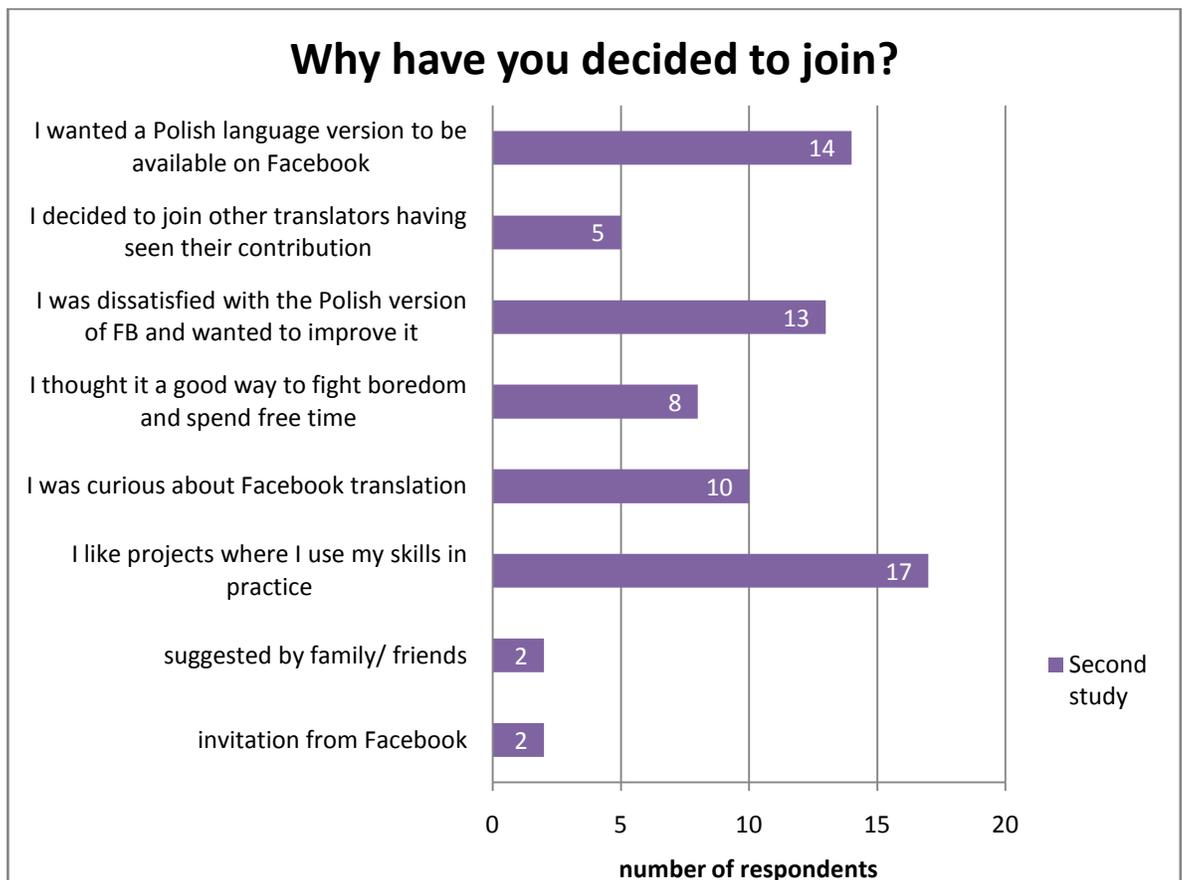
An additional factor which seems to be a very strong motivator for the studied groups of Polish Facebook user-translators is related to the quality of the existing Polish Facebook translation. The responses indicate that that the desire to improve the current Facebook translation forms a very important reason for the Polish user-translators (illustrated by high median values scored by the associated statement in both studies) (Figure 7.17) who appear to be strongly devoted to amending the first Polish language version that was made publicly available by Facebook in 2008.



**Figure 7.17 Features of Facebook translation initiative and their importance to the contributing user-translators**

This stands in agreement with the information the respondents provided regarding the timing of participating in translating Facebook into Polish; the majority of them had joined the project relatively recently and had not been involved in it from the very beginning. Consequently, as their ‘mission’ they state the desire to rectify the shortcomings of the current Polish Facebook translation which had been already in existence when they joined the group.

Over half of those who responded to the second survey indicated that because of their dissatisfaction with the experience of Facebook in Polish they decided to actively support the initiative themselves (Figure 7.18). A similar number of second study respondents further expressed the importance of making a Polish-language version of Facebook available, which additionally correlates with the strong belief that their translation activity on Facebook promotes the Polish language globally (see Figure 7.15).



**Figure 7.18 Respondents' opinion on factors which motivated them to join the initiative**

The responses also imply that the user-translators involved perceive that Facebook translation allows them to broaden their knowledge, practise and further develop their linguistic competence and translation skills, thereby offering a sense of self-satisfaction and development in return (Figures 7.15, 7.16). The pleasure that comes from the fact that Facebook translation is a task which enables the user-translators to put their skills into practice was indicated by the second study participants as the most common reason influencing their decision to actually participate in the process of translation on Facebook (Figure 7.18). The importance of similar personal benefits has been indicated in the majority of the prior studies cited earlier on motivation in crowdsourcing

in general (see section 4.4). For example, the different types of crowdsourced activities in fields such as photography, design, or translation are perceived as great sources of fun and outlets of creative skills with added self-improvement elements while the experience gained is further associated with likely positive outcomes in the future (Brabham 2008, 2010, Lakhani et al. 2007). Nevertheless, the fact that the Polish Facebook user-translators indicate greater good and benefit of their action as one of the primary factors motivating their translation efforts adds a new dimension to the initiative of translation crowdsourcing on Facebook. This distinguishes it from other types of crowdsourcing initiated by for-profit organisations where seemingly no similar sentiment underlies the actions of the contributors (Brabham 2008a, 2008b, 2010, Lakhani et al. 2007). This suggests that from the outset translation in itself is perceived by the participants as an activity with a greater purpose attached to it. This in turn supports the argument that the nature of the task determines the characteristics of motivation to participate in crowdsourcing activities. Furthermore, the survey results indicate that the study participants do not intend to attract attention to their contributions, e.g. to impress family and friends, or to receive praise from the Facebook community of fellow translators and/or service users; the latter was not shown to be of great importance for either of the two groups of respondents. Similarly the fact that the work is performed for the high profile Facebook brand itself also seems to be of lesser importance (Figure 7.17). What the user-translators would rather appreciate instead is a more personal recognition by Facebook as well as a more genuine interest from Facebook concerning various issues with translation the user-translators highlight (Figure 7.11). Very similar attitudes characterise the translators engaged in voluntary translation for The Rosetta Foundation (TRF). O'Brien and Schäler (2010) found that the TRF translators value the most feedback on their work from the clients of TRF or professional translators and would feel discouraged to contribute if some elements of competition, for example, in the form of leaderboard ranks, were introduced into the translation. As shown in Figure 7.17, the second study participants seem particularly uninterested in the ranks of top contributors and do not consider it important to be named on a leaderboard. The netnographic study indicated that more direct interaction with Facebook representatives in charge of the translation initiative would be welcomed by the participants as a form of genuine support, where better outcomes could be achieved through discussion and exchange of views and opinions. This suggests that the freedom and control of the work by the volunteers must be well-balanced so that they feel neither abandoned nor too restrained in carrying out the task bestowed to them.

Interestingly, even though the second study indicated that the respondents were more critical of the initiative of Facebook translation and how it was organised (see Figure 7.11), they appeared more likely than the pilot study respondents to find the translation of Facebook as a fun activity which is a good way to spend free time and also a way to fight boredom (Figure 7.16). This further implies a specific perception of translation in Facebook translation crowdsourcing not as a chore but an enjoyable activity performed for pleasure, in one's own free time and out of one's own free will.

The second study participants were presented with an additional question which gave them the opportunity to provide more details on their perception of Facebook translation specifically as a product of collaborative efforts of all the involved Polish user-translators. This group of respondents recognises cooperation with others as an important aspect of work in the translation initiative organised by Facebook. The respondents also concur that the work of others inspires their own contribution and agree that they strive for their activity in the initiative to be positively evaluated by the fellow user-translators in the Polish community (Figure 7.13).

#### *7.2.5 Questionnaires – Discussion*

The purpose of the two survey-based studies was to learn about the specific instance of Facebook translation crowdsourcing from the perspective of the community of volunteer translators and to obtain an understanding of their motivations to contribute. Although conducted within a relatively short time span and involving a relatively small number of Facebook user-translators translating Facebook into Polish, the two surveys proved to be productive in providing clues to understanding volunteer translator motivation. Both questionnaires were administered in the community of Polish Facebook user-translators at a different time period thus attracting different members of the community to participate. And yet, the respondents' perception of motivation to contribute to Facebook translation was found to be extremely similar for most factors relating to the issue of motivation. This provides for the validity and reliability of the conclusions which can be drawn on the basis of the two survey-based studies.

The collected data characterises a member of the Polish community of Facebook user-translators as most likely to be a male in late teens to mid-twenties, in education, with a good knowledge of English and experience of providing translation in other non-professional, voluntary online translation initiatives. Overall, the user-translators on Facebook were found to attach a lot of value to translation as a community-based activity. Other contributors are considered as partners in the

collaborative efforts of Facebook translation with whom the challenges of producing a Polish language version of the service can be discussed.

With regards to motivation, the analysis of responses obtained through the two studies leads to preliminary conclusions that participation in the act of translating Facebook content into Polish is conducive to the user-translators' increased perceptions of autonomy, competence and relatedness. This strengthens their motivation to contribute, as supported by self-determination theory (SDT) (Deci and Ryan 2008, Ryan and Deci 2000a, b). Furthermore, it appears that the user-translators attach specific personal and social functions to the activity of Facebook translation, similar to the functions specified in the Volunteer Functions Inventory by Clary et al. (1998). The Facebook initiative appears to meet the expectations associated with four of the functions outlined by Clary et al. (ibid.) – values, enhancement, understanding and social function – and this is likely also to be the reason why the user-translators are motivated to participate.

The voluntary nature of participation in the translation of Facebook provides high levels of autonomy. This corresponds with the loose work patterns preferred by the user-translators: the respondents engage in the translation activities usually only a few times in a month and the individual sessions where they devote less than one hour (or at least not exceeding two hours) of their time to translation or voting. The respondents feel competent as they express that by translating Facebook they do what they feel good at and what gives them a lot of satisfaction. They value the opportunity to further improve their language and translation skills and also feel comfortable with the use of the collaborative translation platform for inputting translations offered to them. Furthermore, as the respondents have indicated the wish to improve the current quality of Polish Facebook translation as a highly significant motivating factor, it confirms the participants' belief in their competence to succeed. They do not simply try to provide any translation but genuinely believe in their ability to provide product of high quality (in relation to what is currently available). For the same reason, the participation in the initiative may further be correlated with the perceived sense of self-efficacy as a factor motivating contribution to online group initiatives mentioned by Kollock (1999) and also may fulfil two of the functions specified by Clary et al. (1998): understanding function and enhancement function. It may be interpreted that user-translators perceive this voluntary activity as an opportunity for self-improvement, contributing to personal growth and development through which new knowledge may be gained and self-esteem may be enhanced.

The altruistic attitudes of the respondents reveal that, as Facebook user-translators, they find it important to help people without knowledge of English and see their contribution as a way to fulfil this goal and realise their intentions. The participation thus fulfils the values function as they perceive the Facebook translation initiative to be an opportunity to express the values they associate with greater concern for others (Clary et al. 1998).

Group commitment (Kollock 1999) also appears to be of significance as respondents found it extremely important to support the work done by the whole community of Polish Facebook translators and take on the responsibility for the collaboratively provided translation (Figure 7.11). This further marks the perceived sense of belongingness and connectedness to the other volunteer user-translators in the community, or relatedness in SDT terms (Ryan and Deci 2000a), enhancing motivation. This is also an indicator that participation in the initiative has the social function (Clary et al. 1998).

The belief in mutual exchange and reciprocity (Kollock 1999) is also present with many of the respondents considering their contributions as a way of repaying the work done by other Facebook translators and by specifying that they can expect to receive help from others when experiencing difficulties with translations (even though asking the group was not the most popular solution to translation problems). The second study respondents in particular often indicated contacting other user-translators when needing help with problematic translations.

However, the obtained responses seem to provide least support for the last of the motivating factors suggested by Kollock (ibid.) who linked motivation to collaborate on the Internet with one's wish to maintain one's reputation online. Even though there was a slight difference in opinions between the two groups of respondents, in general they do not seem to pay much attention to being recognised for their contributions by other community members or other Facebook users and do not submit their translations to improve their own image in the eyes of the rest of the translator community. However, the fact that they usually put in effort to consult relevant resources and reference materials before contacting other members of the community for help emphasises that the user-translators probably do not wish to appear in the community as negligent and not skilled enough to work on translations on their own. Also, the responses provided by the second study participants revealed that it bears a lot of significance to them that their contributions are positively evaluated by other user-translators. Additionally, the user-translators strongly emphasised that they would like Facebook staff to interact more with them, show more interest in the progress of the translation and be more active in acknowledging the

best and most active contributors. This confirms that, even though they do not admit it directly, the user-translators do care about their own image projected in the community. Consequently, SDT as well as Clary et al.'s (1998) considerations of functions associated with volunteering and Kollock's findings on motivation to collaborate online can justifiably be considered as highly relevant in the case of volunteer translators in Facebook translation crowdsourcing.

The findings of the two online surveys with Polish Facebook user-translators imply similarities between factors affecting motivation in translation crowdsourcing for a for-profit organisation and factors driving volunteers translating in not-for-profit initiatives such as TRF, MNH or KNVMNH @ MNH or Wikipedia translation and the open source movement. However, because research on motivation in translation crowdsourcing is still relatively scarce, further work will be necessary to account in greater detail for the similarities and/or possible differences in the characteristics of motivation in translation crowdsourcing organised by NGOs/non-profit organisations as opposed to commercially-oriented translation crowdsourcing initiatives by for-profit entities. In the case of the latter, it may be important to take into consideration factors such as whether the given product or service translated by crowdsourcing is offered for free (like it is the case with Facebook) or has to be paid for (e.g. products by *Adobe* or *Microsoft*). One of the assumptions here could be that one's voluntary contribution to a given translation crowdsourcing initiative may be a manifestation of reciprocating – offering one's service in return for the privilege to use the translated product free of charge. For the factors found to be motivating in both scenarios (non-profit vs. commercial translation crowdsourcing), it may be meaningful to establish the degree of their significance as perceived by the contributors in different initiatives.

### **7.3 Concluding Remarks**

This chapter discussed the data collected in stages I and II (see Figure 6.1) of the research procedure and focused on the community of Polish Facebook user-translators and their activity in the initiative of Facebook translation crowdsourcing. The data were gathered from different sources enabling the researcher to first become familiar with the structure of the initiative on Facebook and the characteristics of the translation activity requested from the Facebook users. To understand those who contribute their translations and learn about their behaviour in the initiative, the communication held between the Facebook users contributing to the translation of the service into Polish was analysed. The two online surveys shed light on the Facebook user-translators' self perception of participation in the initiative and facilitated the researcher to identify factors driving individual user-translators to perform translation at the request of

Facebook. The next chapter will focus on the translation environment on Facebook and analyse its core technological element, the collaborative translation platform, to assess their role in influencing the motivation to contribute to Facebook translation.

## Chapter 8 Translation Technology and Environment on Facebook

This chapter reports on stage three of the research procedure (see Figure 6.1) where the object of investigation was the technology implemented to facilitate translation crowdsourcing on Facebook. Each of the observational sessions with seven Polish Facebook user-translators is described to elicit their actions and attitudes when using the dedicated Facebook collaborative translation platform in their typical translation activity. The chapter analyses the collected data to evaluate the design and functioning of the translation platform with regards to its impact on the translation activity in Facebook translation crowdsourcing in relation to the motivation of the user-translators.

The chapter then turns to discuss the *Translations* application forming the translation environment on Facebook in which the collaborative translation platform operates and the translation activity is performed (see Figure 3.4 and section 3.1.2 in Chapter 3). The data illustrating the perceptions of the Polish Facebook user-translators on the experience of providing translation on Facebook are presented. The analysis is conducted with reference to the presence of game-like elements in the translation environment on Facebook as discussed in Chapter 3.

The analysis in this chapter thus supplements the discussion in the previous chapter which considered motivation in translation crowdsourcing from the perspective of classic theories of motivation to include the impact of translation environment and the implemented technology on the user-translators.

### 8.1 Observational Study

This section reports on the data collected in the third stage of the research procedure through an observational study with six Polish Facebook user-translators (UTs) referred to as UT1– UT6, and a pilot session conducted first with the key informant (UT0). The study focused on translation and related actions undertaken by each study participant performing Facebook translation as they normally would. Each session was captured with the help of remote screen sharing and recording software (see section 6.2.3). The study set the technology facilitating the activity of Facebook translation crowdsourcing as the primary object of investigation. The participants were not directly asked to identify their English language proficiency. Based on the profile of a Polish Facebook user-translator drawn on the basis of the two online surveys it was assumed that the participants would describe their knowledge of English as good or very good. As already specified, the main focus of the study was on the collaborative translation platform and its functioning when

used to contribute translation in the Facebook initiative. The study did not intend to evaluate the translation abilities of the participating UTs. The analysis in this section also incorporates the comments by the participating UTs on their actions as collected in a retrospective think aloud protocol (TAP) while their respective recorded sessions were replayed to them. This provided the researcher with empirical evidence on how the *Translations* application and its main user interface, which is the collaborative translation platform, function in relation to the intentions of the UTs to perform translation. In line with the postulates of motivation theories outlined in Chapter 4, it is hoped that this will shed further light on the factors affecting the motivation of the UTs contributing to Facebook translation crowdsourcing.

Each discussion of a UT's translation activity is organised according to the activity theoretical framework outlined in section 6.2.3 in Chapter 6. The sequences of actions as recorded in each session are analysed individually for each participant taking into consideration factors such as their experience in contributing to Facebook translation and the time needed to complete particular actions. The observation of the translation actions taken by UT0 and then by each of the six study participants enabled the researcher to identify sets of actions necessary to be undertaken by a UT to perform a particular translation-related activity on Facebook but also indicated how it may be necessary for a UT to deviate from a standard set of actions when a problem with the functionality of the collaborative translation platform occurs. What is more, additional actions such as hovering one's mouse over different string elements before undertaking any specific action, switching between the tabs where the original strings and the generated variations are displayed or pausing when typing in one's translation to change it or omit a string all together can also be observed. These were recognised as further indicators of some specific challenges faced by a UT when producing a translation, editing or voting on a translation suggestion. For each of the UTs the time characterised by lack of activity directed at any particular string was also observed. During this 'idle' time a UT would, for example, scroll through the list of displayed strings to omit them, or pause scrolling at some individual strings but without taking on them any action.

As indicated in Chapter 6, Appendix E contains more detailed information on the sets of actions performed in each individual recorded translation session and includes the significant comments made by a given UT in the retrospective analysis of the activity he performed. Additionally, some specific problems with the functioning of the collaborative translation platform as observed by the researcher are indicated. Table 8-1 provides the data overview detailed in Appendix E and identifies the study participants, their experience of providing translation in the initiative of

Facebook translation into Polish, the duration of the session and the number of strings they attempted and acted upon in their recorded session. Acting upon some of the original English strings implied multiplying their number by generating their variations or voting on a number of translation suggestions already available for the single original string. Thus the total number of strings acted upon will typically be higher than the indicated number of the attempted original strings. Table 8-1 specifies the number of the original English strings attempted, the number of the original English strings for which an attempt at an action was made but in the end the action was not completed and the total number of strings (i.e including variations and multiple translation suggestions correlated with a single original string) upon which a translation, voting or editing action was performed by a given UT leading him to achieve the intended goal (to submit a new translation, a translation edit or a vote).

**Table 8-1**An overview of the observational study participants and their translation activity

Study participant	Facebook translation experience	Total activity time	# of original English strings attempted	# of unfinished original strings	Total# of strings acted upon according to different actions		
					Translation	Voting	Editing
UT0	30 months	00:10:35	8	1	9	0	0
UT1	9 months	00:09:42	15	0	4	24	2
UT2	12 months	00:10:08	20	1	23	0	0
UT3	0 months	00:10:40	12	5	4	3	0
UT4	12 months	00:13:16	7	1	10	0	0
UT5	18 months	00:14:28	9	1	35	31	2
UT6	19 months	00:11:02	15	1	5	17	0

The seven sessions of the translation activity of each of the UTs participating in the study are available as AVI video files in Appendix F. The sections below provide a description and analysis of the overall translation activity undertaken by the individual UTs, including their retrospective comments combined with the researcher's observations. For each study participant a table is provided. It specifies all the original strings a UT attempted, indicates the time spent acting upon each of them, the 'idle' time i.e. time during the session not directly associated with an activity on a particular string (e.g. scrolling, switching tabs, omitting strings, pausing at a string to consider it but without undertaking any action) and also the overall time of the recorded session (for the actual sets of actions performed on each of the strings see Appendix E). Additionally, for each original string the type of action taken upon it is indicated, where 't' stands for translation, 'e' for editing of an available translation suggestion and 'v' for voting on a translation suggestion. Chapter 3 describes these actions in detail in the context of the collaborative translation platform on Facebook. The number in brackets identifies how many occurrences of a particular action were recorded for a given original string. If  $t > 1$ , it indicates that for a single original string a number of variations was generated and translated by a UT. In this case, the number defines the number of the generated and translated variations. If  $t = 0$ , it means that a UT performed a specified set of actions but did not (or could not) finalise his intended action either because he decided to omit the string in the end or because the functioning of the platform prevented the action from being completed. If  $v > 1$ , it indicates that for a single original string a number of Polish translation suggestions were displayed to a UT for voting. The number in brackets indicates how many of these suggestions the UT voted on. Furthermore, the data is accompanied by a figure illustrating the duration of time spent performing a sequence of actions on a given original string in relation to the overall duration of the activity time and the duration of the 'idle' time recorded for a given UT.

To analyse the data collected in the observational study the activity-theoretical perspective on the use of tools in the context of human practice was applied (see section 6.2.3 for details) and the Activity Checklist was adopted as a means of evaluating the collaborative translation platform. The descriptions provided for each of the UTs already signal some problems with the functioning of the platform in each of the analysed sessions of translation activity. These were recognised as 'breakdowns' and are discussed in section 8.2 of this chapter evaluating in detail the functioning of the platform and the implications for the UTs' motivation.

### *8.1.1 Pilot Session (UT0)*

As explained in the methodology chapter (see section 6.2.3), prior to the translation session with the first UT, a pilot session with the key informant was performed. The main goal of the session was to put into practice the study design and ensure that the technology set-up functioned as intended. The functioning of the applications and software packages selected to facilitate a VoIP connection between the researcher and a participant, screen sharing, recording of the participant's actions, playing back of these actions and recording of the retrospective TAP by the participant was tested. The researcher could also set her expectations on the nature and volume of translation activities to be observed which helped estimate how long to allow for the requested translation activity.

- Observations on the session set-up

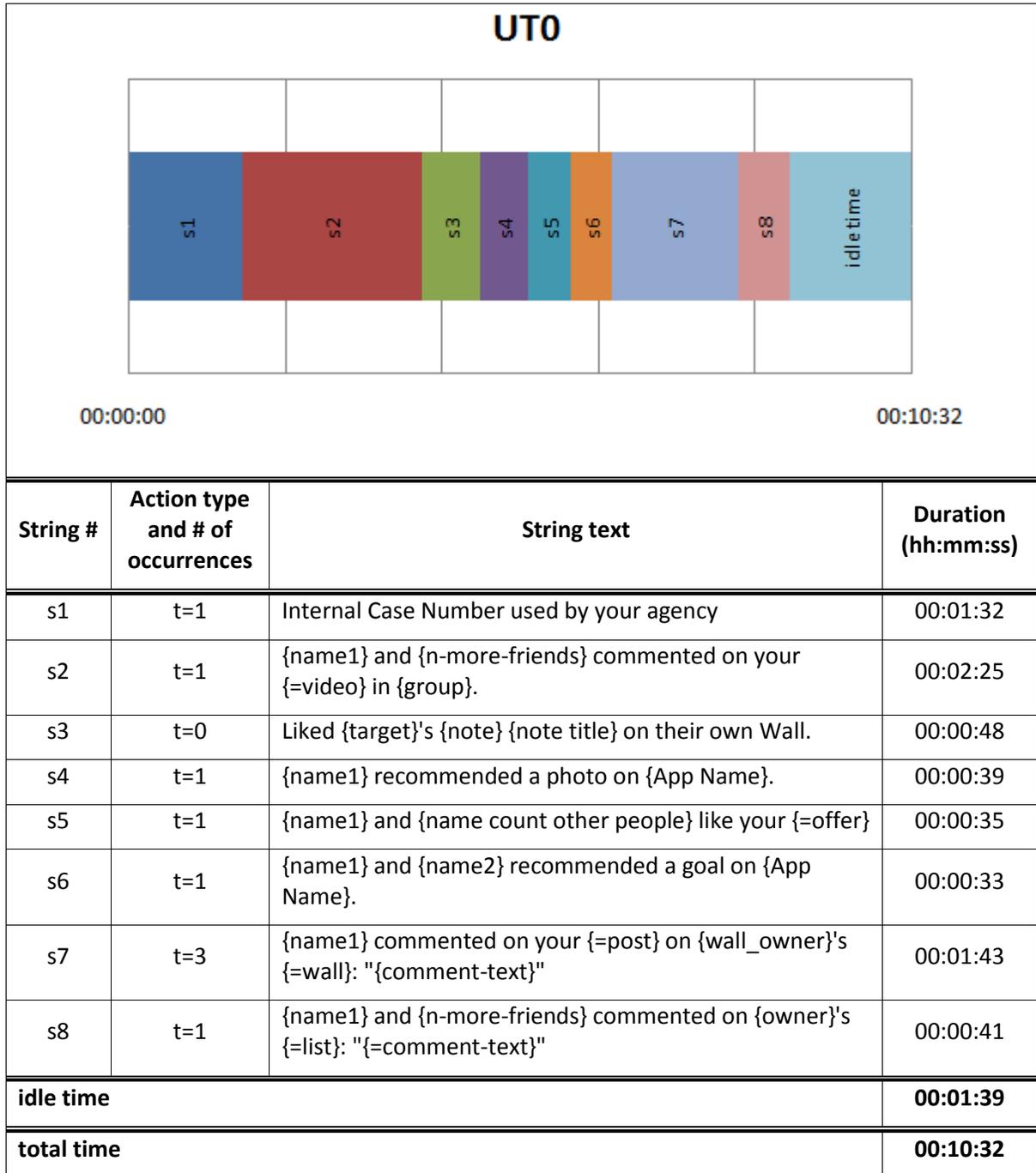
The first observation made by the researcher was in relation to the functioning of TeamViewer. Initially, the software was selected to facilitate voice communication between the researcher and a participant, screen sharing and also recording of the sound and image of the conducted translation session. However, the quality of the VoIP connection established with the software became much worse once the screen sharing feature was enabled. This made communication during the session impossible. For this reason TeamViewer was used only to enable screen sharing and recording during the translation session and Skype was introduced as an additional application to be used in the study to facilitate VoIP connection. This adapted set-up was introduced in all the subsequent sessions with UT1-UT6.

The session participant (UT0) suggested that instead of analysing his translation session retrospectively he would first like to try and analyse his actions concurrently when performing them. However, already the activity performed by UT0 on the very first few strings UT0 indicated that it was difficult for him to focus on the translation activity and express his thoughts at the same time. The researcher and UT0 therefore decided to continue recording but with UT0 only performing his activity without verbalising his thoughts. In 10 min. and 35 sec. UT0 acted upon 8 original English strings. He generated variations for two of the strings (s2 and s7) only to finally abandon translating the variations for the string s2 as will be explained below. The recorded session was played back to UT0 who confirmed that he did not have problems recollecting what he was thinking when performing actions on each of the strings. Thus it was decided that the study would be performed as initially planned by the researcher, with a retrospective TAP explaining the

recorded activity after a session of around 10 minutes of uninterrupted translation activity undertaken as normally would be on Facebook.

- Observations on the translation activity<sup>48</sup>

**Table 8-2** Outline of the translation activity recorded for UTO (pilot session)



<sup>48</sup> For the actual sets of actions performed by UTO see Table 2 in Appendix E.

UT0 began his session by explaining how the collaborative translation platform can be configured to display either all the available strings, the strings for translation only or the strings for voting only. He set the platform to list for him only the strings for translation and started to work on the first displayed string. In comparison with other strings he acted upon, it took UT0 relatively longer to provide his translations for s1 and s2. This was affected by the fact that for the first few minutes of the session UT0 intended to verbalise his thoughts when performing his translation.

Additionally, in the case of s1, which did not contain any tokens, UT0 used external resources online – a machine translation engine and an English to Polish dictionary – to translate a phrase which was a part of the string. This entailed switching to a new tab in his web browser, launching the selected resource and performing a search for the translation of the phrase. UT0 indicated that the contextual information provided for this string in the platform did not help him with the translation of s1 at all.

In the case of s2, which contained 4 tokens, UT0 indicated that one of them was particularly challenging: it would be substituted with a phrase including a number and would affect the form of the verb to follow. He began typing in his translation but then decided to investigate the variations settings for this string which had been specified in the past and proceeded with the translation of the generated variations. He began typing in his translation for s2a switching back to the main tab to consult the variations settings. In the end he decided that no variations were necessary, removed the existing variations settings and finished his translation for s2 as begun earlier.

He also commented on one additional token in s2 which he specified would be substituted with a translation retrieved from the glossary. This translation would be a noun in the nominative case while to make a grammatically correct Polish sentence would require this noun to be inflected. He expressed his discontent with the functioning of the platform and its inability to serve the translation into Polish properly.

Upon analysing the string s3, UT0 decided that string variations were necessary to reflect the gender of the string sentence subject. However, the string sentence had an implied subject and UT0 specified that he was uncertain how to specify the settings for the variations to generate them as he needed. In the end he decided to omit this string.

S4 contained two tokens, one of them representing the subject of the string sentence. UT0 specified that ideally he would again need to generate string variations to provide correct Polish

translations depending on the gender of the subject. However, here he pointed out some of the problematic aspects of working with variations. He mentioned that the variations are generated in a new tab, translation for each generated variation needs to be provided separately, even though the differences between the translations of variations are only minimal (e.g. one letter in the verb ending) and then each provided translation needs to be submitted separately as well, by clicking on the 'translate' button corresponding with a given variation. He suggested that the translation provided for the very first variation could be automatically populated across all the variations so that only minor editing would need to be done by a UT. Then for all the variations there could be a single 'translate' button submitting all the translations at once. In the end, he suggested changing the verb tense in his translation of s4 from the past tense in the original to the present in the translation. In this way one verb form could be used irrespectively of the subject gender eliminating the need to generate variations. As UT0 did not need to generate or consider existing string variations, in comparison with s2 it took him less time to provide and submit his translation for s4.

