Between the rocks and hard places: A Narrative Inquiry exploring the experiences of Educational Technology Leaders

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Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

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Date: 25 August 2023

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Finally, I would like to dedicate this work to the memory of my parents, Ann and John, who supported me throughout all my educational endeavours and who would have been immensely proud.

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Abbreviations

Abbreviation	Definition
AIT	Advanced Information Technology
ALT	Association for Learning Technology
ALTC	Australian Learning and Teaching Council
ASCILITE	Australasian Society for Computers in Learning in Tertiary Education
CPD	Continuing Professional Development
DEAP	Digital Education Action Plan
DELT	Digitally Enhanced Learning and Teaching
EDEN	European Distance and E-Learning Network
EDIN	Educational Developers in Ireland Network
ERT	Emergency Remote Teaching
HECA	Higher Educations Colleges Association
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institution
ICT	Information Communications Technology
ILTA	Irish Learning Technology Association
IoT	Institute of Technology
IPA	Interpretative Phenomenological Analysis
NFETLHE	National Forum for the Enhancement of Teaching and Learning in Higher Education
NMC	New Media Consortium
RTC	Regional Technical College
SATLE	Strategic Alignment of Teaching and Learning Enhancement
SEDA	Staff and Educational Development Association
TEL	Technology Enhanced Learning
THEA	Technological Higher Education Association
TU	Technological University

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Abstract

The imperative to embed educational technologies in higher education practice requires leadership at many levels. However, there is a dearth of empirical research in "educational technology leadership", situated at the nexus of educational leadership and educational technology. This is particularly so in relation to educational technology leaders who, working in the "middle" of their institutions often in informal positions, are uniquely positioned to play a crucial role in leading change.

This study employs Narrative Inquiry in exploring the experiences of these leaders in Irish higher education, beginning with an online survey of such leaders, followed by semi-structured interviews with ten leaders in the Institute of Technology/Technological University sector.

Using Thematic Analysis and Interpretative Phenomenological Analysis, the study concludes that, although participants see their roles more in terms of change agency than leadership, their practices clearly position them as leaders, relying primarily on influence rather than any positional authority. The leadership exemplified by these leaders embodies a congruence that encompasses five key dimensions: people-centred, purpose-driven, shared, credible, and enabling. This coherence is central to their credibility and ability to influence. It is crucial, then, that this seldom acknowledged leadership be recognised and nurtured so that these middle-out leaders, and institutional leaders in general, may more fully appreciate and leverage it.

In addition, the efforts of these leaders can be further enhanced through consistent and coherent institutional approaches where vision, strategy, policies, and actions are aligned to value and support their endeavours.

Importantly, while leadership can be exercised at all levels, albeit in different ways, the study contends that learning "leadership" should not be left to chance or osmosis but needs to be intentionally woven into the fabric of institutional conversations to ensure that it is recognised, valued, and developed to foster sustainable and transformative learning organisations.

1 Introduction

This research study explores the experiences of educational technology leaders in Irish Higher Education as they seek to implement change from the "middle" of their institutions. They do so in the context of the imperative to improve the quality of student learning through the integration of digital technologies into practice. This is based on the premise that technology tools have the potential to enable, enhance, or even transform student learning, a transformative discourse which features prominently in national and international policy and strategy documents (European Commission 2020; European Commission 2014; Hénard and Roseveare 2012; Hunt 2011; NFETLHE 2015b).

1.1 Importance of leadership

While educational technology tools are widely used in higher education (Gaebel et al. 2014; Jones and Shao 2011), the history of such technologies suggests many do not fulfil their initial promise (Selwyn 2011; Cuban 1986; Cuban 2003). This lack of impact has become even more relevant given the integration imperative and the plethora of new and emerging technologies now available. Thus, deft leadership is more important than ever in efforts to embed suitable technologies, convince those reluctant to embrace the potential, and close the rhetoric-reality gap. However, this leadership needs to extend beyond top-down change management strategies to include both bottom-up and middle-outward practices as identified in literature on educational change (Fullan 2015; Hénard and Roseveare 2012).

In the past decade, considerable attention has been given in the literature to the study of leadership in general and, in particular, leadership for change management in educational contexts (Fullan and Scott 2009; Scott et al. 2008). At the same time, research on educational technology has primarily focused on teachers' pedagogical use and effectiveness of technology tools (Jameson 2013; Hsu et al. 2013). This suggests an important gap in the literature. As identified by Jameson (2013