S5 was very similar in structure to s2, as one of its tokens would be substituted with a noun in the nominative case as retrieved by the translation module from the glossary. UT0 indicated that he knew that this would negatively affect the quality of his translation but he could not do anything to change this. He suggested that for a single English noun the glossary could contain its Polish translation in the nominative case as well as the inflected forms of this noun reflecting different cases. A UT could then indicate the necessary form when providing his or her translation of a string featuring a token to be substituted with a noun from the glossary.

UT0 decided to generate variations for s7 indicating that the gender of the subject (represented by a token, similarly as in s4) determined the translation. UT0 did not face any problems when generating the variations here. What affected the time necessary to complete his translation was the fact that the platform did not respond when he attempted submitting the translation for s7c. UT0 was forced to refresh the tab where the variations were listed, then provide and submit the translation for s7c again. The last string he acted upon had the same problem as s2 and s5; he indicated a problem with a token which would be incorrectly substituted with a noun in the nominative case.

- Session summary and implications of breakdowns in the collaborative translation platform

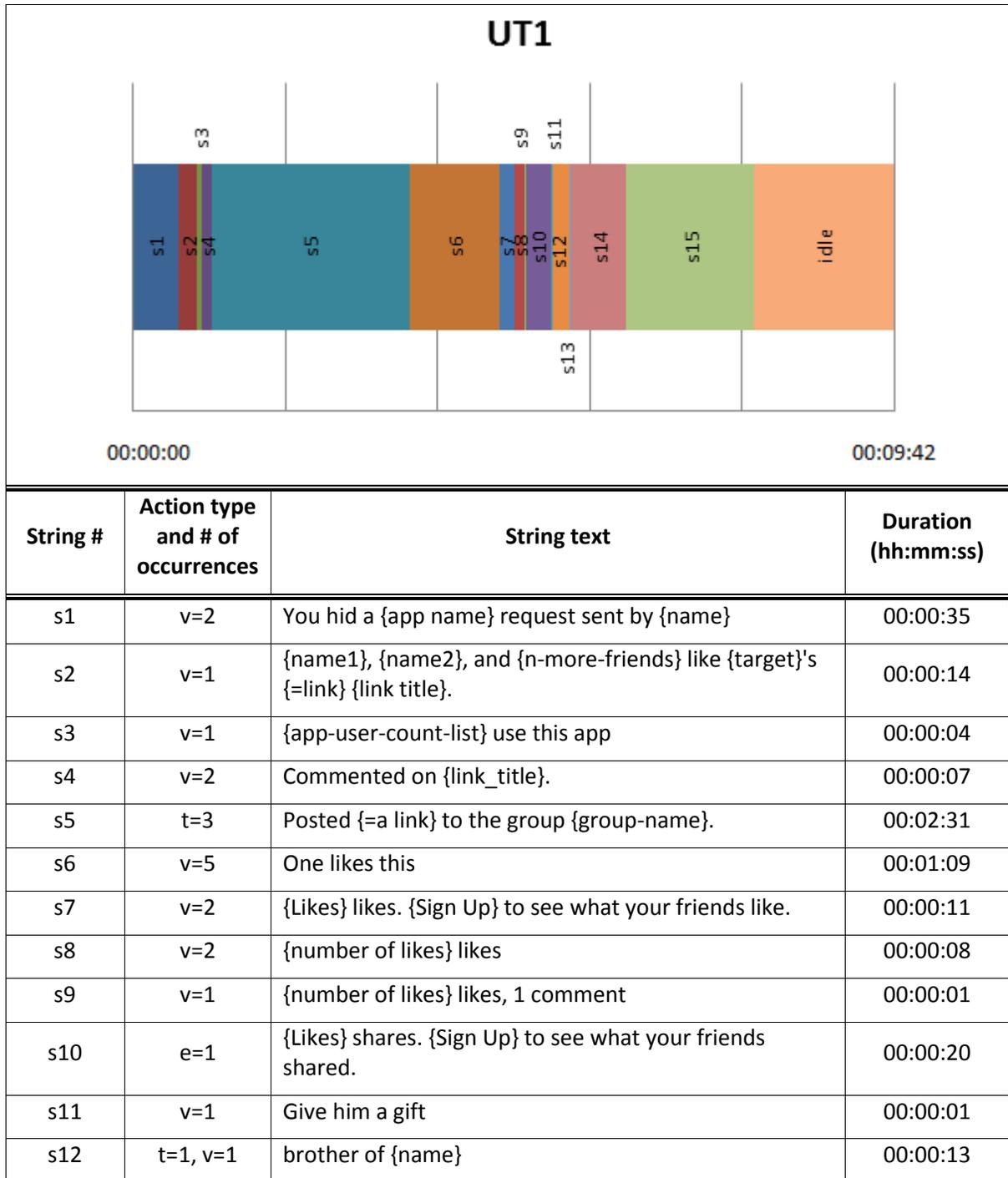
UT0 precisely discussed all the problematic aspects of translating the strings he decided to act upon during the session. This suggests that the longer time spent on analysing a string does not imply a lack of linguistic competence on the part of a UT providing translation. It may rather indicate the complexity of a string and the need to consult additional resources to find translation suggestions (e.g. s1). It is likely to be further associated with the problematic aspects of using the variations feature of the translation module on Facebook in order to provide a grammatically correct set of Polish translations for an original string with tokens (e.g. s2). Some technical issues with the functioning of the platform may also occur (e.g. s7).

The session identified that even for an experienced UT (30 months as indicated in Table 8-1) it may sometimes be difficult to work out how the variations settings should be specified in a given case to ensure that the correct set of variations is generated and then translated. In one case UT0 decided to change the tense in his translation to avoid using the variations feature altogether (s4). He also strongly emphasised the detrimental effects of representing nouns recognised as terms with tokens, which are to be substituted with the translations retrieved from the glossary. The strings he worked on (s2, s5, s8) illustrated that such an approach does not work for the Polish language where nouns need to be inflected depending on their syntactic function in the sentence. These problems were also discussed by the community of Polish Facebook user-translators on their Facebook community group page as observed in the netnographic study (see Chapter 7) and will recur in the translation sessions with the six UTs participating in the observational study.

### 8.1.2 User-Translator 1 (UT1)

- Observations on the translation activity<sup>49</sup>

**Table 8-3 Outline of the translation activity recorded for UT1**



<sup>49</sup> For the actual sets of actions performed by UT1 see Table 3 in Appendix E.

s13	v=1	Turn On	00:00:01
s14	v=5	meta tags	00:00:42
s15	e=1	The page failed to provide a valid list of administrators. It needs to specify the administrators using either a "{fb-app-id}" meta tag, or using a "{fb-admins}" meta tag to specify a comma-delimited list of Facebook users.	00:01:38
<b>idle time</b>			<b>00:01:47</b>
<b>total time</b>			<b>00:09:42</b>

The actions taken by UT1 were mainly focused on voting on the existing translations rather than providing new string translations. Of the 15 original strings he acted upon, he provided new translations for the three variations generated for s5 and for the original string s12. In the case of s10 and s15, he edited the existing translations. For the remaining 13 strings he considered the available translation suggestions voting on 24 of them in total. UT1 tended to choose very short strings with the majority of them having only 1 or 2 tokens.

UT1 made use of the search feature in the application whereby he could specify a particular word or phrase he wanted to find from among all the original strings or their translations. He did that to provide translations specifically for all the strings that contained this word/ phrase and to consult how it was translated previously.

For the first 16 seconds of the session, UT1 kept scrolling the list of strings displayed to him in the application. UT1 explained that the reason for skipping all the previous strings was because he did not feel competent enough to provide his own translations and indicated being unsure about the context in which they would be used. Thus he had no certainty of how the corresponding translations should be formulated. When the researcher asked him directly about the impact of the presence of tokens in the strings he left out, he admitted that they *mogq zmylić* (“can mislead”) and further cause problems with inflecting the sentence elements in the translated string.

The time the UT spent on voting on the translation suggestions available for the individual original strings varied depending on the number of the suggestions he had to analyse. For the strings with one or two suggestion only he would be able to provide his vote in a matter of seconds (e.g. s8, s9, s11, s13). It would take him slightly more time if the original string contained a number of tokens (s2). He would spend considerably more time evaluating if there were more suggestions to

consider (s6, s14) as he would additionally consult internal and external resources before voting these suggestions up or down.

UT1 offered his first own translation for a string which already had two translation suggestions (s5), however both were translated with the 'generic' sentence structure before the variations feature was introduced. UT1 decided to generate the string variations to account for gender differences required for the Polish language.

Of all the strings considered by UT1, it took him the longest to finalise the translation activity performed on s5. The log of actions illustrates a number of different actions undertaken before the string could have been translated. First, the user-translator performed a sequence of actions to generate variations. As a result of this, UT1 had to switch between many different tabs in the browser in order to: (1) proceed with his translation while referring to the existing translation suggestions already available for this string; (2) search and check how similar strings were translated and used on Facebook consulting the list of the actual notifications he had published to his Facebook profile page; (3) consult the glossary and external resources online; (4) provide the translation of the variations and finally (5) return to the main tab of the UI of the translation platform where all the strings for translation were listed, so that he could proceed with the translation activity further. For the string s5 three string variations (s5a, s5b and s5c) were generated. After providing the translation of the first of the variations (s5a), UT1 copied and pasted this translation as the translations for the remaining two string variations (s5b and s5c) to then edit the verb forms as required. The edits were minor and involved the change in the verb form to reflect the gender of the subject. To provide these only slightly different translations, the whole sequence of actions involving copying, pasting and confirming the translations by clicking the 'translate' button had to be performed twice. Performing the additional sequences of actions with the intention to consult resources in search of help with translation of s5 significantly influenced the time UT1 needed to provide the translations for the three generated variations. The set of actions performed by UT1 on s5 was the lengthiest of all the actions recorded in the session.

Next, UT1 decided to filter the list of strings for translation displayed to him as he wanted to find a particular original string he had in mind. However, the search again did not provide him with what he was looking for. When he came across a string which referred to a feature on Facebook unknown to him, he again implied that he did not feel competent to translate this string. Later he also revealed that some level of Facebook-specific knowledge is required to be able to provide correct translations.

In the case of s10, UT1 was not happy with the word order of the available translation suggestion. He provided his own translation based on this suggestion changing the word order as he found appropriate, finishing the sequence of actions within 20 seconds. At one point UT1 again filtered the strings to display only those containing an English word he specified. He searched for a particular phrase with this word and once he found it (s14) in the filtered list of strings, he looked through all the available translation suggestions. He opened a new tab in his browser and searched for one of the suggestions online to find out how frequently it was used. Because the frequency of usage was high and the phrase also appeared in external online resources he considered as reliable, he decided to 'vote up' this particular suggestion and 'vote down' the remaining ones.

He then proceeded to translate another string (s15) in which the phrase he had modified in the previous string was also used. He changed the available translation suggestion using the translation of the phrase he voted up. He then took a closer look at the whole translation of the string and described it as *dośćdziwnie przetłumaczona* ("quite awkwardly translated") deciding to further apply more changes to it.

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UT1 appeared very decisive performing actions on his selected strings. He actively used the option of filtering the strings displayed in the application, searching for those particularly worthy of his attention. However, he was not able to find a specific string missing translation, which he had come across before when using Facebook in Polish on his mobile device. His intention was to provide the missing translation but could not do so. He blamed the administrators of the application as responsible for excluding the string from translation and expressed his surprise and annoyance as to why they had done so. His glossary search for the translation of the verb in one string was found irrelevant for his problem after all. His glossary search for the translation of the verb in s5 did not provide him with any relevant results.

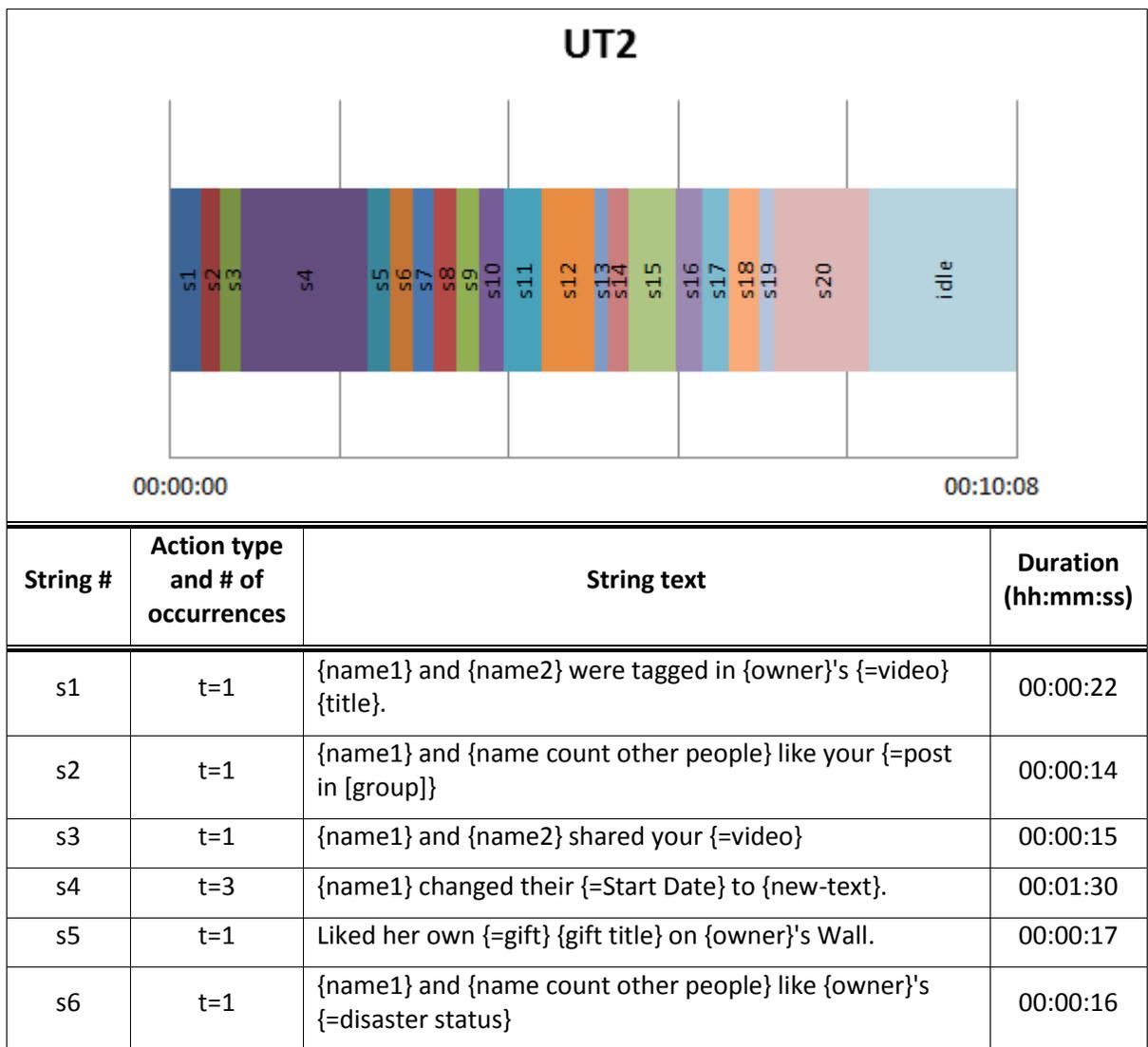
The time UT1 spent on voting on the available translation suggestions varied from string to string but still the most time-consuming was the activity of producing new translations for a single original string which required variations to be generated. In general, UT1 also avoided strings with tokens, due to the lack of certainty about the values substituted for them. This made it difficult for him to establish the meaning of such strings. He indicated the need to be familiar with Facebook features and infrastructure to be able to provide correct translations.

He was not happy with the lack of contextual information, specifically when he came across s15, a long string composed of two sentences with tokens, whose function he also was not able to specify. He was further dissatisfied with how slowly the application responded to the actions he undertook, which he found annoying and distracting. This particularly occurred when he was waiting for the list of variations to be generated for a particular string. The set of actions he performed on this original string was the second longest after s5 where UT1 generated variations.

### 8.1.3 User-Translator 2 (UT2)

- Observations on the translation activity<sup>50</sup>

**Table 8-4 Outline of the translation activity recorded for UT2**



<sup>50</sup> For the actual sets of actions performed by UT2 see Table 4 in Appendix E.

s7	t=1	Commented on his own {=gift} {gift title}.	00:00:15
s8	t=1	{name1} and {n-more-friends} commented on your {=video} in {group}.	00:00:16
s9	t=1	{name1} and {name2} like a radio station.	00:00:17
s10	t=1	{name1}, {name2} and {name3} like your {=change of address} "{title}"	00:00:17
s11	t=1	{name1} and {name2} commented on {owner}'s {=note}: "{comment-text}"	00:00:27
s12	t=1	{name1} and {n-more-profiles} is using an {=application}.	00:00:38
s13	t=1	{name1} and {name2} like a video.	00:00:10
s14	t=1	{name1}, {name2} and {name3} like {owner}'s {=playlist} {playlist title}	00:00:15
s15	t=1	{name1} and {n-more-profiles} commented on {owner}'s {=deal} on your {=wall}.	00:00:34
s16	t=0	{name1}, {name2} and {name3} commented on your activity: Recommended {link}.	00:00:19
s17	t=1	{name1} and {name count others} want to watch {movie1} and {movie count other movies} on {App Name}.	00:00:19
s18	t=1	Liked {target}'s {=disaster status} {disaster status title} on his own Wall.	00:00:22
s19	t=1	Created in about a month	00:00:11
s20	t=3	Shared {content owner}'s {=note}: {share-title}.	00:01:08
<b>idle time</b>			<b>00:01:46</b>
<b>total time</b>			<b>00:10:08</b>

UT2 had the translation platform set to only display the strings which required translation and he focused on this activity in his session. He was not selective and he rarely scrolled through the list of strings. Overall, the sequences of actions he performed on each individual string were almost identical and all took up very similar lengths of time to be completed. The sequence of actions for generating variations was performed by UT2 only twice (s4 and s20). All of the strings UT2 translated contained tokens.

The first string UT2 acted upon contained five tokens. He very quickly provided his translation clicking on the tokenisers whenever he wanted to introduce a corresponding token into his translation. Nevertheless, in a number of cases the original string should have ideally been marked as requiring variations to be generated. However, UT2 generated variations only for s4 and s20.

For s4 it was not until he started providing the verb form in the translation when he stopped typing to delete his input and indicate the need for variations to be generated. UT2 noted later that this was actually the first time he used the feature as usually he would omit strings requiring variations to be generated. It took him 2 minutes and 15 seconds to finalise the activity on this string which included translation of the three generated string variations. UT2 spent a significant amount of this time deciding which sentence elements in s4 (the tokens, the subject or the person viewing the translation) determined the required string variations to indicate to the translation module which variations to generate. He indicated that, because of a lack of experience of using the variations feature, he hesitated changing his first choice after a few seconds selecting and deselecting checkboxes corresponding with different sentence elements and grammatical categories.

In one case (s12), immediately after providing and submitting his translation, UT2 decided to retranslate the same string changing the form of the verb which followed a token. In the case of string s16, UT2 abandoned the translation altogether because he could not determine the correct form of a verb following a token. The second string UT2 generated variations for was s20. In comparison with s4, it took him less time to indicate the sentence elements and grammatical categories determining the type of variations to be generated. Nevertheless, as already indicated, many more of the strings he worked on during the session required variations to be generated. These examples illustrate the problems with the interpretation of the form and meaning of the word to be substituted for the tokens in these strings and explain the reluctance in using the variations feature.

When the researcher raised a question about one of the tokens in the string s8 and its possible substitutes, UT2 admitted *pojęcia nie mam* ("I have no clue") what would appear instead of the token in the translation, pointing out that the only way to find out would be to see the translation being actually displayed on Facebook. He indicated that the positive aspect of providing translations in Facebook's initiative was that other contributors could offer their own translation suggestions for the same string and the best translation would be selected in the end through voting. He implied that he relies on the others to pick up on his errors and correct them.

- Session summary and implications of breakdowns in the collaborative translation platform UT2 did not experience any particular problems with the functioning of the platform during the session. However, his translation activity was not varied. Commenting on the suggestions from the glossary, he responded by saying that *przynajmniej dla mnie, nie są jakoś specjalnie użyteczne* ("at

least for me, they are not really useful”). He himself did not consult any internal or external resources or compare his translations with already existing translations of similar strings.

The researcher’s perception about the attitude of UT2 was that he was not too concerned about the absolute correctness of the translations he was providing. When the researcher asked about the particular linguistic choices made when formulating his translations, he explained that his decisions were guided by his intuition, or, as in case with s4: *kiedyś zobaczyłem, że ktoś tak przetłumaczył i stwierdziłem, że zostaną przy tym* (“I once saw that it was translated in this way by someone and decided to stick with it [this way of translating]”). His commentary also revealed that what he did during the session was all that he could do under the circumstances.

Considering this UT’s relative experience in the translation activity on Facebook, his reluctance to use the variations feature may seem rather surprising. On the other hand, a similar attitude was revealed in the pilot session with UT0 who has been in the initiative for 30 months. UT2 expressed that he did not feel competent to generate variations and that he was also never completely sure about his suggested translations because of the lack of (or insufficient) context and the inability to determine how tokens would be substituted in the translations displayed on Facebook.

UT2 seemed to be aware of the possible mistakes in his translations, caused by the fact that he avoided generating variations. Nevertheless, UT2’s view was that even if he was not completely sure about the quality of his translation, he would submit it believing that the other UTs could always rectify his mistakes as required. He indicated voting as the mechanism for safeguarding quality by rejecting inappropriate translations from appearing on Facebook and remarked that his suggestions would not become part of the final translation immediately upon their submission anyway as they had to be voted for by other UTs.

### 8.1.4 User-Translator 3 (UT3)

- Observations on the translation activity<sup>51</sup>

**Table 8-5 Outline of the translation activity recorded for UT3**

String #	Action type and # of occurrences	String text	Duration (hh:mm:ss)
s1	t=1	Content that is sponsored or promoted on Facebook is more intrusive than other websites	00:02:51
s2	t=1	Enter your cell phone number and we'll send you a link to the Facebook Mobile web site.	00:00:21
s3	t=1	The author was banned from the group.	00:00:09
s4	t=1	I didn't have time to read the story the first time	00:01:32
s5	t=0	You can choose if you want to add it to your timeline.	00:00:01
s6	t=0	{name1} and {n-more-people} commented on their own {=wallpost} in {group}: "{=comment-text}"	00:00:03
s7	t=1	Fairly dissatisfied	00:00:41
s8	v=1	Status updated in about a week	00:00:13
s9	v=1	College	00:00:01
s10	t=0	{name} read {number} things on {application}.	00:00:02
s11	t=0	Liked their own {=gift} in {group}.	00:00:30
s12	v=1	{name1} and {name2} like an {=album} on their timeline	00:00:32
<b>idle time</b>			<b>00:03:44</b>
<b>total time</b>			<b>00:10:40</b>

<sup>51</sup> For the actual sets of actions performed by UT3 see Table 5 in Appendix E.

UT3 decided to participate in the study despite having no previous experience of providing translations on Facebook. He had had the application installed onto his profile before the research started and could observe the discussions of the community translating Facebook into Polish. In this way he found out about the study and decided to participate in it. His input allowed the researcher to observe how the translation actions are performed by a first-time user of the collaborative translation platform.

For the total of 12 original strings he analysed, of which only one was a string with tokens, UT3 submitted 4 translations and 3 votes. He stated that he intentionally looked for strings without tokens. He attempted generating variations for one string (s4). However, as he did not finish the required sequence of actions as necessary, the variations in the end were not displayed to him for translation.

What characterises the activity of UT3 were long sequences of actions performed on a single string, especially in the first half of the recorded session. The sequence of actions performed on s1 lasted 2 minutes and 45 seconds with UT3 trying to explore the different actions and their possible consequences. He would frequently perform the action of scrolling up and down the list of the available strings clicking on different action buttons and selecting different commands for neighbouring strings. This made his activity seem very chaotic.

He would often stop his scrolling to pause for a few seconds to investigate a string more closely, in some cases perform a single action or a short, random sequence of actions and then leave it without introducing any changes (e.g. s5 and s6). This type of activity took up one third of the time of UT3's session as reflected by the length of the 'idle' time, which was twice as long as for the other study participants.

In the case of s1, UT3 clicked on the 'variations' command, as he himself explained later, to investigate what would happen rather than as a decisive action. He remarked that he expected to find some mechanism that would allow him to indicate gender/ number differences, if necessary. However, once the table of string elements and available grammatical categories was displayed, he did not know how to interpret and correlate the displayed information and the assigned checkboxes and thus how to use the feature.

He had two extensions installed to his web browser, both of which were English-to-Polish dictionaries. Consequently, by double-clicking a word he could check its definition in English and translation into Polish. He consulted these dictionaries prior to translating s1.

UT3 decided to explore the variations feature on one more occasion (s4) to reflect the differences in translation depending on the gender of the subject. However, the contextual information about this string indicated that the subject of the given sentence was feminine implying that no further variations were necessary. However, UT3 did not notice this information and went through the process of creating the variations himself. He specified the settings for the variations but did not finalise the sequence of actions required to actually generate the variations in a new tab. This left him slightly disconcerted as he felt the system would not let him provide the variation to mark gender differences which he considered necessary.

Following this episode, it became clear that UT3 was looking particularly for strings which did not contain tokens and did not require variations to be generated. When the researcher asked whether he could explain the role of the text element of a string contained in curly brackets, he indicated that he understood these were variables and how the text would be substituted for them. However, he mentioned that he did not feel familiar with this feature here on Facebook and how the actual text would be substituted once the actual translation was displayed. Because the majority of the strings displayed to him did contain tokens, he was forced to scroll the screen frequently in search of a greater selection of strings. While scrolling, he would specify also his slight annoyance with the fact there were not many strings which he could actually attempt translating. As he noted, he was searching for strings that would be *przyjemne dla użytkownika, (...) nie te nawiasy* (“nice for the user, (...) not these brackets”) and *bez tych zmiennych* (“without these variables”), meaning that they would not contain tokens.

- Session summary and implications of breakdowns in the collaborative translation platform

The analysis of the translation actions taken by UT3 reveals that, for a person interacting with the *Translations* application on Facebook for the first time, it may be difficult to find their way around the UI and different functionalities of the collaborative translation platform. However, it seemed that towards the end of the session UT3 became more aware of the layout of the strings in the application as well as the functionality of filtering them depending on the translation action relevant to him. Nevertheless, the presence of tokens was again signalled by this UT as the most troublesome. He indicated the lack of clarity on how to treat the tokens and the difficulty in predicting what the tokens could be substituted with. As a consequence, he decided not to translate any strings with tokens. Even though he once made an attempt at using the variations feature for one selected string, the procedure was not successful as he did not finalise the corresponding sequence of actions as required.

In the retrospective analysis of his activity, UT3 also emphasised being distracted by the information appearing live in his Facebook news feed and the excerpts of conversations held in the Polish translator community. These two features are displayed by default in the *Translations* application in a panel to the right of the main interface of the collaborative translation platform listing the strings for translation. He further described the work space as being too cluttered and the arrangement of the text strings as unclear, pointing out that this might have caused him to feel confused and unable to recognise the individual strings and their corresponding action buttons. UT3 was confused about the process of confirming his suggested translations so that they are submitted to the translation module and admitted that he struggled to identify which action buttons corresponded with which of the displayed strings he wanted to work on. Towards the end of his recorded session he realised that it was possible to filter the strings displayed in the platform, depending on the actions a user-translator was interested in, so that only strings for translation or requiring evaluation through voting would be listed. He indicated that he would have focused on voting only if he had known this feature.

### 8.1.5 User-Translator 4 (UT4)

- Observations on the translation activity<sup>52</sup>

**Table 8-6 Outline of the translation activity recorded for UT4**

String #	Action type and # of occurrences	String text	Duration (hh:mm:ss)
s1	t=1	{name1} and {n-more-profiles} commented on their own {=status} on {wall_owner}'s {=wall}: "{=comment-text}"	00:02:17
s2	t=3	{name1} and {n-more-people} commented on their own {=status}: "{=comment-text}"	00:02:28
s3	t=3	{name1} commented on {owner}'s {=note} in {group}.	00:01:34
s4	t=1	Liked his own {=album} on {owner}'s Wall.	00:00:33
s5	t=1	Commented on her own {=wallpost} {wallpost title}.	00:00:20
s6	t=0	{name1} and {name count other people} like your {=story} {story title} on your timeline	00:02:17
s7	t=1	We accept the submission of applications from people 13 years of age and older. If you are under the age of 18, you will need an accompanying adult to participate in any session.	00:02:05
<b>idle time</b>			<b>00:01:42</b>
<b>total time</b>			<b>00:13:16</b>

<sup>52</sup> For the actual sets of actions performed by UT4 see Table 6 in Appendix E.

UT4 performed translation actions on 7 original strings analysed during the session. Of these, six had tokens. For strings s2, s3 and s6 he generated variations, with the sequences of actions performed on s2 and s6 being the most time consuming in the session.

UT4 had his application set specifically to display strings requiring translations. The very first of those strings (s1) contained six tokens and UT4 started translating it immediately. The sequence of actions performed on this string was the longest one and the second most time consuming with the UT emphasising the complexity of the string.

UT4 took some time to consider what verb form he should enter in his translation. In his retrospective commentary he explained that the translation would depend on the number which was to be substituted for the token directly preceding the verb. He hesitated about whether to indicate that variations should be generated hovering his mouse between the translation box, the tokens and the link that would enable the variations feature for his string. He did click on the link, hovered the mouse over the sentence elements and available grammatical categories though in the end he did not generate any variations. However, he decided to change the word form of the verb just before submitting his final translation. He indicated that he did not have a complete certainty whether his translation was correct. He found the original string to be *skonstruowany w dosyć dziwny sposób* (“constructed in a quite strange way”) as he had never come across a similar string when using Facebook in English.

In the case of s2, UT4 decided to generate variations for this string only after he started translating the original string using tokenisers to insert the required tokens (a similar situation happened with UT2). He later commented that sometimes the translation of variations can become tedious because as many as 20 – 30 of them may be generated. He used the function of copy and paste to insert the translation provided for the first variation into the remaining variations and then just edited the verb endings as required. He considered whether the verb forms he used were correct, as suggested by his actions of moving his mouse between the ‘translate’ button and the verb a few times before finally submitting his translation.

After submitting his final translation (s2c) he decided to open the glossary in a new tab to search for the translation of the token, which determined the variations as he was still unsure how it would be substituted when displayed to Facebook users. In his retrospective commentary he even indicated that the token could have been substituted by a different word than he had thought during the translation session. Nevertheless, the glossary did not provide him with any suggestions

relevant for his search. UT4 mentioned that because his glossary searches are rarely successful, he does not use the glossary often.

After generating a set of variations for s6 depending on the number to be substituted for one token in the string sentence, UT4 realised that the gender of the word substituted for yet another token would also affect translation. Thus he again performed the set of actions to generate more string variations. Nevertheless, when trying to submit his translation for the first of the generated variations, the translation module prevented his action from being finalised indicating that the original string no longer existed and thus the translation could not be submitted. Working on these three strings (s1, s2, s6) took up almost half of the whole activity time recorded in the session for this UT.

UT4 would often refresh the main tab to display a new set of strings for translation. In his commentary he suggested that it is sometimes necessary to think about the order of the tokens which may be different in the translation compared to the original.

One of his chosen strings contained the term 'Wall' (s4), which he explained as referring to a feature which no longer existed on Facebook. He was surprised that such a string was offered for translation.

S7 was a long sentence and it took UT2 over 2 minutes to complete its translation. However, it did not contain any tokens and UT2 mentioned that he much preferred this type of string. When the researcher asked him, he agreed that tokens can complicate the translation. He said that there is no particular reason why the tokens are problematic, noting rather than that it is Polish grammar that is problematic. However, when the researcher suggested that maybe it is not Polish grammar but the fact that the Facebook translation module is not designed to handle Polish grammar properly, UT4 agreed, commenting further that the application had been developed with the English language in mind, where there is not much variability in word forms. However, he found it fascinating that in the end it was possible to develop a system which would work with the grammar of languages more complicated than English, even though its functioning was far from perfect.

- Session summary and implications of breakdowns in the collaborative translation platform

The translation actions by UT4 and then his general comments on the use of the *Translations* application and the collaborative translation platform focused on the translation of strings with tokens. Even though he indicated his preference to translate strings without tokens, he did not

omit any string in particular because of the presence of tokens during the session. However, his sequences of actions and commentary illustrate how complicated the analysis and translation of such strings can be.

As with previous UTs, he expressed his uncertainty about the text that could be substituted for some of the tokens. This further made it difficult to indicate the necessary variations, as well as to provide a translation. He would often pause when typing in his translation to consider what would be the appropriate form of the verb following a token in a string. His session proved that the information provided (if any) about the strings is often not enough to comprehend the intended meaning of the strings fully and be certain about the text substituted for the tokens. UT4 considered his only string without tokens (s7) for more or less the same duration of time as strings with tokens which required variations to be generated. However, he still indicated that he prefers working with token-less strings. This implies that the challenge of translating even a longer and complicated string is preferred to translating a string with tokens, where it is difficult to predict how the final translation will be used when displayed on Facebook.

The functioning of the platform during the session could be questioned with regards to two strings displayed to the UT (s4 and s6). The former referred to a feature which was no longer available on Facebook and the latter, upon the submission of its translation, was defined as no longer in existence. Those strings thus should not have been listed for translation at all. The glossary search performed by UT4 also did not satisfy him, as was the case with other UTs.

UT4 compared his experience of translating Facebook with the translation of subtitles in TED Open TranslationProject (see section 2.2 in Chapter 2 and 4.5 in Chapter 4). His main observation was that when translating in the TED projects, he works with finite text with no tokens. By comparison on Facebook, the translation is seen as an indeterminate activity leading to some dissatisfaction.

### 8.1.6 User-Translator 5 (UT5)

- Observations on the translation activity<sup>53</sup>

**Table 8-7 Outline of the translation activity recorded for UT5**

String #	Action type and # of occurrences	String text	Duration (hh:mm:ss)
s1	t=3	{number} friends	00:00:30
s2	t=1, e=2, v=9	{name1} likes a {=playlist} on your timeline	00:00:59
s3	t=1, v=4	{name1} likes your {=activity} on her own timeline	00:01:15
s4	t=0	{name1}, {name2}, and {n-more-profiles} like your {=note} in {group}.	00:00:24
s5	t=3	{short-name} likes {name}.	00:00:30
s6	v=6	Individual Facebook members can connect to a maximum of 5000 friends. To do this action, you'll need to remove a friend you're already connected to.	00:01:24
s7	v=3	Your email, {email-address} is invalid. Enter a valid email so you don't miss important notifications about your account and updates from your friends.	00:00:36
s8	v=9	The author was banned from the group.	00:00:19
s9	t=27	{name1} and {name2} commented on a {=post} that you're tagged in	00:07:22
<b>idle time</b>			<b>00:01:09</b>
<b>total time</b>			<b>00:14:28</b>

<sup>53</sup> For the actual sets of actions performed by UT5 see Table 7 in Appendix E.

This user-translator was the second most experienced of all the study participants. He had the platform set to display both strings for translation and voting. He had *Google Translator Toolkit* active in a separate tab in his web browser but did not use this resource during the session. He acted upon 9 original strings but he generated variations for four of them (s1, s3, s5 and s9) and also evaluated multiple translation suggestions available for the individual original strings. Thus in total he acted upon 68 different strings. 27 of these were the variations generated for the single original string s9. The sequence of actions performed on this string took up half of time of the UT's recorded session.

UT5's setup of work space was interesting and different from other user-translators but also turned out to be quite problematic in one instance (s3) as will be described below. UT5 began by scrolling through the list of strings displayed for translation to choose the ones to work on. He commented that in the first place he searches for "easier" strings, i.e. those with the least number of tokens emphasising that it is not difficult to translate just because the string is long. Again, as it was the case with UT4, UT5 perceived tokens as more challenging than working on a longer, complicated text string with few or no tokens.

He generated variations for the first string s1 but did not proceed with their translation immediately. Instead, he acted upon s2 indicating that he wanted to translate its variations and then continued to generate variations for the strings s3 – s5. In the case of s4, UT5 was not able to modify the variations settings and in the end omitted this string. As a result of his actions, many new tabs were generated in his web browser – each referring to one string and its generated variations. Thus the actions undertaken by UT5 were characterised by frequent switching between tabs – to provide translation for all the generated variations and also for other strings in the main list and thus still on the main tab.

After performing the initial sets of actions on strings s1-s5, he switched to the tab in which the variations for the string s1 were listed to submit their translations. This went very smoothly with all the activity taken on s1 lasting 30 seconds. The variations displayed for s2 already had translation suggestions and UT5 edited two of them, voted on nine and provided one new translation.

When UT5 turned to analyse the variations generated for s3, he realised that they were not in the end necessary. However, he realised his mistake only once he started translating the first variation (s3a). He noted that the pronoun in the string clearly indicated that the subject of the described

action was female. To rectify the error, he had to switch back to the main application tab and search the entire list of strings to find the original string s3 and change its variations settings. It took him some time to revise the displayed strings once again and find the one he was looking for. He decided to change the initial settings for the generation of variations for s9 as well, specifying that the translation was affected by the grammatical category of not one but two sentence elements so that in the end he had 27 different variations generated for s9. After submitting translation for the very first variation, he proceeded with the action of copying and pasting this translation into the remaining variations, editing them as required.

He also found the lack of context as very problematic. He specified that it made him often provide translations which did not sound the most natural but rather would be *wielofunkcyjne* (“multifunctional”) meaning that they could suit many different contexts of use.

When the researcher asked whether or not he ever consults the suggestions from the glossary displayed for individual strings, UT5 indicated that he does not pay too much attention to this information. He would be more likely to consult the dictionary which was developed by the members of the Polish community of Facebook user-translators themselves. He indicated that he pays a lot of attention to the spelling of the available translation suggestions, as in his opinion, other UTs often disregard spelling standards.

- Session summary and implications of breakdowns in the collaborative translation platform

The translation platform prevented UT5 from changing the setting for the variations generated for one of the strings he wanted to work on. UT5 specified that this was not the first time he came across such a situation and explained that most probably the variations were set quite a long time ago and it was no longer possible to change them, even if necessary.

His session also revealed the problematic aspect of the functionality of the platform with the automatic opening of variations in a new browser tab and the difficulty to search again for the original string associated with the variations. The link between an original string and its variations (if generated) thus appears to be not as strong as it should be. If there is a need to change the settings of the generated variations, the tab in which they are displayed needs to be abandoned and the original string needs to be located again in the main application tab listing all the strings.

UT5 indicated that the *Translations* application has been improved over the time he has been involved in the initiative of Facebook translation. However, he suggested that the tokens remain the most irritating aspect of the translation action, especially when they need to be further

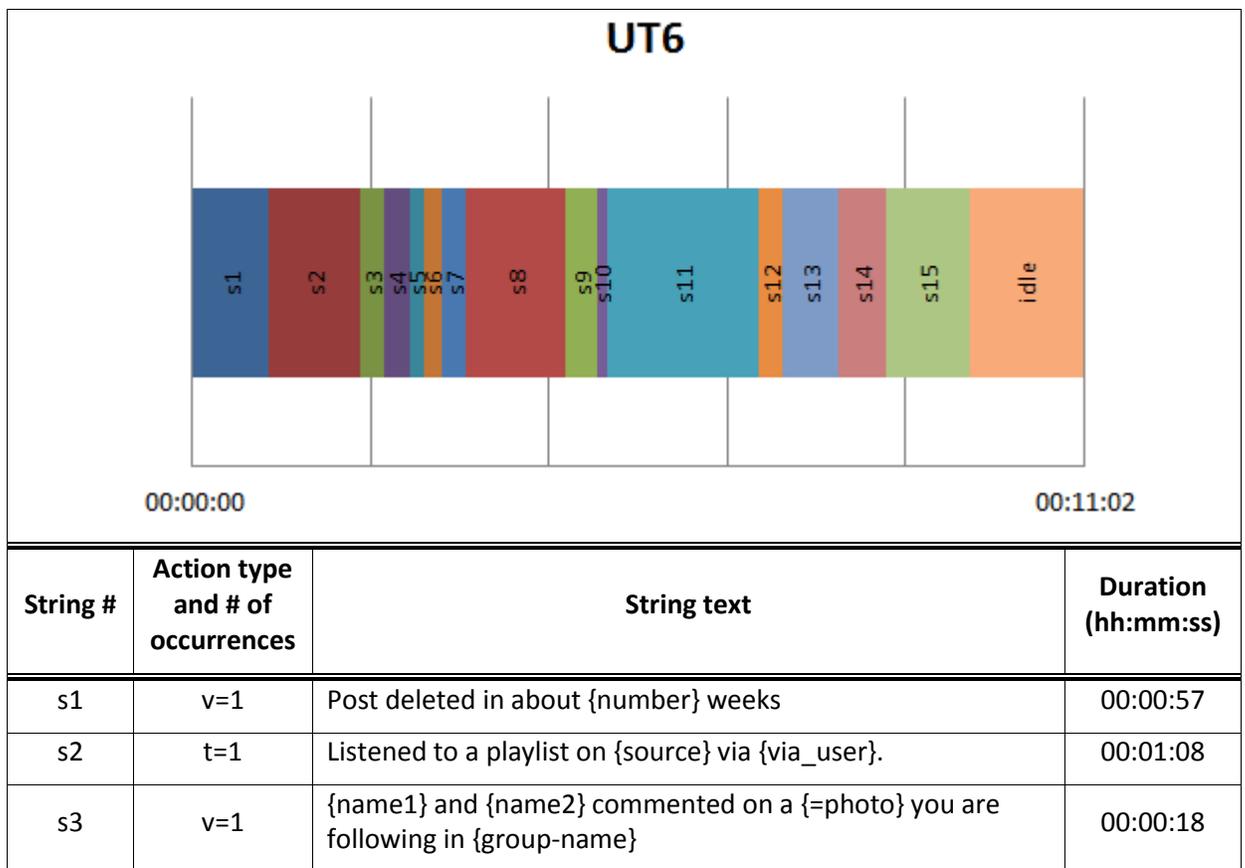
inflected for number and gender. In his opinion the fact that IT was his field of expertise and that he had already been familiar with the concept of variables before joining the initiative helped him to deal with tokens. Lack of contextual information was further mentioned by UT5 as a problematic aspect of Facebook translation, and he also described the internal glossary as not useful.

While working on s9, UT5 remarked that the translation of variations was mundane, indicating that the differences between the translations of individual variations were very minimal and that he had to be careful not to make a mistake. UT5, similarly to UT0, suggested it would be helpful if the translation he provided for the first variation (i.e. s9a) could be automatically populated throughout the remaining variations.

### 8.1.7 User-Translator 6 (UT6)

- Observations on the translation activity<sup>54</sup>

**Table 8-8 Outline of the translation activity recorded for UT6**



<sup>54</sup> For the actual sets of actions performed by UT6 see Table 8 in Appendix E.

s4	t=1	Edit Username	00:00:19
s5	v=1	{other-friend} and {num} others {action} this.	00:00:11
s6	v=1	{name1} and {n-more-friends} were tagged in a {=comment}.	00:00:13
s7	v=1	{name} asked to add {number} tags to your {=photo}.	00:00:18
s8	t=1	{name1} and {name2} commented on {owner name}'s {=video} of you	00:01:14
s9	v=1	You ignored {request count} {name} requests. Do you want to {block} {name} or {=report} it as abusive?	00:00:24
s10	v=1	{name1} and {name2} like {product count products} on {App Name}.	00:00:08
s11	v=1	{name1} and {n-more-friends} like that {name} recommended {link}.	00:01:53
s12	v=2	who can send me friend requests	00:00:18
s13	v=3	You can {=suggest more people} {short-name} knows.	00:00:42
s14	v=5	Mobile	00:00:35
s15	t=1	{name1} likes your {=activity} on her own timeline	00:01:02
<b>idle time</b>			<b>00:01:26</b>
<b>total time</b>			<b>00:11:02</b>

UT6 performed actions on 15 original strings. His preference was to vote on the available translation suggestions as he provided translation for five original strings. Except for s4, all the sequences of actions leading UT6 to submit a translation lasted over a minute, while his voting actions were significantly shorter and performed in a matter of seconds.

In the case of the first translated string s2, UT6 began by performing the sequence of actions required to generate variations but he did not decide to finalise it in the end. He further switched between the 'vote' and 'translate' modes a few times to finally submit his own translation for s2 using tokenisers to insert the necessary tokens. Similarly, he specified the settings for the variations for s11 but in the end did not proceed to generate and then translate the variations, translating instead the single original string s11 only. When he tried to submit it, a notification message was displayed informing UT6 that a token was missing in his translation and thus the translation could not be accepted. In his translation he provided the noun describing the token in the place of the token but did not include it within the curly brackets. He rectified his error and replaced this word with the proper tokeniser listed below the original string and then submitted the translation, which was accepted. The second notification message was displayed when after

voting on five translation suggestions for s14 UT6 wanted to offer a new translation for this one-word string, which was a proper name referring to a Facebook feature (s14). He wanted to keep in the Polish translation the original name of the feature in English believing that proper names referring to Facebook features should not be translated. However, when he attempted to submit his suggestion, he was informed that because his suggestion was in language other than the one into which he was supposed to translate, the suggestion could not be accepted. In the end, he decided to omit this string.

His actions were characterised by frequent switching between ‘translate’ and ‘vote’ modes for strings with available translation suggestions. UT6 would often hover his mouse over the suggestions available for a given string before voting on any of them or providing his own translation. However, he himself could not explain precisely in the retrospective session what aspects of the available suggestions he was considering. The researcher tried to enquire without much success about what he was thinking when he would stop for a few seconds over a string and its translation suggestions. The impression formed by the researcher was that UT6 must have been evaluating the linguistic correctness of the available translations rather than having problems with understanding the meaning of the phrases and sentences in the strings displayed to him. He mentioned that the available suggestions *sq tak na prawdę dobre ale można to jeszcze usprawnić* (“are good but could have been improved”) or that they did not sound good to him. Also, he pointed out that what was often wrong with the suggestions was punctuation. In the cases where he provided new translations, his input would not be dramatically different from the available suggestions; he would use a slightly different wording so that the meaning would be preserved but stylistically his suggestions would be different from the existing ones.

When asked whether he found the tokens to be problematic he agreed and pointed out that because the tokens were variables, anything could have been substituted for them. He admitted that in general he did not know what the individual tokens signified and suggested that the values substituted for individual tokens should be shown in the Facebook application. He remarked that in the current situation where the substituted values were not known, Facebook translation into Polish could not be of top quality.

- Session summary and implications of breakdowns in the collaborative translation platform

The activity of UT6 indicated that he was often uncertain whether or not the strings he analysed required variations to be generated. In two cases he performed the sequence of actions specifying the settings for the variations to be generated but in the end did not proceed with their

translation. This indicates that similarly as other UT's, UT5 experienced problems with interpreting the meaning of the tokens. In line with other UTs he made a remark on the difficulty with translating strings with tokens because of their ambiguous values and the lack of certainty on how they would be represented in translation.

The platform prevented his activity when UT5 intended to preserve the original English name of a Facebook feature in the Polish translation. The platform rejected his suggestion because he kept it in English, exactly as in the original string. It was thus imposed on him to translate into Polish the name of the feature in question, forcing the UT to act against his intentions. In the end, he decided to abandon this string completely without performing any other action on it.

#### *8.1.8 Observational Study - Discussion*

The Facebook user-translators who participated in the observational study represented varied levels of experience with the translation of Facebook into Polish. While some of them had already had hundreds of votes and translations submitted to the initiative, some were just starting their activity as Facebook user-translators. Each study participant took their own, distinct approach to the activity of Facebook translation which was reflected in how they interacted with the collaborative translation platform and what translation actions they decided to undertake. However, as the collected data reveals, the opinions of the user-translators about the most troublesome aspects of the process of translating Facebook were by and large similar and referred to the same aspects of the use of the collaborative translation platform and its functioning when providing their translations and votes.

The example of the least experienced user-translator (UT3) illustrated that the layout of the strings displayed for translation and voting on the translation platform could be confusing to newcomers. He had difficulties recognising which action buttons corresponded with a particular string he was editing or how to submit the translation to generate the actual string variations once their preferences were specified. One other user-translator also commented on the display of the strings in the application: because while scrolling new strings are being added to the list, he felt that the whole translation process on Facebook was indeterminate.

All of the participating user-translators omitted at least one of the strings displayed to them pointing out that it was because they could not comprehend their meaning, describing them for example as "too complicated". The user-translators also mentioned the lack of (or insufficient) contextual information for the original strings which caused further uncertainty about what the

provided translation would actually look like when displayed in use on Facebook. One user-translator (UT1) stated in the session that he came across a string which referred to a Facebook feature which he did not know and thus did not feel competent to undertake any action on the string. However, the most often cited reason for omitting particular strings was the presence of tokens. As indicated by the user-translators, none of them was certain about the values substituted for tokens which was affecting the understanding of the original string and causing problems with the forming of a translation. The user-translators would also pause typing in the middle of their translation when indicating the verb form required in the sentence. The choice would depend on the text substituted for the tokens immediately preceding the verb. Because the values substituted for tokens could not be precisely determined, the user-translators found it problematic to determine the verb forms.

The actions undertaken by the user-translators also implied that the tokens would further complicate the use of the variations feature. The presence of tokens requires the user-translators to consider all the possible values that may be substituted for them. The user-translators indicated that they relied on their intuition as the full list of possible token values was not available to them. When providing translations for string variations with tokens, the user-translators would pause before entering the appropriate verb forms correlated with the values substituted for tokens. They would often stop their typing mid-way, before specifying the appropriate verb ending or proceeding to generate more variations where required. When deciding which sentence elements and grammatical categories determined a string's translation, the user-translators would typically hover their mouse over the different available string elements and grammatical categories trying to decide on the appropriate setting of the variations.

Sometimes only after the variations were generated and the first attempt at their translation was made, a user-translator would realise that still even more variations were required as additional string elements were further determining the translation, or, on the contrary, it would emerge that in the end no variations were necessary. The latter case would occur if a user-translator did not notice in the contextual information about the string that it already was one of the variations generated by a different user-translator in the past and already correlated with a specific grammatical category. The application would not, however, prevent the user-translators from generating new variations for the string even if not required (because already done in the past). To rectify the mistake of generating unnecessary variations the user-translator would need to find the string in question in the main application tab. The user-translators would thus switch between

different tabs generated during their translation sessions (to display variations generated for separate strings) and then, once in the main application tab, locate the string and change its variations settings.

The problematic aspect of the generation of variations was further indicated by the lack of consistency in specifying for which strings they should be generated and which string elements determined these variations. There were examples of a user-translator ignoring the feature for one string to employ it for another almost identical one while it was evidently required for both of them.

There were four cases (UT3, UT4, UT5 and UT6) where a user-translator had to omit a string without editing it specifically because the application did not perform as required. One of the user-translators was not able to change the already existing variations settings for a particular string (UT5). As a consequence, he could not perform the intended action of generating an edited list of variations that he felt was required and in the end he left out the string. For another user-translator, the string variations were not opened in a new tab for translation after he specified how they should be generated (UT3). This left him confused and unsure whether the situation might have occurred through his own fault. In another case, UT6 was not allowed to submit his translation suggestion because the text he provided was not in Polish but in English. However, because the original text referred to a Facebook feature, the user-translator wanted to keep the English original in his translation suggestion as he believed that proper names should be left untranslated. Nevertheless, his action was not allowed and he was forced to use a Polish word instead. He did not want to comply with this requirement and thus decided to omit this string. Yet another user-translator (UT4), who tried to submit his translation suggestion for one of the variations he generated for a particular string, received a notification specifying that the original string on which the translation was based no longer existed.

The resources offered in the application to help the user-translators with the translation actions on Facebook were rarely consulted. The glossary was found to be unhelpful by most and none of the user-translators participating in the study ever selected a suggestion displayed from the glossary for a particular string to paste it directly into their translation. Two user-translators (UT1 and UT4) launched the glossary to search for some specific words and their translations but were unable to find what was of interest to them. One user-translator (UT5) indicated that he was more likely to consult a dictionary developed by some of the members of the Polish translator community on their group page. The style guide was not consulted by any of the user-translators.

The feature that was employed by all the user-translators attempting translation of strings with tokens, were tokenisers. Tokens were never typed in manually into the translations, the user-translators clicked on the tokenisers available for the individual strings to paste them automatically into their translations. In one case, a user-translator (UT6) forgot to insert one of the tokens into his translation which triggered a warning message from the translation module when he tried to submit the translation. He easily corrected his mistake and submitted the appropriate translation.

The findings suggest that the challenge of finding the best possible way of conveying the meaning of the original string is preferred to the challenge of trying to understand the tokens, their role in the original string and how they will be substituted when displayed on Facebook. By consulting additional resources (such as, for example, the existing translations of strings, online dictionaries) it may be possible to provide an adequate translation, the quality of which would satisfy the user-translators. However, it appears more difficult for the user-translators to achieve this level of satisfaction with the translation of strings with tokens. This is primarily because of the lack of certainty about the values substituted for the tokens and no opportunity to verify whether the provided translations fit the context in which they are to be used. As native Polish speakers, user-translators are able to easily identify when variations are required for a given original string. However, this information needs to be communicated to the translation module next. The observed hesitancy in the actions taken by the study subjects when specifying string variations or their complete resignation from providing translation of strings requiring such variations signals that the process of defining variations in the application is not straightforward and rather troublesome.

## **8.2 Translation Crowdsourcing Environment on Facebook – Analysis and Impact on Motivation**

The previous section discussed the observations of the translation activity of six Polish Facebook user-translators (UT1 – UT6) with one pilot UT (UT0) characterising this activity and indicating problematic aspects of the use of the Facebook collaborative translation platform. As established throughout the thesis, the present research considers it crucial for a study on motivation in translation crowdsourcing to examine the environment in which a given translation crowdsourcing initiative takes place and also to pay particular attention to the design and functioning of the platform mediating the involved translation actions.

This section aims to understand the implications for the motivation of the user-translators engaged in the Facebook translation crowdsourcing initiative by looking at the functionality of the Facebook collaborative translation platform and the additional features of the *Translations* application as a whole.

First, the analysis focuses on the collaborative translation platform, which is evaluated with regards to the core concept of mediation as adopted in the present research from the framework of activity theory. On the basis of the observational study analysis, the section assesses the functioning of the platform as a mediator of the translation actions on Facebook. For this purpose the instrument of Activity Checklist has been incorporated. The presence of 'breakdowns' in the collaborative translation platform is further investigated. The implications for the motivation of the user-translators are considered.

Next, the discussion turns to consider the translation environment on Facebook. As described in detail in Chapter 3, the specific features of *Translations*, not directly related to the core translation actions on Facebook, nevertheless treated as contributing to the experience of Facebook translation by affording it a game-like quality and thus possibly affecting the motivation of the user-translators to contribute. The data collected from the Polish community of Facebook user-translators through the two online surveys is cited here to identify how the design of the environment correlates with the perceptions of the user-translators on the experience of providing translation on Facebook.

### *8.2.1 Functioning of the Translations Application on Facebook*

Considering the translation of Facebook as an activity in which individual actions performed by the user-translators are mediated by the collaborative translation platform, the instrument of Activity Checklist (AC) (see also 4.7.5 in Chapter 4) has been adopted to interpret this technology in the context of the translation practices it facilitates on Facebook. AC offers a list of sample questions corresponding with different aspects of the use of the evaluated technology which have been adapted for the purpose of the present research as explained in section 6.2.3 in Chapter 6. With the help of these questions, the data collected in the observational study can be analysed to highlight the problematic aspects of the functionality of the Facebook platform as highlighted below in section 8.2.1.1.

Furthermore, as discussed in section 4.6.4 in Chapter 4, Bødker and Klokmoose (2011) introduced the concept of breakdowns when describing how a technological solution mediates the actions of

a given individual. Breakdowns are understood to occur when the capacities of the mediator are not sufficient for the action they are intended to mediate. In the case of the collaborative translation platform on Facebook these breakdowns are clearly noticeable. Section 8.2.1.2 discusses their impact on the translation activity on Facebook.

#### 8.2.1.1 Facebook platform evaluation with regard to the Activity Checklist

- Does the platform support the translation activity efficiently?

The platform did not support the individual actions entirely efficiently in the activity of Facebook translation. This became especially apparent when a set of string variations had to be generated and translated. This implied the need for the user-translators to submit into the module many similar translations one by one. The user-translators had to either provide all the translations for the generated variations manually or to repeat the actions of copying the translation provided for the first variation and pasting it as a translation for all the remaining variations. They would then introduce the necessary changes, mostly to do with the form of the word representing the sentence verb.

- Is the platform sufficient to accomplish what is intended? Are there any limitations which prevent the translation from being performed as intended?

The platform did not provide enough contextual information about the strings which were to be translated and thus it is often difficult to understand and then convey their meaning. There was also no information about the text that would be substituted for the tokens present in a given string. This was found as the most troublesome aspect of the translation actions. As there was no way of finding out how the translated string would be displayed on Facebook, the user-translators were never certain whether the translation they offered for a string with tokens was a correct one. Because it was not possible to specify what would appear under each of them, it was difficult to understand the full meaning of each string and provide its translation. As a consequence of this, it was further difficult to generate variations if required for a given string.

Furthermore, it was impossible to submit into the module a translation suggestion which was identical to the original text and thus in English. For example, the translation module prevented one user-translator from preserving the original name of a Facebook feature in the translation, despite the fact that the user-translator believed that proper names should not be translated. One other user-translator could not change the existing settings determining how the variations for a given string would be generated.

- Is there any feature of the platform which is redundant?

The glossary was ignored by almost all of the user-translators. None of the user-translators clicked on a suggestion from the glossary that would be displayed under the string they were translating to input it directly into their translation. The user-translators seemed to be well familiar with the terms and their translations included in the glossary. Those who decided to search for some suggestions there by themselves did not find what they were looking for. The resources in the glossary were limited to such an extent that it was made a redundant feature. The style guide was also never consulted by any of the user-translators participating in the study. None of them ever mentioned having a stylistic issue that could have been addressed by consulting this resource.

- Are there any actions related to Facebook translation which the platform does not support but should?

The translation module operating the platform did not support the inflection of tokens, which would always be substituted by words in the nominative case (typically nouns or noun phrases). As a consequence the user-translators indicated that the final product of their string translation would not be grammatically correct in Polish and thus of poor quality. This was a cause of much concern for the user-translators visibly affecting the quality of the produced translations. In the case of the translation of multiple variations the user-translators pointed out that it was time-consuming to copy and paste across all the generated variations the translation they provided for the first variation then edit them as required. A feature that would enable all the variations to be populated automatically with the same translation would be welcomed by the user-translators.

- Does the platform allow for easy access to external resources and materials used to support translation activity?

In general the access seems to be easy – resources available online may be opened in a new tab or window of the browser which is used by a user-translator (e.g. UT0, UT1). However, each sequence of actions generating variations leads to a new tab being opened automatically. Thus after generating variations for a number of strings many new tabs containing the generated variations will be opened. With additional tabs in which some external resources were opened there is a possibility of experiencing problems with locating easily the tab that is needed by a user-translator at a given moment.

- Is the user's attitude towards the platform and how it functions more positive or negative?

None of the six user-translators participating in the observational study expressed particularly negative attitudes towards how the collaborative translation platform on Facebook functioned.

However, as indicated above, the user-translators identified a number of problems and issues with how the platform responded to their actions identifying also that the platform did not correspond with their intentions. They would indicate that as a consequence their translation was compromised. They were often aware of the fact that their translation was not correct and were frustrated by the fact that they could not do anything else to improve the quality of their work.

#### 8.2.1.2 Facebook platform evaluation with regards to the concept of breakdowns

The breakdowns most often occurred because of the misalignment between what the user-translators wanted to achieve and what was actually possible with the use of the collaborative translation platform. The translation module which the platform operates would often prevent the user-translators from performing a certain translation action as intended because it would not account for all the specific aspects of Polish language grammar, especially the inflection rules. This implies certain flaws in the design of the translation system to handle translation from English into Polish. Bødker and Klokmoose (2011) also indicated that breakdowns may also be a result of improper training of the user on how to handle the artefact or when adaptation to the changing forms of the artefact fails. In the case of the collaborative translation platform both these situations occurred. Firstly, Facebook does not provide any guidelines for the user-translators on how the platform and the translation module function or how the specific features of the module (e.g. variations, tokens) should be used. As already identified earlier, the whole environment of Facebook is extremely dynamic and the translation module has been changing affecting in turn how the translation platform is used and how it performs. For example, when new features are introduced, such as the mechanism for the generation of variations, Facebook would never communicate to the user-translators how these changes affect the functioning of the platform and the activity of Facebook translation. As a consequence, the user-translators are left to their own devices to adapt to the changed conditions and 'rediscover' the functioning of the translation module and the features of the translation platform, typically on the basis of trial and error.

The presence of the breakdowns implies that the technology incorporated into the translation activity on Facebook in many aspects does not function as intended which compromises the individual actions performed by the user-translators contributing to the Facebook translation initiative. The observational study emphasised that these breakdowns are sources of discontentment and frustration as they prevent the user-translators from achieving intended translation actions.

Overall, the observational study reveals that the current design and functioning of this technology does not fully satisfy the user-translators. It often undermines the overall activity of Facebook translation into Polish preventing the user-translators from successfully undertaking the required translation actions. The use of tokens without specifying their values or contextual information about the overall meaning of a given string often complicates or even completely prohibits translation. Furthermore, without being able to ascertain the text substituting tokens it becomes difficult to specify whether or not tokens may determine the translation. This in turn defines whether or not for a single original string a set of string variations needs to be generated. As a consequence, the lack of certainty as to whether one's submitted translation suggestion is linguistically correct and accurate for the context of use prevails, which further negatively affects one's perception of one's competence and ability to provide translation. The translation intentions of the user-translators often cannot be met as the application may reject their suggestion, as in the case where they want to keep the original string in the translation, or prevent them from applying changes to the existing preferences of string variations. In these situations the autonomy of the user-translators is undermined.

It is significant to emphasise here that the issues faced by the Facebook user-translators are not exclusive to this particular translation initiative. As indicated in section 3.2 in Chapter 3, the specific translation difficulty caused by the inability to handle tokens and other placeholders for text appears to be well-known and widespread in localisation of UIs (Esselink 2000, Díaz Montón 2007, O'Hagan and Mangiron 2013). However, the software and game localisation industry has found ways of addressing translation issues related to the use of placeholders. For example, Heimburg (2003) suggests describing the original strings and the text substituted for the placeholders with additional information about their grammatical properties, while Woodard (2007) refers to "a custom built macro system that handles articles, singular/plurals and masculine/feminine/neutral text branching" which is put in place by the game localization company Square-Enix. Considering how severe the problems of the Polish Facebook user-translators are, it seems that Facebook launched the initiative without due regard to the consequences of introducing tokens into the strings presented for translation into Polish.

### *8.2.2 Game Elements in Facebook Translation Crowdsourcing*

As presented in Chapter 3, with regards to the Mechanics Dynamics Aesthetics framework for game design (Hunicke et al. 2004), some of the elements of the *Translations* application on Facebook can be seen as game mechanics which shape the particular experience of the activity of

Facebook translation. Each contribution of a translation or a vote is awarded points, whose cumulative value leads to further recognition of the achievements of individual user-translators. Their names may appear on one (or all) of the leaderboards and a badge may be added to their Facebook profile. These contribute to the perception of translation crowdsourcing on Facebook as a well-recognised effort which is a challenging but rewarding experience oriented towards a particular goal with beneficial consequences for many others.

The responses collected in the two questionnaires (see section 7.2 in Chapter 7) indicate that the Facebook translation initiative is perceived as a fun activity providing the participating user-translators with a lot of satisfaction. The Facebook translation implies a challenge of producing a good quality Polish language version of the service and is an opportunity to improve one's skills and abilities. In accordance with Lazzaro's typology (2010) (see also section 4.8.1 in Chapter 4 for details), the translation initiative is thus a source of 'hard' fun. Such qualities are further considered by game designers as the necessary ingredients for a successful and appealing game (Koster 2004, Shell 2008) and motivating factors in gamified experiences (Groh 2012).

The user-translators' responses further emphasise their altruistic attitudes towards their activity which is undertaken 'for the greater good' and for the benefit of fellow Polish Facebook users who do not know English. They are motivated by the fact that their contribution to the initiative has a wider impact as it gives them the opportunity to change the Facebook experience for many others. In accordance with Lazzaro's (ibid.) typology of fun in games, these are the properties of 'serious' fun.

The study with a group of Polish Facebook user-translators analysed in this chapter further revealed that, apart from the perception of fun, the participation in Facebook translation has even more profound emotional impacts on the user-translators. The responses the user-translators' gave to the questions on their motivation to contribute to the initiative highlight the link between the opportunity to act as a Facebook user-translator and further experience satisfaction of their psychological needs. Facebook translation challenges their skills and is a learning experience satisfying their need of competence. Competence is further realised through the belief that they have knowledge and ability to improve the quality of the current Facebook translation. They highly value the opportunity to do what they feel good at and what further helps them grow and develop through the improvement of language and translation skills. As explained in Chapter 4, gamification researchers recognise need satisfaction as a force driving the increased motivation observed in gamified experiences (Deterding 2011b, Schell 2011, Groh 2012).

Freedom to decide how to contribute to the initiative corresponds with the perception of autonomy while the collaborative aspect of work in the realm of a social network seems to strengthen the perception of being related to other contributing user-translators as well as the global audience of Facebook users benefitting from the product of the user-translators' efforts. Group commitment was found to be of significance as respondents emphasised the importance of providing their own contributions in order to support the work done by others in the community of Polish Facebook translators. This is a sign of the perceived sense of belongingness and connectedness in the community, further correlated with the satisfied need of relatedness and source of 'people' fun in Lazzaro's terms (2010). The common purpose unites the user-translators with one another and also with those who benefit from their work.

Even though Facebook does not officially acknowledge their translation crowdsourcing initiative to be designed as a gamified experience, the analysis of the role of the components of the *Translations* application does enable a comparison between Facebook translation and a game-like experience. As revealed through the analysis of the data collected from the Polish user-translators, the particular setup of the translation initiative organised by Facebook can be described as evoking the perception of translation as a form of entertainment rather than labour, and an experience that is enjoyable, brings a lot of satisfaction and is thus described as fun. By incorporating Lazzaro's typology (ibid.) it is possible to specify the particular features of the Facebook initiative which afford it the quality of a fun activity. Research on motivation further indicates that such qualities positively affect motivation to engage in an activity, which implies that incorporating elements of games into the design of a translation crowdsourcing initiative may lead to an increase in the motivation to contribute. Only more focused research on the application of game-like elements to translation crowdsourcing would be able to ascertain the levels of impact on motivation of the contributors. Nevertheless, the observations made throughout the present study seem to imply that the use of certain specific game mechanics positively affects the user-translators' perception of the translation activities they perform, which in turn helps explain their motivation to engage in the effort of translating.

### **8.3 Concluding Remarks**

This chapter focused on the analysis of the translation environment on Facebook. The observational study investigated the functioning of the collaborative translation platform when actively employed by the user-translators contributing to the Facebook translation crowdsourcing initiative. The collaborative translation platform was evaluated as a tool mediating the translation

activity on Facebook and the implications for the motivation of those who use this technology were indicated. The findings show that breakdowns in the mediation occur with the platform often failing to support the individual actions of the user-translators, which consequently undermines their translation efforts.

Nevertheless, further consideration of the perceptions of the user-translators highlighted the specific characteristics entailed in the translation activity. The contributing user-translators enjoy the activity which gives them a lot of satisfaction and is further described as fun. The findings suggest how the presence of game-like elements in the *Translations* application and the overall setup of the translation environment on Facebook are likely to contribute to the shaping of such a perception among the participating user-translators.

The following chapter draws on all the discussions presented thus far and brings together all the findings on the factors affecting motivation in translation crowdsourcing as organised by a for-profit entity to answer the research questions.

## Chapter 9 Conclusion

The recent rapid increase in popularity of the practice of translation crowdsourcing has made this often controversial phenomenon worthy of in-depth academic study (see, for example, O'Hagan 2011, Pérez-González and Susam-Sarajeva 2012). The researcher became curious about the motivation of those who contribute to such initiatives, in particular when translation is requested by for-profit organisations like Facebook, as opposed to non-profit, charitable counterparts, as the reason seems more obvious for the latter. However, while the topic seems timely and well-motivated, a number of issues made such a study extremely challenging. Firstly, the unstable and dynamic nature of the concept of crowdsourcing translation behind the rapidly developing practice called for clarification (see Chapter 2). Secondly, a lack of well-established methodological framework in which ethical issues regarding access to data publicly available yet belonging to individuals in social networks are fully addressed (see Chapter 6) meant a certain explorative approach was necessary. Thirdly, using commercial social networking services such as Facebook as the main site for the study meant that the translation environment under investigation – the Facebook *Translations* application and its core element of the collaborative translation platform – could change at any point at the will of Facebook, making this type of research also time-sensitive. Fourthly, the recruitment of the study subjects posed some difficulty as well as the fact that there is no prior study to conclusively suggest the optimum number of sample size for this type of research.

In this concluding chapter, the key findings are discussed first by revisiting the research questions in light of the theories outlined in Chapter 4. Next, the limitations of the research are indicated and the contribution of the research is presented. A set of recommendations on the design of a collaborative translation platform and implications for future research bring the chapter to a close.

### 9.1 Research Questions and Research Findings

The present research set out to investigate the following two research questions:

1. What motivates users of the Internet to contribute their translations for free in translation crowdsourcing initiatives for for-profit organisations?
2. What is the impact of technology facilitating translation crowdsourcing on the motivation of Internet users contributing their translations in translation crowdsourcing initiatives?

The questions were addressed by taking the case of the translation initiative launched by Facebook as a primary example of translation crowdsourcing in for-profit contexts with specific reference to the community of Polish Facebook user-translators. In order to understand the nature of translation activity on Facebook and the participants' perceptions of their motivation to engage in Facebook translation, the study combined netnographic investigation and online surveys. Furthermore, as evident in the second question, the research investigated the translation environment in which translation crowdsourcing takes place focusing on technological solutions as factors affecting the translation activity and the participants' attitudes towards a given crowdsourcing initiative. For this purpose, the features of the *Translations* application on Facebook and particularly the functioning of the Facebook purpose-built collaborative translation platform when used by the Polish Facebook user-translators were analysed in a remote observational study to assess the quality of the mediation of translation activity by the Facebook platform.

The objectives set for the study were met by a mixed-methods research procedure realised in three separate stages. The data obtained through netnography and two online surveys (stages I and II) enabled triangulation of the results, which in turn informed the design of the final observational study (stage III). It incorporated elements of remote contextual enquiry and usability testing, drawing on both Activity Checklist and the concept of 'breakdowns' derived from activity theory. The observational study to gather evidence on how the user-translators engage with the platform was further supplemented by a data walkthrough by each study subject through a retrospective think-aloud protocol for the purpose of verifying the interpretation of the data by the researcher. This last study allowed for a more fine-grained situated analysis of the role of technology underlying this practice.

The study as a whole found that the participating user-translators are motivated to contribute to Facebook translation crowdsourcing for a variety of reasons. According to the theoretical frameworks employed in this study: (1) self-determination theory (SDT), (2) functional approach to volunteer motivation, (3) motivation to collaborate online and (4) gamification, the motivating factors can be correspondingly attributable when:

- (1) the user-translators are provided with an opportunity to satisfy the needs of competence, autonomy and relatedness;
- (2) the expectations set by the user-translators on personal and social benefits of their voluntary activity are met;

- (3) the user-translators experience reciprocity, self-efficacy, group commitment and reputation gain;
- (4) the translation activity is perceived as a fun and enjoyable, and is undertaken for pleasure.

Through their participation in Facebook translation, the user-translators engage in a task which challenges their skills, enables further development of their linguistic knowledge and translation abilities and, similarly to volunteering in general, is understood to generate social capital and is thus of benefit to the public. The user-translators believe in the positive outcomes of their activity which aims to provide end users with a better experience of using Facebook in Polish. The translation is performed on a social network which by design fosters collaboration with others working towards the same goals. In their online community, the user-translators actively engage in discussions related to translation such as on the use of terminology and style, exchange linguistic information and debate some of the most problematic aspects of the translation activity on Facebook. They rely on mutual exchange and reciprocity and strive to contribute to the best of their ability so that their community as well as the end users of their translation efforts can benefit.

The game-like characteristics of Facebook translation seem to further strengthen the motivation to participate in the activity, mostly through an improved experience in terms of need satisfaction. The user-translators describe the initiative as fun which implies that they perceive translation as a pleasurable activity or even a form of entertainment rather than as a task. This in turn seems to stem from the freedom to undertake the translation actions at any time, without any specific requirements as to the volume of the contribution, which strengthens the autonomy of the user-translators. The challenge they are presented with is clear and specific, corresponding with their competences. The features of the *Translations* application make it possible for the user-translators to monitor their own progress and signal their achievements to others as well. Finally, the user-translators on Facebook know that the fruit of their labour has the potential to make an impact on the everyday lives of millions of Polish Facebook users.

Throughout the study the unique characteristic of translation activity in translation crowdsourcing and the specificity of the technological environment in which this activity occurs were emphasised as significant factors likely correlated with the motivation to contribute to translation crowdsourcing initiatives. As translation crowdsourcing practices on Facebook illustrate, the technological advances are changing the face of translation, turning it from a serious, solitary task into a process of open, collaborative decision-making, which can be further presented as an opportunity to socialise with others who share the same beliefs and passions. All this has been

enabled by the incorporation of specific translation platforms which are developed to function in the online environment and support translation activity to be performed in a highly cooperative manner.

Nevertheless, the present study identified that the collaborative translation platform which was meant to facilitate the translation on Facebook sometimes prevented the intended activity, becoming a source of frustration and discontent detrimentally affecting the translation initiative on Facebook as a whole. Drawing on the framework of activity theory as adopted in research on the use of technologies in the context of human practice, the present research treated the platform as a tool mediating the translation activity on Facebook and thus determining the potential of the translation activity to (1) satisfy the psychological needs of the user-translators, (2) meet their expectations of gained benefits, (3) enable the experience of reciprocity, self-efficacy, group commitment and reputation gain, and (4) enable the experience of fun. However, the study found that the collaborative translation platform often constrained attaining user's goals instead of facilitating them. The occurrence of breakdowns often caused the user-translators to fail in their attempt to provide appropriate, grammatically correct and structurally the most natural translations. As a result, the translation intentions of the user-translators could not be met. The inability of the technology to facilitate the translation activity as expected was thus found to negatively affect the user-translators' motivation as it can be interpreted as:

- (1) weakening the need satisfaction of the user-translators;
- (2) diminishing the opportunity to meet the expectations set by the user-translators;
- (3) hindering the experience of reciprocity, self-efficacy, group commitment and reputation gain;
- (4) limiting the perception of fun.

On Facebook, many features were implemented into the translation module with the intention to aid the translation activity, including the use of so-called tokens as placeholders for text representing dynamic user input. Contrary to the original purpose of using such placeholders, the study found that in the case of Polish Facebook translation tokens often prevent the user-translators from providing the desired string translations, instead forcing them to sacrifice the structure of the translation in order to ensure grammatical correctness. In some cases the presence of tokens prevents the user-translators from providing any translation, as it is not possible to see what a given token actually represents or refers to.

The netnographic study of the Polish community of Facebook user-translators (see Chapter 7) illustrates the efforts to collaboratively come up with solutions to compensate for the technological problems in the functioning of the translation module and its deficiencies in facilitating translation of Facebook into Polish. At one point, the user-translators agreed to compromise and use some specific sentence structures to provide translations which are grammatically correct even if far from natural. Nevertheless, the exchanges on the discussion board and the community page further indicated growing frustration among the contributing user-translators. Some of those who were unhappy decided to resign from further contribution of translations or even gave up on the initiative altogether, uninstalling the *Translations* application from their Facebook profiles. This indicates the detrimental impact on translation crowdsourcing of the core technology intended to mediate the translation activity which is the result of the failure of the technology to fully support the activity.

What adds to the problem here is the fact that Facebook, the requester of translation and the provider of the core technology, does not interact with the user-translators to officially address the situation in a systematic and a timely manner. The frequent changes introduced to the translation module indicate that Facebook indeed works on its improvement, but the lack of communication with the user-translators on how the platform has been enhanced and what it can offer to the user-translators further contributes to the disappointment with the Facebook translation initiative. The user-translators' view on how they are recognised for their contribution also indicates that Facebook should give more careful consideration as to how appreciation for the contributors might best be expressed. The system of scoring individual contributions and ranking the user-translators on leaderboards provides regular feedback on their progress in the initiative and further alerts their achievements to the community of user-translators. It thus recognises a contributor, but only within their community. The user-translators, however, would rather be recognised more directly by the people behind the Facebook translation initiative. This again emphasises the need for a regular and effective communication between the organiser of a translation crowdsourcing initiative and the crowd who responds to the translation request.

The present study indicated that many aspects of the Facebook translation crowdsourcing positively affecting the motivation of the user-translators are associated with the fact that translation crowdsourcing is inherently an activity performed collaboratively online. As such, the translation affords interaction among a potentially large number of people whose activities can be highly valued by the contributing individuals with whom strong bonds can be formed.

Nevertheless, as already indicated, the extent to which this motivating potential is unleashed greatly depends on whether the translation environment enables the translation activity to correspond with the expectations set by the user-translators from whom the translation is requested. Because these expectations are set on an individual basis, the perception of how well they are met once becoming engaged in the activity is personal, the levels of motivation will vary from person to person. However, it remains true that if the mediation of the activity is marked by breakdowns in the corresponding technology then the impact on motivation will always be negative. It is thus further believed that these findings can well be generalised to discuss the motivation of translators working for other types of initiatives possibly including professional environments, where collaborative working processes are becoming more commonly employed through the adoption of technologies supporting cooperation in translation production procedures, as recognised, for example, by Désilets and van der Meer (2011), Kelly et al. (2011) and Babych et al. (2012).

With regard to the discussion above, Table 9-1 summarises the findings of the present research and generalises the factors which could positively and negatively affect the motivation of participants involved in various types of translation crowdsourcing.

Table 9-1 An outline of factors likely affecting motivation in translation crowdsourcing

Factors likely affecting motivation of Internet users to contribute to translation crowdsourcing	
POSITIVE (+)	
Representation of the factor as observed on Facebook	Factor and the correlated theoretical representation
<ul style="list-style-type: none"> <li>making a Polish version of Facebook available to those without knowledge of English</li> </ul>	<ul style="list-style-type: none"> <li><b>expressing altruism; effecting change for the better; benefitting others</b> <ul style="list-style-type: none"> <li>(+) sense of relatedness</li> <li>(+) values function</li> <li>(+) experience of group attachment</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>providing a good quality Polish translation of Facebook</li> </ul>	<ul style="list-style-type: none"> <li><b>putting one's skills into practice; developing skills; gaining knowledge and experience; growing as a person</b> <ul style="list-style-type: none"> <li>(+) sense of competence</li> <li>(+) understanding function</li> <li>(+) enhancement function</li> <li>(+) self-efficacy</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>voting mechanism, interacting with and consulting the community of user-translators through discussion/group page</li> </ul>	<ul style="list-style-type: none"> <li><b>working collaboratively with others towards the same goal</b> <ul style="list-style-type: none"> <li>(+) sense of relatedness</li> <li>(+) social function</li> <li>(+) reciprocity</li> <li>(+) experience of group attachment</li> </ul> </li> </ul>

<ul style="list-style-type: none"> <li>• employing external resources; consulting the community of user-translators; striving to provide good quality Polish translation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>building one's positive image online</b> (+) reputation</li> </ul>
<ul style="list-style-type: none"> <li>• loose contribution patterns</li> <li>• translation of <i>Facebook</i> as a pastime</li> </ul>	<ul style="list-style-type: none"> <li>• <b>having freedom of volume and frequency of contribution</b> (+) sense of autonomy</li> </ul>
<ul style="list-style-type: none"> <li>• translation of <i>Facebook</i> as a fun activity, a form of entertainment incorporating elements of games</li> </ul>	<ul style="list-style-type: none"> <li>• <b>experiencing fun, enjoyment and satisfaction</b> (+)gamification</li> </ul>
<b>NEGATIVE (-)</b>	
<b>Representation of the factor as observed on Facebook</b>	<b>Factor and the correlated theoretical representation</b>
<ul style="list-style-type: none"> <li>• translation module does not serve Polish translation well <ul style="list-style-type: none"> <li>○ good quality Polish translation cannot be achieved</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>breakdowns in the mediation of the translation activity by the tool; intentions of the user-translators are not met</b> (-) sense of competence, autonomy, relatedness (-) values, understanding and enhancement functions (-)self-efficacy</li> </ul>

<ul style="list-style-type: none"> <li>• problems with translation into Polish not addressed by <i>Facebook</i></li> <li>• changes in the functioning of the translation module/ translation platform/ <i>Translations</i> application not announced</li> <li>• Facebook's apparent lack of interest in the quality of the produced translation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>lack of communication and support from the organiser</b> <ul style="list-style-type: none"> <li>(-) sense of competence</li> <li>(-) sense of relatedness</li> <li>(-) understanding and enhancement functions</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• more direct, personal and timely acknowledgement by Facebook is missing</li> </ul>	<ul style="list-style-type: none"> <li>• <b>insufficient recognition by the organiser</b> <ul style="list-style-type: none"> <li>(-) sense of competence</li> <li>(-) self-efficacy</li> <li>(-) reputation</li> </ul> </li> </ul>

## 9.2 Limitations of the Research

While the study uncovered the factors likely to affect, both positively and negatively, the motivation to contribute to translation crowdsourcing in a for-profit context, there are a number of limitations which are discussed in this section.

The researcher is aware of the fact that the group of Polish Facebook user-translators studied in the present research represents only a fraction of all the Polish Facebook user-translators. While it is not possible to obtain the official figure, leaderboards provide a clue identifying hundreds of Polish user-translators every week as contributors. However, the majority tend to be irregular or once-only contributors in comparison with the top contributors who are engaged in the initiative on a more regular and a longer term basis. While such ad hoc contributors undoubtedly form part of the overall crowdsourcing initiatives, it was expected that the call for surveys and observational study participants would likely attract the latter, more committed type of user-translators. They typically become members of the Facebook community of Polish user-translators and actively engage in the discussions on different aspects of Facebook translation. As such, despite the relatively small sample size, they have been considered as a more appropriate group for the purpose of this study and arguably representative of the core members sustaining the initiative.

As mentioned earlier, the recruitment of the user-translators to participate in the second survey, and particularly the observational study proved to be a challenge. The researcher communicated with the user-translators mainly through their dedicated Facebook group page *Translator Community for Polski*, which is limited to members only. Even though the access to the community is open to all the Polish user-translators, it was clear that only some of them had applied for the membership. As a consequence, the researcher was only able to communicate with the members of the community and not all of the user-translators engaged in the activity of Facebook translation into Polish. The number of community members increased from 32 when the pilot survey was announced in November 2011 to 65 when the netnographic study of the community finished at the end of May 2013. However, the discussions carried out by the community members on their Facebook group page in the course of the present research indicate a group of only around 20 user-translators being actively engaged in the initiative on a regular basis. They are therefore considered as the most aware of the present research and are most likely to have participated in the different studies carried out for the purpose of the present research.

The observational study was designed so that it would be the least onerous possible for the user-translators to prepare for their individual sessions sharing with the researcher their Facebook translation activity. However, they had to download a screen sharing application as well as additional software to facilitate a voice call with the researcher. Furthermore, despite the fact that the study description delivered to the user-translators emphasised that the aim of the study was to evaluate the translation technology on Facebook and not the performance of a user-translator, some of the user-translators who decided not to participate expressed that they felt 'not capable' or 'not good enough' to participate in the study. Additionally, as already signalled in the section on research ethics in Chapter 6, there may have been some reluctance on the part of the user-translators to show the researcher their private Facebook profile as the *Translations* application is unavoidably launched there. Although the research ensured that all the private data would be obscured from the recorded videos, some of the user-translators might simply not feel comfortable revealing their Facebook profiles even if for research purposes. This is an understandable reason and is something which future studies of a similar nature needs to take into account.

With regards to the findings reported in the present study, they refer to translation activity from English into Polish only. The findings pointed to a number of constraints in the translation module on Facebook when facilitating translation into this particular target language. Some of these are specific to the studied language pair and will not be found if the target language is different. Furthermore, the design of the technology facilitating translation activities in different translation crowdsourcing initiatives also varies, as discussed in Chapter 2. As a consequence, their functioning, even with regards to the same language pair of English into Polish translation, will also differ. However, many of the translation problems observed in the study are likely to occur in translation between any language pair when the domain is restricted to crowdsourcing involving translation of short strings forming part of a user interface (UI) and containing placeholders as is the case in the Facebook translation initiative. Many such problems have been long in existence and recognised in literature on software and game localisation (see section 3.2 in Chapter 2 and also 8.2.1.2 in Chapter 8 for more details).

### **9.3 Original Contribution of the Research**

Despite the increase in the number of initiatives where translation is requested from the population of Internet users, to the knowledge of the researcher, the present research is the first to provide a large-scale, empirical investigation into the motivation of contributors to translation

crowdsourcing initiatives, specifically in a 'for-profit' context. It offers an extensive discussion on the characteristics of the collaborative translation work on Facebook and identifies the social and personal gains as the expected outcomes of the participation in the initiative. To address the research questions, some of the concepts associated with the research domain which are currently not clearly defined had to be conceptualised. This was particularly challenging as the terminology currently in use appears very unstable with concepts of 'community', 'collaborative' and 'crowdsourced' translation often used interchangeably.

The research is the first to consider in-depth the features of the collaborative translation platform incorporated into a translation crowdsourcing initiative in terms of their impact on the motivation of the intended users to participate in the crowdsourcing initiative. Through the adoption of the concepts of 'mediation' and 'breakdowns' from Activity Theory, the present study offered a means of evaluating the collaborative translation platform as a technological solution facilitating the translation activity on Facebook to further reveal the direct correlation between the functioning of the platform and the motivation of its users to engage in a given translation crowdsourcing activity.

A number of methods were employed to investigate the initiative of Facebook translation crowdsourcing and address the two research questions. The combined methods resulted in an original mixed-method research design which enabled the researcher to delve deep into the activity of the Polish Facebook user-translators, understand their willingness to participate and further reveal that their motivation to contribute is negatively affected as a result of the failure of the collaborative translation platform to support their translation activity as required.

Although still under development, netnography was incorporated as a method enabling the investigation of the Facebook community of user-translators in their natural online setting. It further allowed the researcher to interact with the community members so that it was possible to learn directly from them about the nature of their activity and their perspective on the initiative to which they are contributing. The study identified online surveys as a suitable method supplementing netnography with information characterising the user-translators and their perceptions on the benefits of their translation activity for themselves as well as for others. The study also implemented a remote observation method designed by the researcher to gather data on the actual use and functioning of a given collaborative translation platform in the context of a real-life translation crowdsourcing initiative. The method respects ecological validity and therefore arguably produces authentic data on the nature of interactions between the platform and its users, informing the study on motivation in translation crowdsourcing. Consequently, the study offers an

original and productive approach to the understanding of an online community engaged in a translation activity in relation to participant motivation which can be applicable to language pairs other than English-Polish and to contexts different than translation for a for-profit entity.

The present study confirms that the choice of technology to mediate translation actions, its design and functionality need to be carefully considered with regard to the individual languages the technology is expected to support. Such platforms will affect not only the subsequent quality of translation delivered by the crowd but also the retention rate of the contributing individuals. Low satisfaction correlates with a decrease in motivation which in turn leads the Internet users dropping out of a given translation initiative. It is hoped that the findings of the present research will raise awareness among the organisers of such initiatives of the impact of the incorporated technology on the activity of translation, the behaviour of the users and the ultimate success of the crowdsourcing initiative sustainable over a longer term. This in turn will add further support to the view (e.g. O'Brien 2012) that translation platforms – either when applied to facilitate translation crowdsourcing or any other translation activity – should be designed with the users and their motivation in mind.

#### **9.4 Research Impact and Recommendations for Future Collaborative Translation Platform Design**

It is believed that the research design as well as research findings presented by this study have a distinct and significant impact on both commercial and academic domains.

The employed research design has the potential to be implemented to facilitate further research on translation crowdsourcing as well as on collaborative translation practices online in general. It offers a means for studying not only the particular community of user-translators but also any technology implemented in the case under investigation. Specifically, the observational study offers a setup which is believed to be the least obtrusive while enabling a researcher to obtain authentic data on the nature of interactions between the translation platform and its users as they engage in their translation activity from their preferred location.

The research findings may be of significance to all those who are considering the incorporation of the crowdsourcing model into their translation workflows and wishing to maintain a long-term engagement and with their contributing community of user-translators. The findings specifically on the impact of the functioning of the collaborative translation platform on the contributors' motivation are highly likely to be universal and should be of relevance to any entity considering developing (or employing an existing) collaborative translation platform, not limited to 'for-profit'

organisers of translation crowdsourcing but also including facilitators of collaborative translation initiatives for NGOs and in situations of humanitarian aid as well as self-organised groups of fans relying on collaborative translation tools to offer some particular media content in different languages.

With social media considered to be the greatest source of authentic social data to exist (Young 2013), the translation initiative organised by Facebook, which involves translation activity on a social network by millions of Internet users from all around the world, is possibly the most extensive body of data on the practice of translation crowdsourcing in a for-profit context. Such data opens up an opportunity to conduct a large-scale quantitative analysis which could benefit the discussion on the topic of translation crowdsourcing and draw a much broader picture of the phenomenon and the attitudes of those who contribute. Nevertheless, research using data available on social networking sites is still in its relative infancy (Young *ibid.*). The implications of incorporating such data – also known as Big Data – are still questioned, especially with regards to research ethics, as policies related to accessibility, privacy, security and intellectual property are yet to be addressed (see e.g. boyd and Crawford 2012). The research methods emerging to account for the Internet as a source of online social data, such as netnography used in the present research, still need to be refined in this respect. Further research could help identify the best ethical practice enabling researchers in the domain of translation (and also in other domains) to make use of Big Data for the analysis of contemporary translation activities.

Finally, a set of recommendations on the design of a collaborative translation platform is provided as a research product which can be incorporated when planning a translation crowdsourcing initiative. As clearly indicated by the findings of this study, it is not enough to develop a technology to function simply as a mechanism for presenting strings of text in one language and enabling their submission online in another language. A number of issues may arise over the course of the translation activity and these should be addressed during the stage of platform design. The intended language pairs should be considered individually to account for the potential translation challenges; the technology should offer means for addressing these challenges. The advantages and disadvantages of using variables should be accounted for for each target language individually. Special attention should be paid to highly inflected languages where word forms change depending on their syntactic function in the sentence. Further recommendations for platform design are as follows:

- Clear instructions on the function of the collaborative translation platform and its features should be provided. Different types of associated actions which can be performed on a string should be explained. Examples should illustrate what steps to take to achieve a certain outcome. Any changes made to the platform affecting its functionality should be communicated to the user-translators.
- Contextual information should be provided for each string with possible examples of actual use of a string in context.
- The strings should be displayed in the platform so that there is no confusion as to which buttons/ commands to use when intending to perform a certain type of action on a certain selected string. If generating string variations is supported, the generated string variations should be displayed in close vicinity of the original string to strengthen the association between the strings. The translation provided by a user-translator for the first of the generated variations could be automatically populated across all the string variations to reduce the need to retype or copy and paste the translation manually by the user-translator. A single action button submitting the translations provided for all the variations at once could also be introduced.
- If variables are used, all the possible content to be substituted for the given variables should be specified and the conditions for this substitution should be explained. The use of variables specifically to reduce the need to translate the same text multiple times should be carefully considered, especially in the case of synthetic languages. A mechanism enabling the user-translators to specify the word form necessary to be provided for a variable in a given case could be introduced. A string filtering option could be provided so that a user-translator can decide whether the strings with variables are displayed at all to them for translation.
- Additional resources provided to aid the translation activity (glossaries, style guides) should be maintained on a regular basis and in close collaboration with the user-translators.
- A mechanism for reporting problematic translations or issues with the functioning of the platform should be provided. The issues raised by the user-translators should be addressed on a regular basis and feedback should be provided to the reporting user-translators.

- Assigning a person familiar with the functioning of the collaborative translation platform as well as aware of a particular target language to oversee the translation process and interact with the community of user-translators is advised.

As highlighted earlier, collaborative translation models are being increasingly more often incorporated into professional translation environments as well. It is thus believed that the present research could serve as a theoretical and methodological background for studies analysing the motivation of professional translators who are exposed to collaborative translation work practice models in a web-based environment and whose translation actions are mediated by collaborative translation platforms. The present study confirms that the technological environment affects the motivation of a translator as a human engaged in a purposeful activity. Further research could go beyond the concept of motivation to focus more on the impact of technologies on the attitude of the translator toward the task at hand and their overall translation behaviour. This could further affirm that translation studies research can benefit by acknowledging translation as a form of human-computer interaction.

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# Appendices

# Appendix A

## 1. Online survey approval

Dublin City University  
Ollscoil Chathair Bhaile Átha Cliath



Dr. Minako O'Hagan  
SALIS

16<sup>th</sup> November 2011

**REC Reference:** DCUREC/2011/109

**Proposal Title:** A Study of Factors Motivating Internet Users to Participate in Translation Crowdsourcing: Polish Facebook Users as Volunteer Translators

**Applicants:** Dr. Minako O'Hagan, Ms. Magdalena Dombek

Dear Minako,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this research proposal. Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,



A handwritten signature in black ink that reads 'Donal O'Mathuna'.

Dr. Donal O'Mathuna  
Chair  
DCU Research Ethics Committee

## 2. Observational study approval

Ollscoil Chathair Bhaile Átha Cliath  
Dublin City University



Ms. Magdalena Dombek  
SALIS

16<sup>th</sup> November 2012

**REC Reference:** DCUREC/2012/176

**Proposal Title:**

**A Study of Factors Motivating Internet Users to Participate in Translation Crowdsourcing: Polish Facebook Users as Volunteer Translators.**

**Applicants:** Dr. Minako O'Hagan, Ms. Magdalena Dombek

Dear Magdalena

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this research proposal. Materials used to recruit participants should not that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee. Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink that reads 'Donal O'Mathuna'.

Dr. Donal O'Mathuna  
Chairperson  
DCU Research Ethics Committee



# Appendix B

## 1. Online Survey – Pilot Study

### Original Polish version:

Kwestionariusz - Polscy tłumacze Facebooka i ich motywacja - badanie pilotażowe

### I - Dane demograficzne

1. Twoja płeć to:

- mężczyzna
- kobieta

2. Twój wiek to:

- do 16 lat
- 16 do 19 lat
- 19 do 25 lat
- 25 do 30 lat
- 30 do 40 lat
- powyżej 40 lat

3. Mieszkasz:

- w Polsce
- poza granicami kraju - w kraju angielskojęzycznym
- w innym kraju

4. Na co dzień:

- uczę się/ studiuje
- pracuję
- jestem bezrobotny (-a)
- jestem na emeryturze/ rencie

5. Twoje miejsce zamieszkania to:

- wieś
- miasto poniżej 25 tys. mieszkańców
- miasto od 25 tys. do 100 tys. mieszkańców
- miasto od 100 tys. do 500 tys. mieszkańców

- miasto ponad 500 tys. mieszkańców

6. Twoja najwyższa zdobyta kwalifikacja to:

- brak
- egzamin po szkole podstawowej
- egzamin gimnazjalny
- egzamin maturalny
- tytuł licencjata/ inżyniera (lub inny odpowiednik)
- tytuł magistra (lub inny odpowiednik)
- doktorat/ habilitacja/ profesura

7. Twój język ojczysty to:

- język polski
- język angielski
- inny język

8. Swoją znajomość języka angielskiego oceniasz jako:

- bardzo słabą, prawie nie znasz tego języka
- słabą, znasz pojedyncze słowa, budujesz proste zdania, popełniasz sporo błędów
- dobrą, „masz niewielkie trudności z komunikowaniem się ale rozumiesz większość tekstu pisanego i czytanego, potrafisz budować krótsze wypowiedzi
- bardzo dobrą, nie masz problemów z komunikowaniem się, czytając nie rozumiesz tylko pojedynczych słów, bez problemu piszesz wypracowania, eseje
- biegłą, językiem angielskim posługujesz się tak samo dobrze jak językiem polskim

9. Języka angielskiego nauczyłeś (-aś) się/ uczysz się:

(wybierz wszystkie, które Cię dotyczą):

- samemu
- poprzez naukę w szkole/ na studiach
- poprzez kursy językowe
- poprzez studia wyższe na kierunku filologia angielska/ amerykanistyka lub podobnym
- inne

## **II – Facebook**

1. Facebooka używasz:

- krócej niż rok

- ponad rok ale mniej niż 2 lata
- od 2 do 4 lat
- ponad 4 lata

2. Liczba Twoich znajomych na Facebooku to:

- poniżej 50 osób
- od 50 do 100 osób
- 100 do 200 osób
- 200 do 350 osób
- ponad 350 osób

3. Liczba aplikacji, których używasz na Facebooku to:

- nie używasz żadnych aplikacji na Facebooku
- 1 aplikacja
- 2 do 4 aplikacji
- 4 i więcej aplikacji

4. Serwisu Facebook używasz, ponieważ:

(wybierz wszystkie, które Cię dotyczą):

- pozwala Ci komunikować się i utrzymywać kontakt z rodziną, znajomymi
- dostarcza Ci informacji o Twoich ulubionych aktorach, zespołach, produktach, firmach/organizacjach, promocjach, konkursach itp.
- umożliwia Ci granie w gry
- pozwala Ci brać udział w procesie tłumaczenia
- inne

### **III - Tłumaczenie Facebooka**

1. O projekcie tłumaczenia Facebooka dowiedziałeś (-aś) się:

(wybierz wszystkie, które Cię dotyczą):

- na Facebooku od osoby z listy Twoich znajomych
- otrzymałeś (aś) zaproszenie do udziału w tłumaczeniu przesłane przez Facebook
- z Internetu (blog, artykuł z gazety/ magazynu online, forum dyskusyjne itp)
- z mediów innych Internet (prasa, radio, telewizja)
- od przyjaciół, znajomych. rodziny
- inne

2. W projekcie tłumaczenia Facebooka zacząłeś (-ęłaś) uczestniczyć:

- mniej niż pół roku temu
- 6 do 12 miesięcy temu
- rok do 2 lat temu
- 2 do 3 lat temu
- ponad 3 lata temu

3. Najczęściej tłumaczysz/ głosujesz:

- korzystając z trybu inline (tłumaczenie kontekstowe)
- używając platformy tłumaczeniowej należącej do aplikacji 'Tłumaczenia'

4. Mój udział w projekcie tłumaczenia to:

(określ częstotliwość w skali od 0 do 3; 0 - nigdy; 1 - rzadko; 2 - często; 3 - najczęściej):

- tłumaczę
- edytuję tłumaczenia i proponuję ich nowe wersje
- głosuję na tłumaczenia

5. Udziałem w projekcie tłumaczenia Facebooka zajmujesz się:

(wybierz jedną z podanych opcji najlepiej opisującą Twoją częstotliwość udziału w procesie tłumaczenia Facebooka)

- przynajmniej raz dziennie
- kilka, kilkanaście razy w tygodniu
- kilka, kilkanaście razy w miesiącu
- kilka, kilkanaście razy w roku

6. Jednorazowo pracując nad tłumaczeniem/ głosując na tłumaczenia spędzasz:

- poniżej 1 godziny
- 1 do 2 godzin
- 2 do 3 godzin
- 3 do 5 godzin
- powyżej 5 godzin

7. Twoje nazwisko kiedyś było/ obecnie jest wyświetlone na tablicy liderów:

(wybierz wszystkie, które Cię dotyczą):

- tygodnia
- miesiąca
- wszechczasów
- Twoje nazwisko nigdy nie pojawiło się na tablicy liderów

- nie wiesz, czy Twoje nazwisko zostało kiedykolwiek wymienione, nie interesuje Cię to
- nie wiesz, czym jest tablica liderów

8. Za udział w tłumaczeniu Facebooka otrzymałeś nagrodę w postaci medalu przyznanego do profilu przez Facebook:

(wybierz jedną z podanych opcji):

- tak
- nie
- nie wiesz, czy został Ci przyznany medal, nie interesuje Cie to
- nie wiesz czym są medale przyznawane do profilu przez Facebooku

9. Czy zdarzyło Ci się kiedyś korzystać z forum będącego częścią aplikacji 'Tłumaczenia' w celu znalezienia wskazówek dotyczących procesu tłumaczenia, uzyskania pomocy z tłumaczeniem jakiegoś słowa/ zdania, używania aplikacji 'Tłumaczenia'?

(wybierz jedną z podanych opcji):

- tak
- nie
- nie wiedziałeś (-aś) o istnieniu takiego forum

10. Czy zdarzyło Ci się korzystać z przewodnika stylu dostępnego dla języka polskiego?

(wybierz jedna z podanych opcji)

- tak
- nie
- nie wiedziałeś (-aś) o istnieniu przewodnika stylu dla języka polskiego

11. W przypadku trudności ze znalezieniem odpowiedniego tłumaczenia dla danego słowa/ wyrażenia/ zdania:

(wybierz wszystkie te, które Cię dotyczą):

- starasz się rozwiązać problem samemu korzystając z pomocy naukowych (podręczniki, słowniki, książki do gramatyki, własne notatki z lekcji języka polskiego/ angielskiego)
- starasz się rozwiązać problem samemu korzystając z pomocy naukowych dostępnych w Internecie
- kontaktujesz się z polską społecznością tłumaczy Facebooka wysyłając prywatną wiadomość do wybranych tłumaczy
- kontaktujesz się z polską społecznością tłumaczy Facebooka publikując wiadomość/ swoje pytanie na forum aplikacji 'Tłumaczenia' lub na stronie grupy polskich tłumaczy na Facebooku

- szukasz fachowej pomocy u profesjonalnego tłumacza, nauczyciela języka angielskiego, osoby, której językiem ojczystym jest angielski, polonisty
- używasz tłumaczenia maszynowego (np. Tłumacz Google)
- inne

#### **IV - Motywacja**

1. Biorę udział w tłumaczeniu Facebooka, ponieważ:

(określ, w skali od 0 - całkowicie bez znaczenia do 4 - niezwykle ważne, jak ważne są dla Ciebie podane sugestie):

- a) jest to dla mnie świetna zabawa, rozrywka i sposób na spędzenie wolnego czasu
- b) jest to dobry sposób na nudę
- c) traktuję to jako moje hobby
- d) sprawia mi to wiele satysfakcji
- e) pozwala mi to na wykorzystanie moich umiejętności w praktyce
- f) jest to działanie w dobrej sprawie dla dobra społeczności
- g) robi to dobre wrażenie na rodzinie, znajomych

2. Oceń podane stwierdzenia w skali od 0 - całkowicie się nie zgadzam do 4 - całkowicie się zgadzam, zgodnie z tym, do jakiego stopnia się z nimi zgadzasz:

- a) Tłumacząc/ głosując odwdzięczam się innym tłumaczom za ich wkład w proces tłumaczenia Facebooka
- b) Jako członek społeczności tłumaczy czuję się odpowiedzialny (-a) za pracę całego zespołu
- c) Wiem, że mogę liczyć na pomoc innych tłumaczy-ochotników w przypadku trudności z tłumaczeniem

3. Dzięki udziałowi w procesie tłumaczenia Facebooka na język polski:

(0 - całkowicie się nie zgadzam; 4 - całkowicie się zgadzam)

- a) poznaję nowych ludzi i zawieram znajomości z osobami o podobnych zainteresowaniach
- b) promuję język polski na świecie
- c) podnoszę swoje kwalifikacje i poprawiam swój wizerunek wśród potencjalnych pracodawców
- d) poprawiam swoją znajomość języka angielskiego oraz umiejętność tłumaczenia

- e) robię coś z pożytkiem dla wielu innych ludzi, którzy nie znają języka angielskiego a chcieliby używać Facebooka
- f) zwiększam swoją reputację wśród innych tłumaczy-ochotników na Facebooku
- g) poprawiam swój wizerunek wśród polskich użytkowników Facebooka

4. Określ do jakiego stopnia zgadzasz się z podanymi stwierdzeniami:

(0 - całkowicie się nie zgadzam do 4 - całkowicie się zgadzam)

- a) Podoba mi się sposób, w jaki Facebook postanowił dokonać tłumaczenia swojego serwisu
- b) Uważam, że platforma tłumaczeniowa służąca do wprowadzania tłumaczeń jest prosta w obsłudze
- c) Uważam, że Facebook powinien udostępnić więcej wskazówek dotyczących sposobu wprowadzania tłumaczeń i głosowania na tłumaczenia
- d) Problemy z obsługą i działaniem platformy tłumaczeniowej na Facebooku zniechęciły mnie do dalszego tłumaczenia/ głosowania
- e) Uważam, że proces tłumaczenia Facebooka jest przyjemny i nieskomplikowany
- f) Chciałbym (-ałabym), aby osoby reprezentujące Facebook bardziej interesowały się tym, jak przebiega proces tłumaczenia tego serwisu
- g) Uważam, że system głosowania na tłumaczenia działa poprawnie i dobrze spełnia swoją rolę
- h) Zdarzyło się, że nie wiedziałem (-am) jak przetłumaczyć wyświetlony segment z powodu braku kontekstu
- i) Słownik terminów pomaga mi w dokonywaniu tłumaczenia

5. W kontekście Twojego udziału w procesie tłumaczenia Facebooka, oceń jak ważne są dla Ciebie:

( w skali od 0 - całkowicie bez znaczenia do 4 - niezwykle ważne)

- a) możliwość uzyskania w postaci medalu do profilu oraz pojawienie się na tablicy liderów
- b) możliwość pracy dla znanej marki jaką jest Facebook
- c) chęć poprawy jakości obecnej wersji polskiego tłumaczenia Facebooka
- d) otrzymanie za swój wkład pracy pochwały, pozytywnego komentarza od znajomych, użytkowników Facebooka, innych tłumaczy-ochotników
- e) dorównania ilością przetłumaczonych słów/ oddanych głosów innym tłumaczom-ochotnikom
- f) wspieranie swym udziałem całej społeczności tłumaczy Facebooka

## **V - Crowdsourcing**

1. Czy wiesz co to jest i na czym polega 'crowdsourcing'?

- tak
- nie

2. Czy tłumaczyłeś (-aś) Facebooka na języki inne niż polski?

- tak
- nie

3. Czy brałeś (-aś)/ bierzesz udział w innych projektach tłumaczeniowych w Internecie, za które nie jest oferowane wynagrodzenie finansowe?

- tak
- nie

3.1 Określ w jakiego rodzaju projektach tłumaczeniowych w Internecie brałeś (-aś)/ bierzesz udział: (np. tłumaczenie napisów do filmów, tłumaczenie gier, oprogramowania open-source. Jeśli możesz, podaj nazwę tłumaczonego produktu lub projektu, w którym bierzesz udział).

## **VI - Doświadczenie**

1. Czy posiadasz doświadczenie zawodowe jako tłumacz z języka angielskiego na język polski?

- tak
- nie

2. Czy kiedykolwiek wykonywałeś (-aś) lub wykonujesz zlecenia tłumaczeniowe, za które otrzymałeś (-aś) lub otrzymujesz wynagrodzenie finansowe?

- tak
- nie

## **VII - Twoje opinie**

Jeśli chcesz, możesz podzielić się tutaj swoimi odczuciami dotyczącymi udziału w procesie tłumaczenia Facebooka na język polski. Możesz tu umieścić także uwagi dotyczące tego kwestionariusza.

## **1. Online Survey – Pilot Study**

### **English translation:**

Questionnaire – Polish Facebook Translators and their Motivation - Pilot Study

### **I. Demographic information**

1. Specify your gender:

- male
- female

2. Specify your age:

- under 16 years old
- 16 to 19 years old
- 19 to 25 years old
- 25 to 30 years old
- 30 to 40 years old
- over 40 years old

3. Specify the country in which you live:

- Poland
- abroad, in an English-speaking country
- other country

4. Your primary occupation:

- in education
- working
- unemployed
- retired

5. Please specify where you live:

- countryside
- city of up to 25,000 citizens
- city of 25,000 to 100,000 citizens
- city of 100,000 to 500,000 citizens
- city of over 500,000 citizens

6. Specify your highest educational qualification:

- no qualification
- primary school final diploma
- middle school final diploma
- high school final diploma
- BA or a corresponding degree
- MA or a corresponding degree
- a PhD, professorship

7. Native language:

- Polish
- English
- other language

8. Assess your knowledge of English:

- very poor, almost no knowledge of this language
- poor, you only know individual words, construct simple sentences, make a lot of errors.
- good, you have some difficulty with communicating but you understand most of written text, you can construct shorter texts yourself
- very good, you do not have difficulty with communication, when reading you do not understand only individual words, you do not have any problems with writing essays
- native-like, your English is almost as good as your Polish

9. Specify how you have learnt English:

(multiple choice)

- by yourself, you have learnt on your own
- classes at school/ university
- by taking language course(s)
- by studying English language/ linguistics/ English studies or a similar degree at university level
- other

**II. Use of Facebook**

1. How long have you been using Facebook:

- less than a year
- over a year but less than two years

- 2 to 4 years
- over 4 years

2. The number of friends that you have on Facebook:

- less than 50
- from 50 to 100
- from 100 to 200
- from 200 to 350
- over 350

3. The number of applications you use on Facebook:

you do not use any applications on Facebook

- 1
- 2 to 4
- over 4

4. You use Facebook

(multiple choice):

- in order to communicate with your family and friends
- because it provides you with information about your favourite actors, bands, brands, companies/ organizations, offers, competitions etc.
- because it allows you to play games
- because it allows you to get involved in a translation process
- other:

### **III. Facebook Translation**

1. How did you learn about the initiative of Facebook translation?

(multiple choice):

- On Facebook, from a person on your friends list
- You received an invitation from Facebook to participate in the initiative
- You found out about the initiative on the Internet (from a blog post, article in an online newspaper/ magazine, on a discussion board)
- You heard about it in media other than the Internet (tv, newspapers, radio)
- You heard about the initiative from your family/ friends
- other

2. When did you start translating Facebook into Polish?

- less than 6 months ago
- 6 to 12 months ago
- 1 year to 2 years ago
- 2 to 3 years ago
- over 3 years ago

3. What is the mode that you use most often to translate Facebook?

- the 'inline' mode
- you use the collaborative translation platform which is part of the *Translations* application

4. Specify how and with what frequency do you contribute to the process of Facebook translation:

(specify the frequency on a scale from 0 to 3; 0 - never; 1 = rarely, 2 = often, 3 = most often):

- by translating new phrases/ sentences
- by voting on translations
- by editing the existing translations

5. How often do you contribute to the initiative of Facebook translation?

(select one of the option that describes your contribution frequency best)

- at least once a day
- a few times a week
- a few times a month
- a few times a year

6. How long does your individual session of translation-related activity on Facebook last?

- less than 1 hour
- between 1 and 2 hours
- between 2 and 3 hours
- between 3 and 5 hours
- over 5 hours

7. Has your name ever been displayed on a leaderboard?

(multiple choice):

- yes, on a leaderboard of a week
- yes, on a leaderboard of a month
- yes, on a leaderboard of all time
- no, your name has never appeared on any leaderboard

- you do not know whether your name has ever been displayed on a leaderboard, you are not interested in it
- you do not know what the leaderboards are

8. Have you ever received for your contribution a Facebook award added to your Facebook profile?

(select one of the options)

- yes
- no
- you do not know whether you have ever received an award, you are not interested in it
- you do not know what are the awards offered to translators by Facebook

9. Have you ever used the discussion board to ask for help or find advice on how to translate a word/phrase or use the *Translations* application?

(select one of the options):

- yes
- no
- you did not know about such a discussion board

10. Have you ever used a style guide for Polish language?

(select one of the options):

- yes
- no
- you did not know about such a style guide

11. How do you deal with problematic phrases/ sentences which you are unable to translate?

(multiple choice):

- You try to solve the problem yourself by looking for help in your own reference materials (grammar books, dictionaries, notes from English/ Polish classes)
- You try to solve the problem yourself by using help materials available online
- You contact the members of the Polish community of Facebook user-translators sending private Facebook messages
- You contact the members of the community of Polish Facebook user-translators posting a message on the discussion board
- You look for help from a professional translator, a teacher of English/ Polish, a native speaker etc.
- You use Machine Translation

- other:

#### **IV. Motivation**

1. Specify to what extent you agree with the given statements concerning your participation in the initiative of Facebook translation:

(specify on a scale from 0 - I completely disagree to 4 - I completely agree how important are to you the given statements):

- a) I participate in the initiative because it is a great fun and a way to spend free time
- b) I participate in the initiative because it is a good way to combat boredom
- c) I participate in the initiative because it gives me a lot of satisfaction
- d) I participate in the initiative because it allows me to use my skills in practice
- e) I participate in the initiative because it is a good deed for the benefit of others
- f) I participate in the initiative because it makes a good impression on my family, friends

2. Specify to what extent you agree with the given statements (on a scale from 0 - I completely disagree to 4 - I completely agree):

- a) By translating/ voting I repay other translators for their contributions to the project
- b) As a member of the community of Polish Facebook user-translators I feel responsible for the work done by the whole community
- c) I know I can count on help of other user-translators in case of translation difficulties

3. Thanks to my participation in the initiative...

(0 - I completely disagree; 4 - I completely agree):

- a) I meet new people and make friends with people who have similar interests
- b) I promote Polish language globally
- c) I improve my qualifications and how I am perceived by potential employers
- d) I improve my knowledge of English and my translation skills
- e) I do something that is of benefit to others who do not know English but would like to use Facebook
- f) I improve my reputation among other Facebook user-translators
- g) I improve how I am perceived by other Facebook users.

4. Specify to what extent you agree with the given statements:

(0 - I completely disagree; 4 - I completely agree):

- a) I like the way in which Facebook decided to translate their service

- b) I think that the collaborative translation platform is easy to use
- c) I think that Facebook should provide more instructions on how to submit translations and vote on them
- d) Problems with the use and functioning of the collaborative translation platform have discouraged me from providing translation/ voting on translations
- e) I think that the process of Facebook translation is pleasant and uncomplicated
- f) I would like Facebook representatives to show more interest in how the process of Facebook translation proceeds
- g) I think that the voting system functions effectively and serves its purpose well
- h) It happened to me that I did not know how to translate a given string because of lack of context
- i) The glossary helps me translate

5. Specify how important it is for you:

(0 = completely unimportant; 4 = extremely important):

- a) to receive an award or have your name displayed on a leaderboard
- b) the fact, that Facebook translation is an opportunity to work for a well-known brand
- c) to improve the quality of the current version of the Polish Facebook translation
- d) to receive from other translators, family, friends a praise for your contribution to the project
- e) to equal other contributing translators with the number of provided translations/ votes
- f) to support with your contributions the community of Polish Facebook user-translators

## **V. Crowdsourcing**

1. Do you know what crowdsourcing is and what does this phenomenon imply?

- yes
- no

2. Have you ever translated Facebook into a language other than Polish?

- yes
- no

3. Have you ever participated in other translation projects online for which no payment was offered?

- yes
- no

3.1 If yes, please name some (or all) of these projects.

(e.g. translation of subtitles, video games, open-source software. If you can, please specify the name of the translated product or the initiative).

## **VI. Experience**

1. Do you have any professional experience as an English to Polish translator?

- yes
- no

2. Have you ever performed any translation work for which you would receive payment?

- yes
- no

## **VII. Your opinions**

If you like, you can share here your opinions on your participation in the initiative of Facebook translation into Polish. Here you can also comment on this questionnaire.

## 2. Online Survey – Second Study

### Original Polish version:

Kwestionariusz - Polscy tłumacze Facebooka i ich motywacja - badanie zasadnicze

### I - Dane demograficzne

1. Twoja płeć to:

- mężczyzna
- kobieta

2. Twój wiek to:

- do 16 lat
- 16 do 19 lat
- 19 do 25 lat
- 25 do 30 lat
- 30 do 40 lat
- powyżej 40 lat

3. Mieszkasz:

- w Polsce
- poza granicami kraju - w kraju angielskojęzycznym
- poza granicami kraju - w innym kraju

4. Twoje miejsce zamieszkania to:

- wieś lub miasto poniżej 25 tys. mieszkańców
- miasto od 25 tys. do 100 tys. mieszkańców
- miasto od 100 tys. do 500 tys. mieszkańców
- miasto ponad 500 tys. mieszkańców

5. Na co dzień:

(wybierz określenie, które najlepiej do Ciebie pasuje)

- uczę się/ studiuję
- pracuję
- jestem bezrobotny (-a)
- jestem na emeryturze/ rencie

6. Twoja najwyższa zdobyta kwalifikacja to:

- brak
- egzamin po szkole podstawowej

- egzamin gimnazjalny
- egzamin maturalny
- tytuł licencjata/ inżyniera (lub inny odpowiednik)
- tytuł magistra (lub inny odpowiednik)
- doktorat/ habilitacja/ profesura

7. Twój język ojczysty to:

- język polski
- język angielski
- inny język

8A. Swoją znajomość języka angielskiego oceniasz jako:

(wybierz jedno ze stwierdzeń najlepiej opisujące Twoją znajomość języka angielskiego):

- bardzo słabą, prawie nie znasz tego języka
- słabą, znasz pojedyncze słowa, budujesz proste zdania, popełniasz sporo błędów
- dobrą, „masz niewielkie trudności z komunikowaniem się ale rozumiesz większość tekstu pisanego i czytanego, potrafisz budować krótsze wypowiedzi
- bardzo dobrą, nie masz problemów z komunikowaniem się, czytając nie rozumiesz tylko pojedynczych słów, bez problemu piszesz wypracowania, eseje
- biegłą, językiem angielskim posługujesz się tak samo dobrze jak językiem polskim

8B. Swoją znajomość języka polskiego oceniasz jako:

(wybierz jedno ze stwierdzeń najlepiej opisujące Twoją znajomość języka polskiego)

- bardzo słabą, prawie nie znasz tego języka
- słabą, znasz pojedyncze słowa, budujesz proste zdania, popełniasz sporo błędów
- dobrą, „masz niewielkie trudności z komunikowaniem się ale rozumiesz większość tekstu pisanego i czytanego, potrafisz budować krótsze wypowiedzi
- bardzo dobrą, nie masz problemów z komunikowaniem się, czytając nie rozumiesz tylko pojedynczych słów, bez problemu piszesz wypracowania, eseje
- biegłą, językiem polskim posługujesz się tak samo dobrze jak swoim ojczystym językiem

9A. Języka angielskiego nauczyłeś (-aś) się/ uczysz się:

(wybierz wszystkie, które Cię dotyczą):

- samemu
- poprzez naukę w szkole/ na studiach
- poprzez kursy językowe
- poprzez studia wyższe na kierunku filologia angielska/ amerykanistyka lub podobnym

- inne

9B. Języka polskiego nauczyłeś (-aś) się/ uczysz się:

(wybierz wszystkie, które Cię dotyczą):

- samemu
- poprzez naukę w szkole/ na studiach
- poprzez kursy językowe
- poprzez studia wyższe na kierunku filologia polska/ polonistyka lub podobnym
- inne

## II - Facebook

1. Facebooka używasz:

- krócej niż rok
- ponad rok ale mniej niż 2 lata
- od 2 do 4 lat
- ponad 4 lata

2. Liczba Twoich znajomych na Facebooku to:

- poniżej 50 osób
- od 50 do 100 osób
- 100 do 200 osób
- 200 do 350 osób
- ponad 350 osób

3. Liczba aplikacji, których używasz na Facebook to:

nie używasz żadnych aplikacji na Facebooku

- 1 aplikacja
- 2 do 4 aplikacji
- 4 i więcej aplikacji

4. Serwisu Facebook używasz, ponieważ:

(wybierz wszystkie, które Cię dotyczą):

- pozwala Ci komunikować się i utrzymywać kontakt z rodziną, znajomym
- jest miejscem, gdzie możesz przedstawić się innym, wyrazić kim jesteś
- dostarcza Ci informacji o Twoich ulubionych aktorach, zespołach, produktach, firmach/ organizacjach, promocjach, konkursach itp
- pozwala Ci zawierać nowe znajomości

- jest miejscem, gdzie możesz znaleźć wsparcie emocjonalne i pomoc od innych
- umożliwia Ci granie w gry
- pozwala Ci brać udział w procesie tłumaczenia
- inne

5. Korzystasz z Facebooka w języku:

(wybierz tę opcję z której korzystasz najczęściej):

- polskim
- angielskim
- w innym języku

5.1 Proszę, podaj kilka powodów, dla których nie używasz Facebooka w języku polskim:

### III - Tłumaczenie Facebooka

1. O projekcie tłumaczenia Facebooka dowiedziałeś (-aś) się:

(wybierz wszystkie, które Cię dotyczą):

- na Facebooku od osoby z listy Twoich znajomych
- otrzymałeś (aś) zaproszenie do udziału w tłumaczeniu przesłane przez Facebook
- z Internetu (blog, artykuł z gazety/ magazynu online, forum dyskusyjne itp)
- z mediów innych Internet (prasa, radio, telewizja)
- od przyjaciół, znajomych, rodziny
- samemu, szukając w Internecie projektów tłumaczeniowych, w których mógłbyś (mogłabyś) wziąć udział
- inne

2. W projekcie tłumaczenia Facebooka zacząłeś (-ęłaś) uczestniczyć:

- mniej niż pół roku temu
- 6 do 12 miesięcy temu
- rok do 2 lat temu
- 2 do 3 lat temu
- ponad 3 lata temu

3. Najczęściej tłumaczysz/ głosujesz:

- korzystając z trybu inline (tłumaczenie kontekstowe):
- używając platformy tłumaczeniowej należącej do aplikacji 'Tłumaczenia'

3.1 A Określ do jakiego stopnia zgadzasz się z podanymi stwierdzeniami:

(w skali od 0 - całkowicie się nie zgadzam do 4 - całkowicie się zgadzam):

- uważam, że tryb 'inline' służący do wprowadzania tłumaczeń jest prosty w obsłudze
- problemy z obsługą i działaniem trybu 'inline' na Facebooku nieraz zniechęcają mnie do dalszego tłumaczenia/ głosowania

3.1 B Określ do jakiego stopnia zgadzasz się z podanymi stwierdzeniami:

(w skali od 0 - całkowicie się nie zgadzam do 4 - całkowicie się zgadzam):

- uważam, że platforma tłumaczeniowa służąca do wprowadzania tłumaczeń jest prosta w obsłudze
- problemy z obsługą i działaniem platformy tłumaczeniowej na Facebooku nieraz zniechęcają mnie do dalszego tłumaczenia/ głosowania

4. Mój udział w projekcie tłumaczenia to:

(określ częstotliwość w skali od 0 do 3; 0 - nigdy; 1 - rzadko; 2 - często; 3 - najczęściej):

- tłumaczenie nowych fraz/ zdań
- głosowanie na tłumaczenia
- edycja istniejących tłumaczeń

5. Udziałem w projekcie tłumaczenia Facebooka zajmujesz się:

(wybierz jedną z podanych opcji najlepiej opisującą Twoją częstotliwość udziału w procesie tłumaczenia Facebooka):

- przynajmniej raz dziennie
- kilka, kilkanaście razy w tygodniu
- kilka, kilkanaście razy w miesiącu
- kilka, kilkanaście razy w roku

6. Jednorazowo pracując nad tłumaczeniem/ głosując na tłumaczenia spędzasz:

- poniżej 1 godziny
- 1 do 2 godzin
- 2 do 3 godzin
- powyżej 3 godzin

7. Twoje nazwisko kiedyś było/ obecnie jest wyświetlone na tablicy liderów:

(wybierz wszystkie te, które Cię dotyczą):

- tygodnia
- miesiąca
- wszechczasów
- Twoje nazwisko nigdy nie pojawiło się na tablicy liderów
- nie wiesz, czy Twoje nazwisko zostało kiedykolwiek wymienione, nie interesuje Cię to

- nie wiesz, czym jest tablica liderów

8. Za udział w tłumaczeniu Facebooka otrzymałeś nagrodę w postaci medalu przyznawanego do profilu przez Facebook:

(wybierz jedną z podanych opcji):

- tak
- nie
- nie wiesz, czy został Ci przyznany medal, nie interesuje Cie to
- nie wiesz czym są medale przyznawane do profilu przez Facebooku

9. Czy korzystałeś (-aś) kiedyś z forum (będącego częścią aplikacji 'Tłumaczenia' przed zmianami wprowadzonymi i listopadzie 2011) w celu znalezienia wskazówek dotyczących procesu tłumaczenia, uzyskania pomocy z tłumaczeniem jakiegoś słowa/ zdania, używania aplikacji 'Tłumaczenia'?

(wybierz jedną z podanych opcji):

- tak
- nie
- nie wiedziałeś (-aś) o istnieniu takiego forum

10. Czy korzystałeś (-aś) z przewodnika stylu dostępnego dla języka polskiego?

(wybierz jedna z podanych opcji)

- tak
- nie
- nie wiedziałeś (-aś) o istnieniu przewodnika stylu dla języka polskiego

11. W przypadku trudności ze znalezieniem odpowiedniego tłumaczenia dla danego słowa/ wyrażenia/ zdania:

(wybierz wszystkie te, które Cię dotyczą):

- starasz się rozwiązać problem samemu korzystając z pomocy naukowych (podręczniki, słowniki, książki do gramatyki, własne notatki z lekcji języka polskiego/ angielskiego)
- starasz się rozwiązać problem samemu korzystając z pomocy naukowych dostępnych w Internecie
- kontaktujesz się z polską społecznością tłumaczy Facebooka wysyłając prywatną wiadomość do wybranych tłumaczy
- kontaktujesz się z polską społecznością tłumaczy Facebooka publikując wiadomość/ swoje pytanie na stronie grupy polskich tłumaczy na Facebooku

- szukasz fachowej pomocy u profesjonalnego tłumacza, nauczyciela języka angielskiego, osoby, której językiem ojczystym jest angielski, polonisty
- używasz tłumaczenia maszynowego (np. Tłumacz Google)
- inne

#### **IV - Motywacja**

1. Zdecydowałem (-am) się na udział w procesie tłumaczenia Facebooka na język polski, ponieważ:  
(zaznacz wszystkie, które Cię dotyczą):

- a) otrzymałem (-am) zaproszenie do udziału w projekcie wysłane przez Facebook
- b) znajomi/ rodzina zasugerowali, abym uczestniczył (-a) w procesie tłumaczenia Facebooka
- c) lubię projekty tego typu, gdzie mogę wykorzystywać posiadane umiejętności
- d) byłem (-am) ciekawy (-a) na czym polega proces tłumaczenia Facebooka
- e) uznałem (-am) to za sposób dobry na nudę i spędzenie wolnego czasu
- f) używałem (-am) Facebooka w języku polskim ale jakość tłumaczenia nie była satysfakcjonująca dlatego chciałem (-am) ją poprawić
- g) widząc jak inni poświęcają czas na tłumaczenie Facebooka postanowiłem (-am) dołączyć, aby im pomóc
- h) zależało mi, aby język polski był dostępny jako wariant językowy na Facebooku
- i) inne

2. Dzięki udziałowi w procesie tłumaczenia Facebooka na język polski:

(0 - całkowicie się nie zgadzam; 4 - całkowicie się zgadzam):

- a) poznaję nowych ludzi i zawieram znajomości z osobami o podobnych zainteresowaniach
- b) promuję język polski na świecie
- c) podnoszę swoje kwalifikacje i poprawiam swój wizerunek wśród potencjalnych pracodawców
- d) poprawiam swoją znajomość języka angielskiego oraz umiejętność tłumaczenia
- e) robię coś z pożytkiem dla wielu innych ludzi, którzy nie znają języka angielskiego a chcieliby używać Facebooka
- f) zwiększam swoją reputację wśród innych tłumaczy-ochotników na Facebooku
- g) poprawiam swój wizerunek wśród polskich użytkowników Facebooka

3. Biorę udział w tłumaczeniu Facebooka, ponieważ:

(określ, w skali od 0 - całkowicie bez znaczenia do 4 - niezwykle ważne, jak ważne są dla Ciebie podane sugestie):

- a) jest to dla mnie świetna zabawa, rozrywka i sposób na spędzenie wolnego czasu
- b) jest to dobry sposób na nudę
- c) traktuję to jako moje hobby
- d) sprawia mi to wiele satysfakcji
- e) pozwala mi to na wykorzystanie moich umiejętności w praktyce
- f) jest to działanie w dobrej sprawie na rzecz innych
- g) robi to dobre wrażenie na rodzinie, znajomych

4. Oceń podane stwierdzenia w skali od 0 - całkowicie się nie zgadzam do 4 - całkowicie się zgadzam, zgodnie z tym, do jakiego stopnia się z nimi zgadzasz:

- a) Tłumacząc/ głosując odwdzięczam się innym tłumaczom za ich wkład w proces tłumaczenia Facebooka
- b) Jako członek społeczności tłumaczy czuję się odpowiedzialny (-a) za pracę całego zespołu
- c) Wiem, że mogę liczyć na pomoc innych tłumaczy-ochotników w przypadku trudności z tłumaczeniem
- d) Podoba mi się sposób, w jaki Facebook postanowił dokonać tłumaczenia swojego serwisu
- e) Uważam, że Facebook powinien udostępnić więcej wskazówek dotyczących sposobu wprowadzania tłumaczeń i głosowania na tłumaczenia
- f) Uważam, że proces tłumaczenia Facebooka jest przyjemny i nieskomplikowany
- g) Chciałbym (-ałabym), aby osoby reprezentujące Facebook bardziej interesowały się tym, jak przebiega proces tłumaczenia tego serwisu
- h) Uważam, że system głosowania na tłumaczenia działa poprawnie i dobrze spełnia swoją rolę.
- i) Zdarzyło się, że nie wiedziałem (-am) jak przetłumaczyć wyświetlony segment z powodu braku kontekstu
- j) Słownik terminów pomaga mi w dokonywaniu tłumaczenia

5. W kontekście Twojego udziału w procesie tłumaczenia Facebooka, oceń jak ważne są dla Ciebie: (w skali od 0 - całkowicie bez znaczenia do 4 - niezwykle ważne):

- a) pojawienie się na tablicy liderów
- b) możliwość pracy dla znanej marki jaką jest Facebook
- c) chęć poprawy jakości obecnej wersji polskiego tłumacza Facebooka

- d) otrzymanie za swój wkład pracy pochwały, pozytywnego komentarza od znajomych, użytkowników Facebooka, innych tłumaczy-ochotników
- e) dorównania ilością przetłumaczonych słów/ oddanych głosów innym tłumaczom-ochotnikom
- f) wspieranie swym udziałem całej społeczności tłumaczy Facebooka

6. Oceń podane stwierdzenia w skali od 0 - całkowicie się nie zgadzam do 4 - całkowicie się zgadzam, zgodnie z tym, do jakiego stopnia się z nimi zgadzasz:

- a) Współpraca z innymi tłumaczami-ochotnikami jest ważnym aspektem udziału w procesie tłumaczenia Facebooka
- b) Praca wykonana przez innych tłumaczy inspiruje mnie do udziału w procesie tłumaczenia Facebooka
- c) Uważam, że moimi umiejętnościami dorównuję innym tłumaczom Facebooka i mój wkład w proces tłumaczenia jest równie wartościowy
- d) Staram się, aby mój wkład w proces tłumaczenia Facebooka został pozytywnie oceniony przez innych członków społeczności tłumaczy.

7. Czy uważasz, że Facebook powinien ograniczać możliwość uczestnictwa w projekcie tłumaczenia i zezwalać na głosowanie/ edytowanie/ wykonywanie tłumaczeń tylko wybranym osobom (np. na podstawie ich osiągnięć i doświadczenia w tłumaczeniu Facebooka)?

- tak
- nie
- nie mam zdania

8. Czy uważasz, że Facebook powinien lepiej wynagradzać najlepszych/ najbardziej zaangażowanych tłumaczy?

- tak
- nie
- nie mam zdania

8.1 Twoim zdaniem, jak Facebook powinien wynagradzać ochotników za ich wkład pracy w proces tłumaczenia tego serwisu?

## **V - Crowdsourcing**

1. Czy tłumaczyłeś (-aś) Facebooka na języki inne niż polski?

- tak

- nie

2. Czy brałeś (-aś)/ bierzesz udział w innych projektach tłumaczeniowych w Internecie, za które nie jest oferowane wynagrodzenie finansowe?

- tak
- nie

2.1 Określ w jakiego rodzaju projektach tłumaczeniowych w Internecie brałeś (-aś)/ bierzesz udział: (np. tłumaczenie napisów do filmów, tłumaczenie gier, oprogramowania open-source. Jeśli możesz, podaj nazwę tłumaczonego produktu lub projektu, w którym bierzesz udział)

## **VI - Doświadczenie**

1. Czy posiadasz doświadczenie zawodowe jako tłumacz z języka angielskiego na język polski?

- tak
- nie

2. Czy kiedykolwiek wykonywałeś (-aś) lub wykonujesz zlecenia tłumaczeniowe, za które otrzymałeś (-aś) lub otrzymujesz wynagrodzenie finansowe?

- tak
- nie

3. Czy wiesz co to jest i na czym polega 'crowdsourcing'?

- tak
- nie

## **VII - Twoje opinie**

Jeśli chcesz, możesz podzielić się tutaj swoimi odczuciami dotyczącymi udziału w procesie tłumaczenia Facebooka na język polski. Możesz tu umieścić także uwagi dotyczące tego kwestionariusza

## **2. Online Survey – Second Study**

### **English translation:**

Questionnaire – Polish Facebook Translators and their Motivation - Second Study

### **I. Demographic information**

1. Specify your gender:

- male
- female

2. Specify your age:

- under 16 years old
- 16 to 19 years old
- 19 to 25 years old
- 25 to 30 years old
- 30 to 40 years old
- over 40 years old

3. Specify the country in which you live:

- Poland
- abroad, in an English-speaking country
- other country

4. Please specify where you live:

- countryside or a city of up to 25,000 citizens
- city of 25,000 to 100,000 citizens
- city of 100,000 to 500,000 citizens
- city of over 500,000 citizens

5. Your primary occupation:

- in education
- in work
- unemployed
- retired

6. Specify your highest educational qualification:

- no qualification
- primary school final diploma

- middle school final diploma
- high school final diploma
- BA or a corresponding degree
- MA or a corresponding degree
- a PhD, professorship

7. Native language:

- Polish
- English
- other language

8A. Assess your knowledge of English:

- very poor, almost no knowledge of this language
- poor, you only know individual words, construct simple sentences, make a lot of errors.
- good, you have some difficulty with communicating but you understand most of written text, you can construct shorter texts yourself
- very good, you do not have difficulty with communication, when reading you do not understand only individual words, you do not have any problems with writing essays
- native-like, your English is almost as good as your Polish

8B. Assess your knowledge of Polish:

- very poor, almost no knowledge of this language
- poor, you only know individual words, construct simple sentences, make a lot of errors.
- good, you have some difficulty with communicating but you understand most of written text, you can construct shorter texts yourself
- very good, you do not have difficulty with communication, when reading you do not understand only individual words, you do not have any problems with writing essays
- native-like, your Polish is almost as good as your native language

9A. Specify how you have learnt English:

(multiple choice):

- by yourself, you have learnt on your own
- classes at school/ university
- by taking language course(s)
- by studying English language/ linguistics/ English studies or a similar degree at university level
- other

9B. Specify how you have learnt Polish:

(multiple choice):

- by yourself, you have learnt on your own
- classes at school/ university
- by taking language course(s)
- by studying English language/ linguistics/ English studies or a similar degree at university level
- other

## II. Use of Facebook

1. How long have you been using Facebook:

- less than a year
- over a year but less than 2 years
- 2 to 4 years
- over 4 years

2. The number of friends that you have on Facebook:

- less than 50
- from 50 to 100
- from 100 to 200
- from 200 to 350
- over 350

3. The number of applications you use on Facebook:

- none
- 1
- 2 to 4
- over 4

4. You use Facebook

(multiple choice):

- in order to communicate with your family and friends
- because it is a place where you can express yourself
- because it provides you with information about your favourite actors, bands, brands, companies/ organizations, offers, competitions etc.
- because you can make new friends there

- because it is a place where you can find emotional support and help from others
- because it allows you to play games
- because it allows you to get involved in a translation process
- other

5. The interface language you use Facebook in is:

- Polish
- English
- other language

5.1 Please specify a few reasons why you do not use Facebook in Polish.

### III. Facebook Translation

1. How did you learn about the initiative of Facebook translation?

(multiple choice):

- On Facebook, from a person on your friends list
- You received an invitation from Facebook to participate in the initiative
- You found out about the initiative on the Internet (from a blog post, article in an online newspaper/ magazine, on a discussion board)
- You heard about it in media other than the Internet (tv, newspapers, radio)
- You heard about the initiative from your family, friends
- You found out about it yourself while looking specifically for translation projects online in which you could participate
- other

2. When did you start translating Facebook into Polish?

- less than 6 months ago
- 6 to 12 months ago
- 1 year to 2 years ago
- 2 to 3 years ago
- over 3 years ago

3. What is the mode that you use most often to translate Facebook?

- the 'inline' mode
- you use the collaborative translation platform which is part of the *Translations* application

3.1A Specify to what extent do you agree with the given statements

(0 = I completely disagree; 4 = I completely agree):

- The 'inline' translation mode is easy to use
- The problems with the functioning of the 'inline' translation mode sometimes discourage me from further translation

3.1B Specify to what extent do you agree with the given statements

(0 = I completely disagree; 4 = I completely agree):

- The collaborative translation platform is easy to use
- The problems with the functioning of the platform sometimes discourage me from further translation

4. Specify how and with what frequency do you contribute to the process of Facebook translation:

(identify the frequency on a scale: 0 – never; 1 – rarely; 2 – often; 3 – most often):

- by translating new phrases/ sentences
- by voting on translations
- by editing the existing translations

5. How often do you contribute to the initiative of Facebook translation?

- at least once a day
- a few times a week
- a few times a month
- a few times a year

6. How long does your individual session of translation-related activity on Facebook last?

- less than 1 hour
- between 1 and 2 hours
- between 2 and 3 hours
- over 3 hours

7. Has your name ever been displayed on a leaderboard?

- yes, on a leaderboard of a week
- yes, on a leaderboard of a month
- yes, on a leaderboard of all time
- no, never
- you do not know whether your name has ever been displayed on a leaderboard, you are not interested in it
- you do not know what the leaderboards are

8. Have you ever received for your contribution a Facebook award added to your Facebook profile?

- yes
- no
- you do not know whether you have ever received an award, you are not interested in it
- you do not know what are the awards offered to translators by Facebook

9. Did you ever use the discussion board (which used to be a part of the *Translations* application until the changes to Facebook in November 2011) to ask for help or find advice on how to translate a word/phrase or use *'ranslations*?

(choose one of the options):

- yes
- no
- you did not know about such a discussion board

10. Have you ever used a style guide for Polish language?

(choose one of the options):

- yes
- no
- you did not know about such a style guide

11. How do you deal with problematic phrases/ sentences which you are unable to translate?

(multiple choice):

- You try to solve the problem yourself by looking for help in your own reference materials (grammar books, dictionaries, notes from English/ Polish classes)
- You try to solve the problem yourself by using help materials available online
- You contact the members of the Polish community of Facebook user-translators sending private Facebook messages
- You contact the members of the community of Polish Facebook user-translators posting a message on their dedicated Facebook group page
- You look for help from a professional translator, a teacher of English/ Polish, a native speaker etc.
- You use Machine Translation (e.g. Google Translate)
- other

#### **IV. Motivation**

1. Why have you decided to contribute to the initiative of Facebook translation?

(multiple choice):

- a) You received an invitation from Facebook
- b) Your family/ friends suggested that you could participate
- c) You like projects where you can use your skills in practice
- d) You were curious about the initiative organised by Facebook
- e) You thought it to be a good way to spend free time and fight boredom
- f) You were dissatisfied with the quality of the available Polish translation of Facebook and you wanted to improve it
- g) You decided to join other translators seeing how they contribute
- h) You wanted to make Polish language version on Facebook to be available to Facebook users

2. Specify to what extent you agree with the given statements (0 = I completely disagree; 4 = I completely agree):

- a) Thanks to my participation in the initiative I meet new people and make friends with people who have similar interests
- b) Thanks to my participation in the initiative I promote Polish language globally
- c) Thanks to my participation in the initiative I improve my qualifications and how I am perceived by potential employers
- d) Thanks to my participation in the initiative I improve my knowledge of English and my translation skills
- e) Thanks to my participation in the initiative I do something that is of benefit to others who do not know English but would like to use Facebook
- f) Thanks to my participation in the initiative I improve my reputation among other Facebook user-translators
- g) Thanks to my participation in the initiative I improve how I am perceived by other Polish Facebook users.

3. Specify to what extent you agree with the given statements concerning your participation in the initiative of Facebook translation:

(0 = I completely disagree; 4 = I completely agree):

- a) I participate in the initiative because it is a great fun and a way to spend free time
- b) I participate in the initiative because it is a good way to combat boredom
- c) I participate in the initiative because it gives me a lot of satisfaction
- d) I participate in the initiative because it allows me to use my skills in practice
- e) I participate in the initiative because it is a good deed for the benefit of others

f) I participate in the initiative because it makes a good impression on my family, friends

4. Specify to what extent you agree with the given statements (0 = I completely disagree; 4 = I completely agree):

a) By translating/ voting I repay other translators for their contributions to the project

b) As a member of the community of Polish Facebook user-translators I feel responsible for the work done by the whole community

c) I know I can count on help of other user-translators in case of translation difficulties

d) I like the way in which Facebook decided to obtain translation of their service

e) I think that Facebook should provide more instructions on how to provide translations and vote on them

f) I think that the translation of Facebook is a pleasant and uncomplicated process

g) I would like Facebook representatives to show more interest in translation process

h) I think that the voting system works well and serves its purpose

i) It happened that I did not know how to translate because of the lack of context

j) The glossary helps me in translation

5. Specify how important it is for you (0 = completely unimportant; 4 = extremely important):

a) to have your name displayed on a leaderboard

b) the fact, that Facebook translation is an opportunity to work for a well-known brand

c) to improve the quality of the current version of the Polish Facebook translation

d) to receive from other translators, family, friends a praise for your contribution to the project

e) to equal other contributing translators with the number of provided translations/ votes

f) to support with your contributions the community of Polish Facebook user-translators

6. Specify to what extent you agree with the given statements (0 = I completely disagree; 4 = I completely agree):

a) Cooperation with the other Facebook translators is an important aspect of the process of Facebook translation

b) The work done by other Facebook translators inspires me to participate in the initiative

c) I believe that with my skills I equal other Facebook translators and my contributions are equally valuable

d) I make an effort for my contributions to be positively evaluated by other translator community members

7. Do you think that Facebook should limit the opportunity to contribute translations/ votes/ and to edit translations only to the selected individuals (on the basis of their achievements, experience):

- yes
- no
- I do not know

8. Do you think Facebook should reward the best/ most active contributors better?

- yes
- no
- I do not know

8.1 If yes, then how do you think Facebook should reward the contributors?

## **V. Crowdsourcing**

1. Have you ever translated Facebook into a language other than Polish?

- yes
- no

2. Have you ever participated in other translation projects online for which no payment was offered?

- yes
- no

Please specify in what other online translation projects you participate: (e.g. translation of subtitles, video games, open-source software. If you can, specify the name of the product you translate or the project you participate in):

## **VI. Experience**

1. Do you have any professional experience as an English to Polish translator?

- yes
- no

2. Have you ever performed any translation work for which you would receive payment?

- yes
- no

3. Do you know what crowdsourcing is and what does this phenomenon imply?

- yes

- no

## **VII. Your opinions**

If you like, you can share here your opinions on your participation in the initiative of Facebook translation into Polish. Here you can also comment on this questionnaire.

## Appendix C

This appendix contains the original excerpts of the notes archived from the discussion board and the *Translator Community for Polski* group page on Facebook. Their English translations, labeled as Note 7.1 – Note 7.17 illustrate the discussion in Chapter 7.

[posted 13 April 2008]

### Rodzaj męski i żeński czasowników

**C1** Na Facebooku chyba nie ma takiej opcji (a może jest, tylko ja nie wiem?), żeby czasowniki były odmieniane na podstawie płci, którą wybierzemy w profilu. Chodzi mi tu np. o historyjki z mini-feed typu "Jan \*dodał\* zdjęcie".

No i w takim wypadku dobrze by było ustanowić jakąś konwencję, do której będziemy się stosować wszędzie.

Czy pisać:

- dodał(a)

- dodał/a

- dodał/dodała

- czy jeszcze jakoś inaczej? [over a year ago](#) • [Report](#)

**C2** z tego co widzę, większość jest z nawiasem na końcu, dlatego sama też tak piszę. [over a year ago](#) • [Report](#)

**C3** temat poruszany. najładniej wygląda z dywizem i nawiasem na koncu: napisał(-a). za tym postulowała osoba, która miała bardzo znaczący wpływ na magazyny, w których się zaczytywałem, stąd też te osobe daze szacunkiem :))).

sam facebook czasem odmienia, czasem nie. pojawia się częst zastrzeżenie, że "subject is female". jeśli nie ma takiego zastrzeżenia, można wybrnąć pisząc "użytkownik {user}..." -- nawet jeśli będzie to dotyczyło się kobiety, to będzie bardziej neutralne. [over a year ago](#) • [Report](#)

### Note 7.1\_PL

[posted 14 April 2008]

### Płeć podmiotu!

**C4** Zwracajcie uwagę na adnotacje typu "Subject sex is female" itp. Już kilka razy spotkałem się z przypadkami, że zdanie opatrzone podobną notką zostało przetłumaczone z użyciem np: usunęli, zamieścili itp.

Oczywiście kto umie czytać, ten się raczej nie pomyli ;) [over a year ago](#) • [Report](#)

**C4** PS: temat się chyba powtarza, ale skoro problem istnieje, to warto o nim przypominać [over a year ago](#) • [Report](#)

**C5** Żebym to tylko raz widziała...!

Wydaje mi się jakby ktoś po prostu pomylił 'female' z 'male' i notorycznie swój błąd powtarzał.. [over a year ago](#) • [Report](#)

**C6** A co z ogólnymi tłumaczeniami. Do general subject. Nie chcę by zwracali się do mnie per on. [over a year ago](#) • [Report](#)

### Note 7.2\_PL

[posted 29 April 2008]

### **Facebuka, Facebooku itd. \_przypadki**

**C7** Proponuję żeby nie odmieniać tylko stosować mianownik. Wszędzie FACEBOOK. To nazwa własna. Unikniemy przy tym sporów przy rozbieżnych odmianach w pewnych przypadkach [over a year ago](#) · [Report](#)

**C8** Była na ten temat długa dyskusja. Przeszukaj forum. [over a year ago](#) · [Report](#)

**C7** Zakładałam że tak mogło być dlatego nie pisałam elaboratów. Niestety jak wiele osób nie mam czasu przeszukiwać setki postów. [over a year ago](#) · [Report](#)

**C9** Nic nie zmienisz, niektórzy upierają się, by odmieniać wszystko. Bedzie brzmiało obrzydliwie, ale jak tylko zakończy [over a year ago](#) · [Report](#)

### **Note 7.3\_PL**

[posted end of 2010]

### "Za krótko jesteś na Facebooku."

**C10** Witam.

Począwszy od dnia dzisiejszego wyskakuje mi takie okienko przy próbie przetłumaczenia, zagłosowania, oceny czegokolwiek w aplikacji Tłumaczenia:

"Za krótko jesteś na Facebooku.

Do korzystania z aplikacji Tłumaczenia wymagany jest określony staż na Facebooku. Zapraszamy za pewien czas."

Czy ktokolwiek wie, może wskazać mi ewentualne źródło, w którym będzie jasno określone ile to jest "za pewien czas", oraz gdzie to jest napisane jaki mam "staż na Facebooku", a także w jaki sposób go podnieść do wymaganego poziomu?

Nie rozumiem faktu, że do tej pory miałem wymagany staż na Facebooku, a w tej chwili już nim nie dysponuję.

Może zostałem zdegradowany? Hehe

Jeśli tak to ja wysiadam.

Pozdrawiam,

C10

over a year ago · [Report](#)

**C11** spotkałem się dziś z tą samą informacją, do tej pory normalnie głosowałem na tłumaczenia :) dziwna informacja :P over a year ago · [Report](#)

**C12** Może za długo jesteśmy na fejsie?

Coś albo zmienili, albo się popsulo, bo ja też mam taki problem. over a year ago · [Report](#)

**C10** Tak to jest to! ;)

Za długo jesteśmy na FB :D hehe

Szczerze? Jak bym dostał wiadomość zatytułowaną ">Za długo< przebywasz na Facebooku", itd., itd., to siedziałbym cicho, bo to jednak prawda.

A może coś nabroiliśmy? over a year ago · [Report](#)

**C13** Czy ktoś już zgłaszał ten problem? Mam to samo. over a year ago · [Report](#)

**C14** Też nie mogę tłumaczyć, a mam już trzy nagrody over a year ago · [Report](#)

**Note 7.4\_PL**

[posted 1 November 2011]

### C15

Przydatne artykuły dotyczące tłumaczeń:

[http://wiki.aviary.pl/GNOME:Wytyczne\\_t%C5%82umaczenia](http://wiki.aviary.pl/GNOME:Wytyczne_t%C5%82umaczenia)

[http://wiki.aviary.pl/Novell:Przyj%C4%99te\\_t%C5%82umaczenia](http://wiki.aviary.pl/Novell:Przyj%C4%99te_t%C5%82umaczenia)

Zapoznajcie się, to z pewnością ułatwi pracę :)

### **GNOME:Wytyczne tłumaczenia – Aviary.pl Wiki**

[wiki.aviary.pl](http://wiki.aviary.pl)

Plik zawiera wytyczne dotyczące pisowni nazw programów, bibliotek lub innych obiektów wykorzystywanych w środowisku GNOME. Ma na celu ujednoczenie sposobu ich pisowni we wszystkich plikach tłumaczonych przez GNOME PL Team.

Like · Follow post · Share · Yesterday at 16:08

## Note 7.5\_PL

[posted 13 March 2011]

### C16

C17 [...] Też przydałoby się zwracać większą uwagę na przecinki. Wiem, że to zwykły post, a nie tłumaczenie, ale zwracam na to uwagę, bo mało ludzi o tym pamięta ;) Polecam te strony:

<http://www.prosteprecinki.pl/>

<http://www.przecinki.pl/>

14 minutes ago · Like

### C17

C16 dzięki. :)

3 minutes ago · Like

## Note 7.6\_PL

[posted 13 March 2011]

### C18

Panel administratora na osi czasu dla stron. 'No New Likes', tłumaczymy jako brak nowych znaczników lubię to, czy brak nowych polubień? Czy jak...

Like · Unfollow post · 13 March at 18:40

**C19** likes this.

**C15** Jak widzę "now znaczniki lubię to" to mnie krew zalewa...

16 March at 14:47 · Like

**C15** "Nikt ostatnio nie polubił"

16 March at 14:47 · Like

## Note 7.7\_PL

[posted 15 January 2012]

**C15**

Chyba zamiast "Zaczniij" lepiej by było "Uruchom". – **FBC**



Like · Follow post · Yesterday at 11:50

2 people like this.

**C20** dokładnie, niezły suchar

Yesterday at 11:51 · Like

### Note 7.8\_PL

[posted 27 May 2012]

**C21**

Głosujemy! :)



Like · Unfollow post · 17 hours ago

**C15** a jaki link do tego?

17 hours ago · Like

**C21** <https://www.facebook.com/?sk=translations&hash=65f6055c17514ee3486c23e995dda7a6>

17 hours ago · Like

**C21** jaki musi być wynik głosowania by FB przyjął nowe tłumaczenie?

17 hours ago · Like

**C15** Nie wiem, ja dałem wszystkie na nie i tak będę robił do czas, aż facaebook się nie nauczy, że ludzi oznacza się "na zdjęciach", a nie w "obiekach zdjęcie" ;)

17 hours ago · Like · 1

### Note 7.9\_PL

[posted 6 November 2011]

## C22

Słownikowa zasada mówi, że użycie wielkiej litery ze względów uczuciowych i grzecznościowych jest indywidualną sprawą piszącego, dodając, że użycie wielkiej litery jest wyrazem jego postawy uczuciowej, szacunku. Jednak zdecydowana większość osób uważa, że tę regułę należy stosować zawsze, wszędzie i wobec każdego. Grzeczności nigdy za wiele? Otóż nie, prawda jest taka, że jest to nadgorliwość. Pozwolimy na nią Facebookowi?

ty, tobie, ci, ciebie, cię, twój

Ty, Tobie, Ci, Ciebie, Cię, Twój

Like · Follow post · 14 hours ago

**C23** Wydaje mi się, że w takich bardziej oficjalnych pismach/tekstach powinno się używać wielkiej litery w zwrotach do czytającego, jednakże (zakładam, że) około połowa użytkowników Facebooka (z Polski) zna nasz ojczysty język w takim stopniu, że nawet nie zauważą różnicy kiedy napiszemy wielką, a kiedy małą. Oczywiście nie mam tu w zamyśle, że niedowidzą tylko, że im to po prostu nie robi różnicy.

8 hours ago · Like

**C24** Moim zdaniem powinniśmy walczyć z tym złym trendem. Facebook to nie jest nasz przyjaciel, który pisze do nas listy.

7 hours ago · Like

## Note 7.10\_PL

[posted 20 November 2011]

## C28

Taka drobna uwaga bo zdecydowana nasza większość to mężczyźni, nie zapominajmy o kobietach :) Nie wystarczy w tłumaczeniu napisać "skomentował(a)", "potwierdziłeś(aś)", itp. Przypominam wam, że pod każdym tłumaczeniem, w którym znaczenie zależy od płci czytającego, lub osoby do której odnosi się wpis należy tłumaczyć go po kliknięciu na to:

"Translation depends on the gender/number of curly braced tokens, subject gender or viewer gender? Click here."

Swoją drogą czemu aplikacja tłumaczeń nagle zmieniła swój język na angielski... to może faktycznie utrudniać pracę nowym...

Like · Follow post · Sunday at 08:43

**C15** and 5 others like this.

**C17** No, ja tego zawsze używać próbuję, ale niekiedy pokazuje się po prostu puste miejsce, dla niektórych wyrażen nie mogłem tak przetłumaczyć, też tak mieliście?

Sunday at 21:32 · Like

**C15** Zgadzam sie. Jednak nie rozumiem w jaki sposób anglojezyczna aplikacja moze utrudniac prace. Chyba jak ktos tłumaczy z to zna jezyk ;) **C17**, tak, tez tak mialem.

Yesterday at 08:25 via Mobile · Like · 1

**C23** C15, znajomość języka swoją drogą, jednak mając ją w swoim języku trochę łatwiej się pracuję, a po drugie mogą tak być użyte zwroty, który nie każdy może znać dlatego lepiej jednak mieć ją w ojczystym języku.

C17 - ja również.

19 hours ago · Like

## Note 7.11\_PL

[posted 8 February 2012]

**C18**

Słuchajcie, jak przetłumaczyć kwestię: "{name1} commented on your {=status update}", gdzie {=status update} jest przetłumaczone jako "zmiana statusu"?

I teoretycznie tłumaczyłoby się to "Jan Kowalski skomentował twoją zmianę statusu", ale brzmi to dość... krzywo

Jedyna poprawna forma jaka przyszła mi na myśl to "Twoja {=status update} została skomentowana przez użytkownika {name1}" czyli "Twoja zmiana statusu została skomentowana przez użytkownika Jan Kowalski", ale tłumaczenie te jest dość długie, więc nie wiem z której strony to ugryźć.

Dajcie znać co o tym sądzicie.

Like · Follow post · 8 February at 20:27

**C29** „Twoja {=status update} została skomentowana przez użytkownika {name1}” - jest ok, bo prawdopodobnie stała {=status update} jest używana także w innych frazach.

8 February at 20:30 · Like

**C26** Można też dawać Twój obiekt „{=status update}”. Brzmi co prawda trochę kulawa, ale jest gramatycznie poprawne, a konstrukcja spójna ze zdaniem skomentował Twoje zdjęcie czy Twój post.

9 February at 09:22 · Like

**Note 7.12\_PL**

[posted 19 February 2012]

**C17**

Kto jest tak niemądry dodając odmiany słowa zależne od liczb, które to słowa nawet nie mają nic wspólnego z liczbami? Zazwyczaj tylko {number} i {count} są liczbami, a przez ludzi niektórych w wyrażeniu „{name1} commented on your {=link}” trzeba bez sensu sprawdzać kilkakrotnie więcej tłumaczeń. Najlepsze w tym jest to, że odznaczając w odmianach liczby (Number) nie zawsze da radę odwrócić ten proces.

Nie zmniejszajcie innym chęci do tłumaczenia!

Like • Follow post • 19 February at 08:01

C15 and C24 like this.

**C19** Myślę, że osobom, które trafiły do tej grupy takich rzeczy mówić nie trzeba... ;) A sposobu przekazania dzieciakom które bawią się aplikacją nie ma i pewnie długo nie będzie...

13 hours ago • Like

**C30** Z ciekawości w takim razie: jak w cytowanym przypadku powinno to wyglądać? Bo mi naturalnym wydaje się tu zależność od liczb i płci. Może przecież być skomentował, skomentowały, skomentowali, skomentowały, skomentowała. Chyba, że sztucznie to ominiemy jakimś: "Komentarz {name1} został dodany do Twojego obiektu {=link}".

11 hours ago • Like

**C31** Lepiej mi powiedzcie panowie, kto sobie robi jaja w tłumaczeniach, wpisując jakieś cytaty z piosenek albo teksty typu "remove my timeline". Co prawda przeglądanie tłumaczeń robi się wtedy śmieszniejsze ;]

7 hours ago • Like

**C19** Najbardziej po polskiemu byłoby "{name1} skomentował udostępniony przez ciebie {=link}". (zwracam przy okazji uwagę, że nie piszemy "Twój, Ciebie", tylko "twój, ciebie")

7 hours ago • Like

**C30** "Anna Kowalska skomentował udostępniony przez ciebie {=link}"?

3 hours ago • Like

**C17** Oj nie rozumiecie o co chodzi, widać, że nowi. Chodzi o to, że {name1} i {=link} to nie są liczby. Więc w tym przypadku zaznaczamy tylko "Gender" dla {name1}, a są ludzie którzy zaznaczają wszystko i nie zawsze jest możliwość odwrócenia tego.

3 hours ago • Like

**C30** jestem nowy, zgadza się :) To pytanie pomocnicze, co dają liczby w takim razie? Widziałem, że jest wyróżnienie wtedy na odpowiednie przedziały liczb... gender w takim razie również załatwia liczbę mnogą?

3 hours ago • Like

**C17** Jeżeli jakaś zmienna będzie liczbą zaznaczasz wtedy. Dzięki temu uzyskujemy odmianę słów np.:

5 jabłek, 2 jabłka, 1 jabłko - rozumiesz?

Dzięki temu możemy dostosować tłumaczenie do konkretnych liczb, bo w polskim z odmianą nie jest tak łatwo jak w angielskim w którym wystarczy dodać „s” albo „es” na końcu słowa.

Mam nadzieję, że rozjaśniłem o co chodzi.

To samo tyczy się imion, dzięki temu możemy ustalić tłumaczenie dla konkretnej płci.

3 hours ago • Like

**C30** Jeśli chodzi o liczby to nie mam wątpliwości. Chodzi mi bardziej o to, czy gender wystarcza do rozróżnienia ze względu na rodzaj i liczbę. Dziękuję.

3 hours ago • Like

**C17** Grender rozróżnia tylko płeć po wprowadzonej przez użytkownika zmiennej płci przy zakładaniu konta.

3 hours ago • Like

**C30** czyli gdyby dać tylko gender, to np. zostanie "X i (4) inne osoby dodał komentarz...", bez możliwości rozróżnienia na "dodały" i "dodali"?

2 hours ago • Like

**C19** Dla mnie dobrze brzmią formy:

X i 1 inna osoba dodała

X i 2 inne osoby dodały

X i 5 innych osób dodało...

Innymi słowy forma takiego zdania do przetłumaczenia zależałaby tylko od liczby innych. Kwestia "dodały/dodali" nie dotyczy zdania typu "X innych osób", bo osoby zawsze są "one". Ale językoznawcą nie jestem.

2 hours ago • Like

**C30** racja, mój błąd. Ale czasem jest "X i Y dodały"

2 hours ago • Like

**C19** A, to w takim wypadku, jeżeli osoby są w tłumaczeniu oznaczone jako {name} to nie ma problemu z rozróżnieniem płci. W takim wypadku nigdy nie miałem problemu z utworzeniem odmian po zaznaczeniu że tłumaczenie zależy od gender i mozołnie uzupełniałem: M i M / M i F / F i M / F i ? / ? i F / M i ? / M i ? dodali, F i F dodały. :)

2 hours ago • Like

#### Note 7.13\_PL

[posted 4 May 2012]

## C25

Brawo!



Like · Unfollow post · Friday at 16:20

**C18** co źle jest, bo się jakoś dopatrzeć nie umiem.

Friday at 16:22 · Like

**C25** Podmiotem zawsze będzie unknown gender. Odmianie należy poddać {name1}, jako że Andrzej polubił, a nie Facebook.

Friday at 16:24 · Like

**C18** jeśli dobrze kojarzę, to czy zaznaczysz jako płeć {name1} czy podmiot, to i tak masz takie same możliwości. Podmiot to {name1} przecież więc to nie ma znaczenia, chyba że coś pokręciłem.

Friday at 16:25 · Like

**C18** Pokręciłeś. Inaczej czemu byłoby "polubił(a)"? Ja mam płeć.

Friday at 16:26 · Like

**C18** też tak mam, nie wiem czy to sprawa tłumaczenia, czy facebooka. Bo w różnych miejscach mam polubił lub polubił(a), przykładowo. Ale mówię po tłumaczeniach, bo czy zaznaczę płeć {name1} czy Podmiot, to i tak mam 3 frazy, czyli The subject is a male, female lub is not a person or has an unknown gender.

Friday at 16:28 · Like

## Note 7.14\_PL

[posted 23 October 2011]

**C15**

Cześć! Drodzy, co z tłumaczeniem "Timeline", za każdym razem gdy widzę "Wehikuł czasu" (nie wiedzieć czemu tylko Wehikuł pisane z dużej), otwiera mi się szczyryk w kieszeni :) Czy wam takie tłumaczenie się podoba?

Like · Follow post · 23 October at 07:11 near Katowice, Poland

[...]

**FBC** <sorry for the English> I work on Timeline, and I am partially in charge / own the 'text' of the strings for Timeline. If we think that "oś czasu" is better than "Wehikuł czasu" (and I agree, it is), but the translation does not change, I can tell our translators and have them change it directly.  
(I can read and speak Polish decently well, but I am not good enough to translate).

27 October at 20:46 · Like · 2

**FBC** C15, we are working on improving our declension rules for several languages, including Polish, which should allow for more subtle translations.

27 October at 20:49 · Like · 2

**C15** FBC that's very good news! :)

27 October at 20:50 · Like

**C15** Chłopcy! TO chyba zaszczyt, że odezwał się do nas ktoś pracujący w FB :D

27 October at 20:53 · Like · 1

**C17** FBC so, tell them about this. Maybe they can change it directly or give it to us to re-translate it.

27 October at 20:53 · Like

**C15** C17, you forgot to add "please" :)

27 October at 20:53 · Like · 1

**C17** C15 tak, to zaszczyt. :)

FBC oh, sorry, i forgot about please. So please tell them about this.

27 October at 20:55 · Like · 2

**Note 7.15\_PL**

[posted 5 January 2012]

**C15**

"XXX jest dostępny(a) pod swoim numerem telefon" - nie mogę znaleźć oryginału, a tu chyba nie do końca chodzi o to, czy ktoś jest dostępny pod numerem telefonu, a że jest dostępny przez urządzenie przenośne.

Like · Follow post · 5 January at 09:03

**C22** {name} is available on mobile

5 January at 09:19 · Like

**C15** no właśnie, więc tłumaczenie "pod numerem telefonu" jest błędne. Tym bardziej, że chodzi tutaj o to, że ktoś ma zainstalowanego Facebooka Messengera.

5 January at 09:25 · Like

**C22** ja niestety nie mogę dodać tłumaczenia tej pozycji

5 January at 09:26 · Like

**C15** FBC can you Help?

5 January at 09:28 · Like

**FBC** This is for Chat?

5 January at 16:21 · Like

**FBC** Let me talk with the engineer who added this string - but I agree, it is not correctly translated.

5 January at 16:32 · Like

**FBC** The translation should be something like "{user} is available to chat on their mobile device", but shorter. If you guys come up with something, I can put it in.

5 January at 19:43 · Like

**FBC** It is referring to Messenger, but they want it to be generic to just 'mobile'.

5 January at 19:43 · Like

**Note 7.16\_PL**

[posted 22 January 2012]

**C23**

Cały czas się zastanawiam dlaczego wszystkie teksty typu "{number} other people" tłumaczone są na "inne osoby ({number})". Jest coś takiego jak zaznaczenie by tłumaczenie zależało od wartości danego parametru ({number}) dzięki czemu spokojnie można to tłumaczyć "{number} innych (inne) osób (osoby)".

Like · Follow post · Yesterday at 09:28

**C15** Dawno, dawno temu w trawie... tzn. na fejsie ktoś tak przetłumaczył :)

Yesterday at 09:29 · Like

**C23** I nie da się już tego zmienić?

Yesterday at 09:31 · Like

**C15** Jak się dobrze popieści...

Yesterday at 09:35 · Like

**FBC** A system to support things like this is being worked on, and in an internal discussion, this example was brought up (how Polish translations depend on more than just singular/plural, but the exact value of the number). Unfortunately, we can't do it yet :(

16 hours ago · Like · 2

**Note 17\_PL**

## Appendix D

### 1. Observational study protocol: original Polish version

#### Polscy tłumacze-ochotnicy na Facebooku i ich motywacja – PROJEKT BADAWCZY NR 3

**Przeprowadzająca badanie:** Magdalena Dombek, Dublin City University, Dublin, Irlandia.

- **email:** [dombekm2@mail.dcu.ie](mailto:dombekm2@mail.dcu.ie)
- **Facebook:** <https://www.facebook.com/MadziaxPL>
- **Skype:** Magdalena\_DCU

**Uczestnik badania:** (imię i nazwisko uczestnika znane tylko prowadzącej badanie)

**Identyfikator:** USER-TRANSLATOR

**Data i godzina przeprowadzenia sesji badawczej:** (czasu polskiego)

#### Protokół przebiegu badania

Proszę zapoznać się z poniższym protokołem przebiegu badania co najmniej na kilka godzin przed rozpoczęciem badania. Wykonaj odpowiednio wcześniej czynności oznaczone jako 'KROK 0'. W dniu badania, o ustalonej godzinie rozpoczniemy od czynności oznaczonych jako 'KROK 1'.

**Do usłyszenia niedługo!**

KROK	CZAS	PROWADZĄCA BADANIE	UCZESTNIK BADANIA
0	<ul style="list-style-type: none"> <li>▪ przed rozpoczęciem indywidualnych sesji z uczestnikami badania</li> </ul>	<ol style="list-style-type: none"> <li>1. przesłać protokół przebiegu badania każdemu z uczestników;</li> <li>2. ustawić czas i datę przeprowadzenia indywidualnej sesji z każdym z uczestników; skolekcjonować nazwy użytkowników Skype jakie posiadają uczestnicy badania;</li> <li>3. przesłać wszystkim uczestnikom badania link do wykonywalnej wersji programu TeamViewer(tj. TeamViewerQuickSupport ).</li> </ol>	<ol style="list-style-type: none"> <li>1. zapoznać się z poniższym protokołem przebiegu badania;</li> <li>2. pobrać na swój komputer aplikację TeamViewerQuick Support dostępną <a href="#">tutaj</a>.</li> </ol>
1	<ul style="list-style-type: none"> <li>▪ krótko przed indywidualną sesją</li> </ul>	<ol style="list-style-type: none"> <li>1. uruchomić TeamViewer;</li> <li>2. uruchomić program BB Flashback; skonfigurować BB Flashback do nagrywania dźwięków i obrazu z wybranego okna w późniejszej fazie badania;</li> <li>3. uruchomić Skype.</li> </ol>	<ol style="list-style-type: none"> <li>1. zalogować się do Facebooka i uruchomić aplikację Tłumaczenia;</li> <li>2. uruchomić TeamViewer Quick Support;</li> <li>3. uruchomić Skype.</li> </ol>

2	<ul style="list-style-type: none"> <li>▪ kiedy rozpocznie się sesja</li> </ul>	<ol style="list-style-type: none"> <li>1. połączyć się z uczestnikiem badania na Skype; poprosić o podanie ID użytkownika i hasła wygenerowanych przez TeamViewer;</li> <li>2. połączyć się z uczestnikiem za pomocą programu TeamViewer (bez opcji zdalnego sterowania komputerem użytkownika);</li> <li>3. poprosić uczestnika badania o przełączenie się w przeglądarce internetowej na zakładkę, w której uruchomiona jest aplikacja Tłumaczenia;</li> <li>4. krótko omówić zadania do wykonania podczas badania przez uczestnika;</li> <li>5. włączyć funkcję nagrywania w programie TeamViewer i poprosić uczestnika o rozpoczęcie procesu tłumaczenia;</li> <li>6. rozpocząć odliczanie czasu (~10 minut).</li> </ol>	<ol style="list-style-type: none"> <li>1. połączyć się z prowadzącą badanie na Skype i podać ID użytkownika oraz hasło wygenerowane przez TeamViewer;</li> <li>2. zezwolić prowadzącej badanie na ustanowienie połączenia i udostępnienie ekranu w programie TeamViewer;</li> <li>3. przełączyć się w przeglądarce internetowej na zakładkę, w której uruchomiona jest aplikacja Tłumaczenia;</li> <li>4. rozpocząć proces tłumaczenia;</li> <li>5. wykonywać wszelkie inne rodzaje aktywności związanej z procesem tłumaczenia zarówno na Facebooku jak i poza nim (np. głosowanie na istniejące tłumaczenia, sprawdzanie przewodnika stylu, przeglądanie pomocnych materiałów w internecie, konsultacje z grupą polskich tłumaczy) aby proces był jak najbardziej naturalny.</li> </ol>
3	<ul style="list-style-type: none"> <li>▪ kiedy upłynie czas procesu tłumaczenia (~10 minut)</li> </ul>	<ol style="list-style-type: none"> <li>1. poinformować uczestnika o upływie wyznaczonego czasu, podziękować za przeprowadzoną sesję;</li> <li>2. zatrzymać proces nagrywania w programie</li> </ol>	<ol style="list-style-type: none"> <li>1. zakończyć proces tłumaczenia i poczekać aż prowadząca badanie udostępni swój ekran.</li> <li>2. obserwować nagranie prezentujące wykonane</li> </ol>

		<p>TeamViewer; zapisać plik z nagraniem na dysku komputera;</p> <ol style="list-style-type: none"> <li>3. dokonać zamiany stron w programie TeamVieweri udostępnić ekran uczestnikowi badania (bez funkcji zdalnego sterowania);</li> <li>4. uruchomić program BB Flashback, aby nagrywać dźwięk i obraz z okna, w którym będzie odtwarzane nagranie procesu tłumaczenia);</li> <li>5. otworzyć plik z nagraniem w programie TeamViewer;</li> <li>6. rozpocząć odtwarzanie nagrania i poprosić uczestnika badania o komentowanie czynności wykonywanych podczas procesu tłumaczenia;</li> <li>7. zatrzymać odtwarzanie nagrania w przypadku, gdy uczestnik badania potrzebuje więcej czasu na wyjaśnienia lub gdy prowadząca badanie zechce zadać więcej pytań.</li> </ol>	<p>wcześniej tłumaczenie;</p> <ol style="list-style-type: none"> <li>3. komentować czynności wykonywane podczas procesu tłumaczenia;</li> <li>4. poprosić o zatrzymanie odtwarzania/ cofnięcie i ponowne odtworzenie fragmentu nagrania kiedy tylko będzie to wymagane.</li> </ol>
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4	<ul style="list-style-type: none"> <li>▪ kiedy uczestnik badania zakończy komentowanie odtwarzanego materiału</li> </ul>	<ol style="list-style-type: none"> <li>1. zapytać uczestnika, czy chciałby/ chciałyby cokolwiek dodać do swojej analizy lub dodatkowo skomentować proces tłumaczenia.</li> <li>2. zatrzymać proces nagrywania w programie BB Flashback; zapisać nagranie na dysku komputera;</li> <li>3. zakończyć połączenie w programie TeamViewer;</li> <li>4. podziękować uczestnikowi za udział w badaniu i zakończyć połączenie w programie Skype.</li> </ol>	<ol style="list-style-type: none"> <li>1. podzielić się ogólnymi opiniami na temat procesu tłumaczenia i/ lub poinformować prowadzącą badanie o jakichkolwiek innych spostrzeżeniach jeśli takie pojawią się po zakończeniu komentowania odtwarzanego materiału.</li> <li>2. poczekać, aż prowadząca badanie zakończy połączenie w programie TeamViewer oraz w programie Skype.</li> </ol>
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## 2. Observational study protocol: English translation

### Polish Facebook user-translators and their motivation – RESEARCH STUDY no. 3

**Researcher:** Magdalena Dombek, Dublin City University, Dublin, Ireland.

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- **Facebook:** <https://www.facebook.com/MadziaxPL>
- **Skype:** Magdalena\_DCU

**Study participant:** (the first name and surname of the study participant known only to the researcher)

**Identifier:** USER-TRANSLATOR

**Date and time of the translation session:** (Polish time)

### Study protocol

**Please familiarise yourself with this study protocol at least a few hours before the start of your translation session. Prior to the session perform all the actions in 'STEP 1'. On the day of the session, at the specified time we will begin with 'STEP 1'.**

**Talk to you soon!**

STEP	POINT IN TIME	RESEARCHER	PARTICIPANT
0	<ul style="list-style-type: none"> <li>▪ prior to the session</li> </ul>	<ol style="list-style-type: none"> <li>1. send the study protocol to all the study participants;</li> <li>2. set up the session date and time with the individual participants; collect the participants' Skype usernames</li> <li>3. send the link to the executable version of TeamViewer (i.e. TeamViewerQuickSupport) to all the participants.</li> </ol>	<ol style="list-style-type: none"> <li>1. make yourself familiar with this study protocol;</li> <li>2. download TeamViewerQuickSupport available <a href="#">here</a>.</li> </ol>
1	<ul style="list-style-type: none"> <li>▪ shortly before the session begins</li> </ul>	<ol style="list-style-type: none"> <li>1. run TeamViewer;</li> <li>2. run BB Flashback in the background, configure it to record a selected window and sound at a later stage of the study;</li> <li>3. run Skype.</li> </ol>	<ol style="list-style-type: none"> <li>1. log-in to Facebook and have the <i>Translations</i> application running;</li> <li>2. run the executable version of TeamViewerQuickSupport;</li> <li>3. run Skype.</li> </ol>

<p>2</p>	<ul style="list-style-type: none"> <li>▪ once the session starts</li> </ul>	<ol style="list-style-type: none"> <li>1. connect with the study participant on Skype; ask the participant for their TeamViewer user ID and password to establish the connection;</li> <li>2. establish the connection with the participant in TeamViewer (disable remote control);</li> <li>3. ask the participant to switch in their web browser to the tab where they have the <i>Translations</i> application running;</li> <li>4. briefly remind the participant their task;</li> <li>5. turn recording on in TeamViewer and ask the participant to start translating;</li> <li>6. count down the time (~10 min.).</li> </ol>	<ol style="list-style-type: none"> <li>1. connect with the researcher on Skype and specify TeamViewer user ID and password;</li> <li>2. accept the researcher's request to establish the connection in TeamViewer and share the screen;</li> <li>3. in the browser, switch to the tab where <i>Translations</i> application is running;</li> <li>4. start translating;</li> <li>5. perform all other translation-related activities on Facebook and outside of Facebook (e. g. voting, searching the system for translations to edit them, consulting the Style Guide, browsing the Internet for linguistic help, consulting the Community of translators via their Facebook group page etc.) to make the translation process as natural as possible.</li> </ol>
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<p><b>3</b></p>	<ul style="list-style-type: none"> <li>▪ when the translation time is up (~10 minutes)</li> </ul>	<ol style="list-style-type: none"> <li>1. inform the participant that the time is up, thank for their work;</li> <li>2. stop recording in TeamViewer; save the file with the recording on the computer drive;</li> <li>3. switch roles in TeamViewer so that the researcher's screen can be displayed to the participant (disable remote control);</li> <li>4. run BB Flashback and prepare for the recording of sound and image from the selected window (the one in which the recording will be replayed);</li> <li>5. load the recording in TeamViewer;</li> <li>6. play the recording to the participant and ask them to reflect upon the translation work they have done;</li> <li>7. stop the replay if the participant requires more time to explain their actions or when necessary to question the participant more about some of their actions.</li> </ol>	<ol style="list-style-type: none"> <li>1. stop translating and wait for the researcher to share her screen;</li> <li>2. observe the recording of the translation activity performed earlier being replayed;</li> <li>3. comment on the actions taken during the translation process;</li> <li>4. ask the researcher to stop the replay at any time when required or ask for a specific fragment to be replayed again.</li> </ol>
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<p>4</p>	<ul style="list-style-type: none"> <li>▪ once the participant finishes commenting on the replayed material</li> </ul>	<ol style="list-style-type: none"> <li>1. ask the participant whether they would like to add anything else to their analysis or comment more on their translation process;</li> <li>2. stop recording in BB Flashback; save the video on the computer drive;</li> <li>3. end the connection in TeamViewer;</li> <li>4. thank the participant and end the connection in Skype.</li> </ol>	<ol style="list-style-type: none"> <li>1. if you like, share your general opinions about the translation process; inform the researcher once you have nothing more to add to the analysis;</li> <li>2. wait for the researcher to end the connections in TeamViewer and Skype.</li> </ol>
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## Appendix E

Table 1 below lists the codes identifying particular actions forming the activity of Facebook translation, as recorded with the seven Polish Facebook user-translators in the observational study and discussed in Chapter 8. Tables 2 to 8 list the sequences of actions taken by each individual user-translator participating in the study.

**Table 1 Coding of actions composing the sequences of actions in the observational study.**

Action code	Coded action details
<b>scrolls</b>	up; down; to the top
<b>clicks</b>	'translate' button; 'vote' command; 'translate' command; 'variations' command; 'vote up' button; 'vote down' button; 'save' button; 'variations' hyperlink; 'translate (edit) <sup>55</sup> variations'; translation suggestion
<b>uses/ does not use</b>	tokeniser; translation suggestion; glossary suggestion
<b>copies</b>	translation suggestion; own translation
<b>pastes</b>	translation suggestion; own translation
<b>hovers mouse over</b>	translation suggestions; tokenisers; sentence elements; variations grid; 'translate' command; 'vote' command; contextual information; 'variations' hyperlink, own translation; original string
<b>omits</b>	string; strings
<b>(un)marks</b>	sentence element (number of elements); grammatical category (number of categories)

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<sup>55</sup>The English command 'translate variations' appears in the Polish user interface of the Facebook collaborative translation platform as either 'przetłumacz warianty' (translate variations) or 'edytuj warianty' (edit variations).

<b>switches</b>	tab; window
<b>searches resources</b>	internal(glossary; style guide; Facebook notifications; original strings list; translated strings list); external (Web; dictionary; machine translation engine)
<b>edits</b>	own translation (wording; word order; verb ending; word inflection); translation suggestion (wording; word order; verb ending; word orthography); adds missing token
<b>adds</b>	missing token
<b>refreshes</b>	tab
<b>pauses</b>	typing own translation (at verb; at pronoun; unknown word); at original string
<b>types in</b>	translation
<b>Coded responses from the platform</b>	
<b>tab</b>	switched; generated
<b>notification message</b>	original string no longer exists, token missing, string not translated

Table 2 UT0

<b>coded sequence of actions</b>	<b>string # (# of tokens)</b>	<b>action type</b>	<b>start</b>	<b>stop</b>	<b>overall time</b>	<b>comments</b>
<b>hovers mouse over (activity modes); selects 'Translate' mode</b>			00:00:00	00:00:17	00:00:17	
<b>hovers mouse over (original string); consults resources external (machine translation; dictionary)</b>	s1 (0)	t	00:00:31	00:02:03	00:01:32	the contextual info provided does not help him; does not search stylistic info because its inadequate; knows what is in the glossary so never really consults it
<b>hovers mouse over (original string); hovers mouse over contextual information; uses tokenisers (x2); edits own translation (wording); pauses typing own translation (at verb); clicks 'variations' command; clicks 'translate variations'; tab switched</b>	s2 (4)		00:02:23	00:03:05	00:02:25	one of the tokens includes a number - problematic to translate, unknown how it will be displayed live
<b>hovers mouse over original string; switches tab; switches tab</b>	s2a		00:03:06	00:03:24		

<b>hovers mouse over translation suggestion; clicks 'translate' command; uses tokenisers (x3); scrolls down; scrolls up; switches tab; switches tab; switches tab</b>	s2a		00:03:26	00:04:21		
<b>unmarks sentence elements and grammatical categories; clicks 'translate' command; uses tokenisers (x2); clicks 'translate' button</b>	s2	t	00:04:22	00:04:48		decided that no variations are necessary, removed the existing settings; paused at the token {=group} to comment that the translation will be ungrammatical as a noun in the nominative case will be substituted from the glossary, however it needs to be inflected
<b>hovers mouse over contextual information; clicks 'variations' hyperlink; omits string</b>	s3 (3)		00:04:58	00:05:46	00:00:48	problematic to specify variations; still has problems himself; if he is uncertain, he leaves a string out; pronoun 'their': neutral in English but problematic in Polish where the gender must be specified
<b>hovers mouse over 'translate' command; uses tokenisers (x1); hovers mouse over original string; uses tokenisers (x1); clicks 'translate' button</b>	s4 (2)	t	00:05:48	00:06:27	00:00:39	changed the tense of the verb to avoid generating variations as it is not convenient: variations open in a new window, then he has to copy the translations and then click 'translate' for each variation translation individually

<b>uses tokenisers (x3); clicks 'translate' button</b>	s5 (3)	t	00:06:34	00:07:09	00:00:39	again commented that token {=offer} will be substituted with a translation from the glossary in the nominative case, he knows the displayed translation will not be grammatical; {name count other people} - unable to understand the meaning of this token
<b>clicks 'vote' command; clicks 'translate' command; hovers mouse over (original string); uses tokenisers (x2); scrolls down; scrolls up; uses tokenisers (x1); clicks 'translate' button</b>	s6 (3)	t	00:07:22	00:07:55	00:00:33	no contextual information available for this string which complicates the translation
<b>hovers mouse over 'translate' command; clicks 'vote' command; clicks 'translate' command; clicks 'variations' hyperlink; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; tab switched</b>	s7 (5)		00:08:00	00:08:15	00:01:43	

uses tokenisers (x2); edits own translation (adds missing token); uses tokenisers (x2); copies own translation; clicks 'translate' button	s7a	t	00:08:21	00:09:00		
pastes own translation; edits own translation (verb ending); clicks 'translate' button	s7b	t	00:09:03	00:09:07		
pastes own translation; edits own translation (verb ending); clicks 'translate' button	s7c		00:09:10	00:09:20		<b>platform poor functioning (unresponsive)</b>
refreshes tab; pastes own translation; edits own translation (verb ending); clicks 'translate' button	s7c	t	00:09:33	00:09:43		
switches tab; uses tokenisers (x1); hovers mouse over (original string); uses tokenisers (x4); clicks 'translate' button	s8 (5)	t	00:09:54	00:10:35	00:00:41	again mentions that token {=list} will be substituted with a noun in the nominative case, which is wrong

Table 3 UT1

coded sequence of actions	string # (# of tokens)	action type	start	stop	overall time	comments
scrolls down, omits strings			00:00:00	00:00:16		unsure about the meaning of the omitted strings
hovers mouse over translation suggestions; clicks 'vote down' button (x1); clicks 'vote up' button (x1)	s1 (2)	v	00:00:17	00:00:42	00:00:35	
hovers mouse over translation suggestions; clicks 'vote up' button (x1)	s2 (6)	v	00:00:45	00:00:59	00:00:14	
scrolls down; omits strings						
clicks 'vote up' button (x1)	s3 (1)	v	00:01:05	00:01:09	00:00:04	
clicks 'vote down' button (x1); clicks 'vote up' button (x1)	s4 (1)	v	00:01:11	00:01:18	00:00:07	one suggestion is a 'slang word' - obviously unacceptable
clicks 'translate' command; clicks variations link; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations; tab switched	s5 (2)		00:01:20	00:01:43	00:02:31	need for variations; annoyed that response from the module takes long time; <b>platform poor functioning (long response time)</b>

switches tabs; hovers mouse over translation suggestions; consults resources internal (Facebook notifications)	s5		00:01:53	00:02:06		
switches tabs; consults resources internal (glossary); switches tabs			00:02:10	00:02:36		did not find what was searching for; <b>platform poor functioning (unsuccessful glossary search)</b>
uses tokenisers (x1); pauses typing own translation; consults resources internal (Facebook notifications); uses tokenisers (x1); copies own translation; clicks 'translate' button	s5a	t	00:02:40	00:03:34		
pastes own translation; edits own translation (verb ending); clicks 'translate' button;	s5b	t	00:03:38	00:03:39		
pastes own translation; edits own translation (verb ending); clicks 'translate' button	s5c	t	00:03:43	00:03:51		
switches tab; switches tab			00:03:59	00:04:04		

<b>scrolls to the top; consults resources internal (original strings list)</b>			00:04:05	00:04:24		searches for a particular string he has in mind - saw it displayed live when using Facebook on his mobile; search did not succeed which the UT found strange
<b>scrolls down; omits strings</b>			00:04:25	00:04:38		
<b>clicks 'vote up' button (x1); clicks 'vote down' button (x1); consults resources internal (Facebook notifications; original strings list; translated strings list); hovers mouse over translation suggestions; clicks 'vote down' button (x3)</b>	s6 (0)	v	00:04:39	00:05:48	00:01:09	
<b>scrolls down; omits strings;</b>			00:05:49	00:05:50		
<b>clicks 'vote down' button (x1); clicks 'vote up' button (x1);</b>	s7 (2)	v	00:05:51	00:06:02	00:00:11	knew he would not consider the next string because it referred to a Facebook feature unknown to him
<b>scrolls to the top; clicks 'vote down' button (x1); clicks 'vote up' button (x1)</b>	s8 (1)	v	00:06:03	00:06:11	00:00:08	
<b>clicks 'vote up button'</b>	s9 (1)	v	00:06:12	00:06:12	00:00:01	

<b>hovers mouse over 'vote up' button (x1); copies translation suggestion; clicks 'translate' command; pastes translation suggestion; edits translation suggestion (word order); clicks 'translate' button</b>	s10 (2)	e	00:06:13	00:06:43	00:00:20	
<b>refreshes tab; scrolls down; omits strings</b>			00:06:44	00:07:10		
<b>clicks 'vote up' button (x1)</b>	s11 (1)	v	00:07:11	00:07:11	00:00:01	
<b>scrolls down; omits strings</b>			00:07:12	00:07:16		
<b>clicks 'vote down' button (x1); clicks 'translate' command; uses tokenisers (x1); clicks 'translate' button</b>	s12 (1)	v; t	00:07:17	00:07:30	00:00:13	
<b>scrolls down; omits strings</b>			00:07:31	00:07:34		
<b>clicks 'vote up' button (x1)</b>	s13 (0)	v	00:07:35	00:07:35	00:00:01	

<p>scrolls down; omits strings; consults resources internal (original strings list); scrolls down; switches tab; consults resources external (web); switches tab; clicks 'vote up' button (x1); clicks 'vote down' button (x4)</p>	s14 (0)	v	00:07:36	00:08:08	00:00:42	<p>searches how a term in one suggestion is used to check the frequency of usage in Polish and then decide how to vote on the available suggestions</p>
<p>scrolls down; hovers mouse over (translation suggestion); clicks 'translate' command; clicks 'vote' command; copies translation suggestion; hovers mouse over (sentence elements); edits translation suggestion (wording); clicks 'translate' button</p>	s15 (2)	e	00:08:14	00:09:42	00:01:38	<p>complains about the lack of contextual information for this string;</p> <p><b>platform poor functioning (no contextual information)</b></p>

Table 4 UT2

<b>coded sequence of actions</b>	<b>string # (# of tokens)</b>	<b>action type</b>	<b>start</b>	<b>stop</b>	<b>overall time</b>	<b>comments</b>
<b>uses tokenisers (x2); pauses typing own translation; hovers mouse over tokenisers; uses tokenisers (x3); clicks 'translate' button</b>	s1 (5)	t	00:00:00	00:00:22	00:00:22	never sure whether his translation is correct
<b>uses tokenisers (x3); clicks 'translate' button</b>	s2 (3)	t	00:00:22	00:00:36	00:00:14	
<b>uses tokenisers (x3); clicks 'translate' button</b>	s3 (3)	t	00:00:37	00:00:52	00:00:15	
<b>uses tokenisers (x1); pauses typing (at verb ending); clicks 'variations' link; hovers mouse over variations grid; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; tab switched</b>	s4 (3)		00:00:59	00:01:33	00:01:30	only after he began typing in his translation, he noticed that variations are required; hesitated when selecting elements and categories; it was the first time to use the feature; usually omits segments where variations are required
<b>uses tokenisers (x3); clicks 'translate' button</b>	s4a	t	00:01:36	00:01:53		
<b>uses tokenisers (x3); clicks 'translate' button</b>	s4b	t	00:01:58	00:02:09		

<b>uses tokenisers (x3); clicks 'translate' button; switches tab</b>	s4c	t	00:02:14	00:02:29		
<b>switches tab; uses tokenisers (x3); clicks 'translate' button</b>	s5 (3)	t	00:02:35	00:02:52	00:00:17	
<b>uses tokenisers (x2); edits own translation (verb ending); uses tokenisers (x2); clicks 'translate' button</b>	s6 (4)	t	00:02:58	00:03:14	00:00:16	
<b>scrolls down; omits string</b>						
<b>uses tokenisers (x2); clicks 'translate' button</b>	s7 (2)	t	00:03:29	00:03:44	00:00:15	
<b>uses tokenisers (x4); clicks 'translate' button</b>	s8 (4)	t	00:03:49	00:04:05	00:00:16	has no idea what will be substituted for the tokens; only seeing the translation live will reveal
<b>omits string</b>			00:04:06	00:04:13		
<b>uses tokenisers (x2); edits own translation (wording); clicks 'translate' button</b>	s9 (2)	t	00:04:14	00:04:31	00:00:17	

<b>uses tokenisers (x3); edits own translation (wording); uses tokenisers (x2); clicks 'translate' button</b>	s10 (5)	t	00:04:35	00:04:52	00:00:17	mentioned that it would be helpful to have an example translation with a token substituted with the actual word or a pop-up showing what word corresponds with a token
<b>uses tokenisers (x2); edits own translation (wording); uses tokenisers (x3); clicks 'translate' button</b>	s11 (5)	t	00:04:58	00:05:25	00:00:27	
<b>uses tokenisers (x3); clicks 'translate' button; clicks 'translate' command; edits own translation (verb ending); clicks 'translate' button; clicks 'translate' command; scrolls down; scrolls up; uses tokenisers (x3); clicks 'translate' button</b>	s12 (3)	t	00:05:29 00:05:47	00:05:39 00:06:09	00:00:38	translated the same string for the second time changing the form of the verb following one of the tokens
<b>uses tokenisers (x2); clicks 'translate' button</b>	s13 (2)	t	00:06:16	00:06:26	00:00:10	comments that others through voting will decide about how good his translations are and, if necessary, they will rectify his mistakes
<b>uses tokenisers (x6); clicks 'translate' button</b>	s14 (6)	t	00:06:33	00:06:48	00:00:15	

<b>uses tokenisers (x5); clicks 'translate' button</b>	s15 (5)	t	00:06:52	00:07:16	00:00:34	
<b>uses tokenisers (x3); pauses typing own translation (at verb); omits string</b>	s16 (4)		00:07:21	00:07:42	00:00:19	does not know how to translate the verb
<b>scrolls down</b>						
<b>uses tokenisers (x5); clicks 'translate' button</b>	s17 (5)	t	00:07:46	00:08:05	00:00:19	
<b>uses tokenisers (x3); clicks 'translate' button; clicks translate' button</b>	s18 (3)	t	00:08:12	00:08:34	00:00:22	
<b>clicks translate' button</b>	s19 (0)	t	00:08:39	00:08:50	00:00:11	
<b>omits string</b>						
<b>hovers mouse over tokenisers; clicks 'variations' link; hovers mouse over variations grid; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; tab switched</b>	s20 (3)		00:09:00	00:09:18	00:01:08	

<b>hovers mouse over tokenisers; uses tokenisers (x3); clicks 'translate' button</b>	s20a	t	00:09:21	00:09:36		
<b>uses tokenisers (x3); clicks 'translate' button;</b>	s20b	t	00:09:40	00:09:50		
<b>uses tokenisers (x3), clicks 'translate' button; switches tab</b>	s20c	t	00:09:54	00:10:08		

Table 5 UT3

<b>coded sequence of actions</b>	<b>string # (# of tokens)</b>	<b>action type</b>	<b>start</b>	<b>stop</b>	<b>overall time</b>	<b>comments</b>
<b>hovers mouse over the original string; types in translation; consults resources external (dictionary); edits own translation (wording); consults resources external (dictionary); types in translation; edits own translation (word order); clicks 'variations' link; hovers mouse over 'vote' command; clicks 'translate' command; clicks 'translate' button; clicks 'variations' command; clicks 'translate' command; scrolls down</b>	s1 (0)	t	00:00:00	00:02:26	00:02:26	discussed the linguistic aspects of his translation, use of the most appropriate wording, especially the use of one verb in Polish for the two verbs in the original; wanted to find out what happens when clicks 'variations' link
<b>clicks translation suggestion;</b>	s2 (0)		00:02:33	00:02:38	00:00:05	clicked the suggestion to see what would happen
<b>scrolls up; clicks 'vote' command</b>	s1		00:02:39	00:02:56	00:00:17	
<b>scrolls down; scrolls to the top;</b>			00:03:05	00:03:29		
<b>hovers mouse over 'vote down' button</b>	s1		00:03:30	00:03:33	00:00:03	

<b>clicks 'translate' button; hovers mouse over translation suggestions; hovers mouse over 'vote' command; hovers mouse over 'translate' command; clicks 'translate' command;</b>	s2	t	00:03:35	00:03:51	00:00:16	
<b>scrolls down; scrolls up; scrolls down</b>			00:03:55	00:04:17		he admits he was a bit lost; kept scrolling to find segments without tokens - understands the concept of variables but does not know how he should translate them here
<b>hovers mouse over 'vote' command; hovers mouse over translation suggestion; clicks 'variations' command;</b>	s3 (0)		00:04:18	00:04:27	00:00:09	
<b>scrolls down; omits strings</b>			00:04:30	00:04:34		

<p>hovers mouse over 'translate' command; hovers mouse over translation suggestions; clicks 'variations' command; marks sentence element and grammatical category; hovers mouse over contextual information; clicks 'save button'; clicks 'translate' command; clicks 'vote' command; hovers mouse over 'vote down' button; clicks 'translate' command; types in translation; clicks 'translate' button;</p>	s4 (0)	t	00:04:35	00:06:07	00:01:32	specified the variations settings and saved them but did not click 'translate variations' link selecting 'translate' command instead.
<p>scrolls down; pauses at a string</p>	s (1)		00:06:13	00:06:25		at this point he admitted that he could not recognise which action buttons referred to the strings he wanted to edit; scrolled up and down to see the very first string and its layout so that he could use the appropriate action buttons for the string he wanted to edit next
<p>scrolls down; pauses at a string</p>	s (0)		00:06:27	00:06:31		
<p>scrolls down; pauses at a string; scrolls down</p>	s (0)		00:06:32	00:06:39		

<b>pauses at a string; clicks 'translate' command;</b>	s5 (0)		00:06:50	00:06:50	00:00:01	
<b>clicks 'translate' command; pauses at a string</b>	s6 (5)		00:06:59	00:07:02	00:00:03	
<b>scrolls to the top; scrolls down; scrolls to the top; scrolls down</b>			00:07:02	00:07:41		
<b>clicks 'translate' command; types in translation; hovers mouse over 'translate' button; clicks 'translate' button</b>	s7 (0)	t	00:07:43	00:08:22	00:00:41	
<b>scrolls down; omits strings</b>			00:08:23	00:08:39		
<b>hovers mouse over translation suggestions; hovers mouse over 'translate' command; hovers mouse over 'vote' command; clicks 'vote up' button (x1)</b>	s8 (0)	v	00:08:40	00:08:53	00:00:13	
<b>scrolls down; omits strings</b>			00:08:54	00:09:03		
<b>clicks 'vote up' button (x1)</b>	s9 (0)	v	00:09:04	00:09:04	00:00:01	
<b>scrolls down; omits strings; pauses at a string; scrolls down</b>	s10 (3)		00:09:05	00:09:07	00:00:02	

<b>clicks on 'variations' command; scrolls down; omits strings; scrolls to the top</b>	s11 (2)		00:09:14	00:09:44	00:00:30	omits strings because all had tokens
<b>hovers mouse over 'variations' command</b>	s1		00:09:46	00:09:51	00:00:05	
<b>scrolls down; hovers mouse over translation suggestions; clicks 'vote up' button (x1)</b>	s12 (3)	v	00:10:08	00:10:40	00:00:32	considered spelling variants in suggestions

Table 6 UT4

coded sequence of actions	string # (# of tokens)	action type	start	stop	overall time	comments
<p>hovers mouse over tokenisers; uses tokenisers (x1); changes own translation (wording); uses tokenisers (x1); pauses typing own translation (at verb); hovers mouse over 'variations' hyperlink; hovers mouse over tokenisers; uses tokenisers (x1); clicks 'variations' hyperlink; clicks on 'translate' command; hovers mouse over own translation; uses tokenisers (x3); hovers mouse over 'translate' button; edits own translation (verb ending); clicks 'translate' button</p>	s1 (6)	t	00:00:00	00:02:17	00:02:17	<p>difficulty with one token (including a number) and the use of the verb; the meaning is ambiguous; unsure about his translation</p>
<p>hovers mouse over tokenisers, uses tokenisers (x4); clicks 'variations' hyperlink, marks sentence element and grammatical category; clicks 'save' button; clicks 'edit variations'; tab switched; scrolls down; scrolls to the top</p>	s2 (4)		00:02:25	00:03:24	00:02:28	

uses tokenisers (x2); pauses typing own translation (at verb form); uses tokenisers (x2); copies own translation; clicks 'translate' button	s2a	t	00:03:35	00:04:14		
pastes own translation; edits own translation (verb ending); hovers mouse over 'translate' button; hovers mouse over own translation; clicks 'translate' button	s2b	t	00:04:15	00:04:40		
pastes own translation; edits own translation (verb ending); clicks 'translate' button	s2c	t	00:04:43	00:04:53		
consults resources internal (glossary); tab switched; scrolls down; consults resources internal (glossary);			00:05:01	00:05:45		searches for a phrase in one of the tokens in s2 after submitting all translations for s2; <b>platform poor functioning (unsuccessful glossary search)</b>
switches tab; refreshes tab;			00:05:46	00:06:01		

<b>hovers mouse over the original string, clicks 'variations' hyperlink; marks sentence element and grammatical category; clicks 'save' button; clicks 'edit variations'; tab switched</b>	s3 (4)		00:06:02	00:06:22	00:01:34	
<b>uses tokenisers (x2); hovers mouse over tokenisers; hovers mouse over own translation; uses tokenisers (x2); copies own translation; clicks 'translate' button</b>	s3a	t	00:06:23	00:06:52		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s3b	t	00:06:56	00:07:04		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s3c	t	00:07:07	00:07:16		
<b>switches tab; refreshes tab</b>			00:07:21	00:07:36		

<b>hovers mouse over the original string; hovers mouse over 'variations' hyperlink; hovers mouse over contextual information; uses tokenisers (x2); clicks 'translate' button</b>	s4 (2)	t	00:07:45	00:08:18	00:00:33	translated although surprised that a string had a term referring to a feature which no longer exists on Facebook
<b>uses tokenisers (x2); clicks 'translate' button</b>	s5 (2)	t	00:08:26	00:08:46	00:00:20	
<b>hovers mouse over tokenisers; hovers mouse over 'variations' link; clicks 'variations' link; marks sentence element and grammatical category; clicks 'save' button; clicks 'edit variations'; tab switched</b>	s6 (4)		00:08:48	00:09:19	00:02:17	
<b>scrolls down; scrolls to the top; uses tokenisers (x2); pauses typing own translation (at verb); clicks 'variations' command; marks sentence element and grammatical category; clicks 'save' button; clicks 'edit variations'; tab switched; scrolls down, scrolls up; switches tab</b>	s6a		00:09:20	00:09:53		

<b>marks sentence element and grammatical category; clicks 'save' button; clicks 'edit variations'; tab switched;</b>	s6		00:10:02	00:10:19		
<b>uses tokenisers (x2); changes own translation (wording); uses tokenisers (x2); clicks 'translate' button</b>	s6a		00:10:20	00:10:58		
<b>notification message (original string no longer exists); omits string</b>	s6a		00:11:00	00:11:05		<b>platform poor functioning (original string no longer exists)</b>
<b>switches tab</b>			00:11:07	00:11:07		
<b>types in translation; clicks 'translate' button</b>	s7	t	00:11:11	00:13:16	00:02:05	

Table 7 UT5

<b>coded sequence of actions</b>	<b>string # (# of tokens)</b>	<b>action type</b>	<b>start</b>	<b>stop</b>	<b>overall time</b>	<b>comments</b>
<b>scrolls down; omits strings</b>			00:00:00	00:00:20	00:00:20	searches for strings with less tokens as he finds them less difficult
<b>clicks 'translate' command; clicks 'variations' hyperlink; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; tab generated</b>	s1 (1)		00:00:21	00:00:29	00:00:08	
<b>scrolls down; omits string</b>			00:00:29	00:00:34		
<b>clicks 'variations' command; clicks 'translate variations'; tab generated</b>	s2 (2)		00:00:35	00:00:39	00:00:04	
<b>scrolls down;</b>			00:00:29	00:00:42		
<b>clicks 'translate' command; clicks 'variations' link; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; tab generated</b>	s3 (2)		00:00:42	00:00:54	00:00:12	

scrolls down; omits string			00:00:54	00:00:55		
hovers mouse over translation suggestions; clicks 'variations' command; hovers mouse over variations grid; clicks 'translate' command; hovers mouse over 'variations' link; clicks 'variations' link	s4 (5)		00:00:55	00:01:19	00:00:24	unable to change the existing settings for the variations  <b>platform poor functioning (impossible to specify variations)</b>
scrolls down; clicks 'translate' command; clicks 'variations' link; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; switches tab	s5 (2)		00:01:20	00:01:32	00:00:12	
uses tokenisers (x1); copies own translation	s1a		00:01:33	00:01:38	00:00:22	
pastes own translation; edits own translation (word inflection)	s1b		00:01:39	00:01:46		
pastes own translation; edits own translation (word inflection)	s1c		00:01:47	00:01:52		
clicks 'translate' button	s1a	t	00:01:53	00:01:53		
clicks 'translate' button	s1b	t	00:01:54	00:01:54		

<b>clicks 'translate' button</b>	s1c	t	00:01:55	00:01:55		
<b>switches tab; clicks translation suggestion; edits translation suggestion (word orthography); clicks 'translate' button; clicks 'vote down' button (x3)</b>	s2a	e; v	00:01:56	00:02:14	00:00:55	glossary: uses rarely, prefers the one developed by the community as a shared document on their Facebook community page
<b>clicks translation suggestion; edits translation suggestion (word orthography); clicks 'translate' button; clicks 'vote down' button (x1)</b>	s2b	e; v	00:02:15	00:02:22		
<b>hovers mouse over translation suggestions; copies own translation (s2b); clicks 'translate' button (s2b); clicks 'variations' command; clicks 'vote' command'; clicks 'translate' command; pastes own translation; edits own translation (verb ending); clicks 'translate' button; clicks 'vote down' button (x5)</b>	s2c	t; v	00:02:23	00:02:51		
<b>switches tab; uses tokenisers (x2); pauses typing own translation (at pronoun)</b>	s3a		00:02:52	00:03:08	00:01:13	

switches tab; scrolls up; scrolls down			00:03:09	00:03:21		searches for s3
unmarks string element (x1) and grammatical category (x1); clicks 'save' button; clicks 'vote' command; clicks 'translate' command; uses tokenisers; clicks 'translate' button; clicks 'vote down' button (x4)	s3 (2)	t; v	00:03:22	00:03:55		only after he started translating, he decided no string variants were necessary, he deleted his settings to provide translation just for the one original string. He realised that the pronoun 'her' in the original string indicates that the sentence subject is female
scrolls down; omits strings			00:03:56	00:03:59		
hovers mouse over translation suggestions; clicks 'vote up' button (x1); hovers mouse over translation suggestions; clicks translation suggestion; hovers mouse over 'variations' link; hovers mouse over 'translate' button; edits translation suggestion (wording); clicks 'vote' command; hovers mouse over translation suggestions; clicks 'vote down' button (x2); clicks 'vote up' button (x1); clicks 'vote down' button (x2)	s6 (0)	v	00:04:00	00:05:24	00:01:24	in the end he did not submit his edited translation suggestion as he found that one of the suggestions is already good and can be simply voted up
scrolls down; omits string			00:05:27	00:05:29		

hovers mouse over translation suggestions; clicks 'vote up' button (x1); clicks 'vote down' button (x2)	s7 (1)	v	00:05:30	00:06:06	00:00:36	again a long string so took him more time to consider it
scrolls down; omits strings			00:06:07	00:06:09		
hovers mouse over translation suggestions; clicks 'vote down' button (x1); clicks 'vote up' button (x1); clicks 'vote down' button (x7)	s8 (0)	v	00:06:10	00:06:29	00:00:19	for some suggestions it is obvious that they are wrong so easy to vote them down
scrolls down; hovers mouse over 'translate' command; clicks 'translate' command; clicks 'variations' link; marks sentence elements and grammatical categories; clicks 'save' button; clicks 'translate variations'; tab generated	s9 (3)		00:06:30	00:06:47	00:00:17	
switches tab	s1		00:06:48	00:06:48		
switches tab	s2		00:06:49	00:06:49		

<b>switches tab; copies translation suggestion; switches tab</b>	s3		00:06:50	00:06:59	00:00:09	realised that he had already edited this string; it did not need variations but he did not close the tab with the (unnecessary) variations
<b>uses tokenisers (x2); copies own translation</b>	s5a		00:07:00	00:07:07	00:00:18	
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s5b	t	00:07:08	00:07:12		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s5c	t	00:07:13	00:07:16		
<b>clicks 'translate' button</b>	s5a	t	00:07:18	00:07:18		
<b>switches tab; switches tab</b>			00:07:19	00:07:21		
<b>uses tokenisers (x3); pauses typing own translation (at verb); copies own translation; switches tab</b>	s9a		00:07:23	00:07:40	00:07:15	mentioned that he had to generate more variations as he found one more string element to affect the number of possible translations
<b>switches tab</b>			00:07:41	00:07:42		

<b>hovers mouse over variations grid; marks sentence element and grammatical category; unmarks sentence element and grammatical category; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate variations'; tab switched</b>	s9		00:07:43	00:07:54		
<b>pastes own translation; uses tokenisers (x3); copies own translation</b>	s9a		00:07:56	00:08:20		
<b>pastes own translation; edits own translations (verb ending)</b>	s9b		00:08:22	00:08:29		
<b>clicks 'translate' button</b>	s9a	t	00:08:31	00:08:31		
<b>clicks 'translate' button</b>	s9b	t	00:08:31	00:08:32		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9c	t	00:08:34	00:08:49		
<b>pastes own translation; edits own translation; pauses typing own translation (at verb); clicks 'translate' button</b>	s9d	t	00:08:51	00:09:24		

<b>pastes own translation; edits own translation; pauses typing own translation (at verb);</b>	s9e		00:09:27	00:10:17		
<b>edits own translation (verb ending); clicks 'translate' button</b>	s9d	t	00:10:18	00:10:23		
<b>edits own translation (verb ending); clicks 'translate' button</b>	s9e	t	00:10:24	00:10:31		
<b>pastes own translation; edits own translation (verb ending); edits own translation (notation of verb endings); clicks 'translate' button</b>	s9f	t	00:10:32	00:10:49		
<b>edits own translation (notation of verb endings); clicks 'translate' button</b>	s9c	t	00:10:53	00:11:00		
<b>pastes own translation; clicks 'translate' button</b>	s9g	t	00:11:03	00:11:08		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9h	t	00:11:09	00:11:18		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9i	t	00:11:19	00:11:28		

<b>pastes own translation; clicks 'translate' button</b>	s9j	t	00:11:31	00:11:34		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9k	t	00:11:36	00:11:46		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9l	t	00:11:49	00:11:57		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9m	t	00:11:59	00:12:03		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9n	t	00:12:05	00:12:15		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9o	t	00:12:19	00:12:29		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9p	t	00:12:39	00:12:41		
<b>pastes own translation; edits own translation (verb ending) clicks 'translate' button</b>	s9q	t	00:12:42	00:12:51		

<b>pastes own translation; clicks 'translate' button; edits own translation (verb ending);</b>	s9r	t	00:12:53	00:13:08		
<b>pastes own translation; clicks 'translate' button</b>	s9s	t	00:13:10	00:13:12		
<b>pastes own translation; clicks 'translate' button; edits own translation (verb ending); copies own translation; clicks 'translate' button</b>	s9t	t	00:13:14	00:13:23		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9u	t	00:13:25	00:13:33		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button; copies own translation</b>	s9v	t	00:13:36	00:13:43		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9w	t	00:13:45	00:13:50		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9x	t	00:13:52	00:14:01		

<b>pastes own translation; clicks 'translate' button;</b>	s9y	t	00:14:04	00:14:08		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9z	t	00:14:10	00:14:15		
<b>pastes own translation; edits own translation (verb ending); clicks 'translate' button</b>	s9za	t	00:14:17	00:14:28		

Table8 UT6

coded sequence of actions	string # (# of tokens)	action type	start	stop	overall	comments
<p>hovers mouse over translation suggestions; clicks translation suggestion; edits translation suggestion; clicks 'vote' command; hovers mouse over translation suggestions; clicks 'vote up' button (x1);</p>	<p>s1 (1)</p>	<p>v</p>	<p>00:00:00</p>	<p>00:00:57</p>	<p>00:57:00</p>	<p>began typing the text in English when editing the translation suggestion, but quickly realised his mistake</p>

<p>hovers mouse over translation suggestions; hovers mouse over 'translate' command' clicks 'variations' command; marks sentence element and grammatical category; clicks 'vote' command'; clicks 'variations' command; unmarks sentence element and grammatical category; clicks 'vote' command; hovers mouse over translation suggestions; clicks 'translate' command; clicks 'vote' command; clicks 'translate' command; uses tokeniser (x1); clicks 'vote' command; 'clicks 'translate' command; uses tokeniser (x1); clicks 'translate' button</p>	s2 (2)	t	00:58:00	00:02:06	00:01:08	switches between 'vote' and 'translate' commands to get inspiration from the available suggestions when generating his own translations
<p>hovers mouse over translation suggestions; clicks 'vote up' button (x1)</p>	s3 (4)	v	00:02:09	00:02:28	00:00:18	
<p>clicks 'vote' command; clicks 'translate' command; types in translation; clicks 'translate' button</p>	s4 (0)	t	00:02:32	00:02:51	00:00:19	

hovers mouse over translation suggestions; clicks 'vote up' button (x1)	s5 (3)	v	00:02:58	00:03:09	00:00:11	
clicks 'vote up' button (x1)	s6 (3)	v	00:03:10	00:03:23	00:00:13	
hovers mouse over translation suggestion; clicks 'vote up' button (x1)	s7 (3)	v	00:03:25	00:03:43	00:00:18	
omits string			00:03:50	00:04:04	00:00:14	for some strings he has no idea how to translate them thus omits
hovers mouse over translation suggestions; hovers mouse over 'translate' command; clicks 'translate' command; uses tokenisers (x4); clicks 'vote' command; clicks 'translate' command; clicks 'translate' button	s8 (4)	t	00:04:07	00:05:21	00:01:14	
hovers mouse over translation suggestions; clicks 'vote up' button (x1)	s9 (5)	v	00:05:24	00:05:48	00:00:24	
hovers mouse over translation suggestions; clicks 'vote up' button (x1)	s10 (4)	v	00:05:52	00:06:00	00:00:08	

<p>hovers mouse over translation suggestions; clicks 'translate' command; uses tokenisers (x3); clicks 'variations' link; marks sentence element and grammatical category; clicks 'save' button; clicks 'translate' command; clicks 'translate' button; notification message (token missing); edits own translation (adds missing token); clicks 'translate' button; hovers mouse over translation suggestions</p>	s11 (4)	t	00:06:05	00:07:58	00:01:53	<p>saved variations settings but did not proceed to translate them; notification message informing him that a token was missing from the translation; rectified his error and submitted the correct translation</p>
<p>hovers mouse over translation suggestions; clicks 'vote up' button (x1)</p>	s12 (0)	v	00:08:02	00:08:19	00:00:17	
<p>hovers mouse over translation suggestions; hovers mouse over original string; hovers mouse over translation suggestions; clicks 'vote up' button (x1)</p>	s13 (2)	v	00:08:23	00:09:02	00:00:39	<p>considers punctuation which is often neglected by other UTs</p>
<p>hovers mouse over translation suggestions; hovers mouse over contextual information; hovers mouse over 'translate' command</p>	s14 (0)		00:09:05	00:09:16	00:00:11	

scrolls up; clicks 'vote down' button (x1); clicks 'vote down' button (x1)	s13 (2)	v	00:09:17	00:09:20	00:00:03	
scrolls up; clicks 'vote down' button (x1)	s12 (0)	v	00:09:21	00:09:22	00:00:01	
scrolls down			00:09:23	00:09:27	00:00:04	
clicks 'vote down' button (x5); clicks 'translate' command; types in translation; clicks 'variations' command; clicks 'translate' command; clicks 'translate' button; notification message (string not translated); clicks 'vote' command; hovers mouse over translation suggestions; omits string	s14 (0)	v	00:09:28	00:09:52	00:00:35	the translation module did not accept the translation, which was the same English word as in the original, forcing the UT to use a Polish word  <b>platform poor functioning (translation rejected)</b>
hovers mouse over translation suggestions; clicks 'translate' command; uses tokenisers (x1); scrolls down; scrolls up; uses tokenisers (x1); hovers mouse over 'translate' button; hovers mouse over 'variations' link; clicks 'translate' button	s15 (2)	t	00:09:55	00:11:02	00:01:07	

## **Appendix F**

The appendix contains a CD with seven video files in AVI format which are the recorded sessions of the observational study conducted with seven Polish Facebook user-translators (UT0-UT6) as described in Chapter 8.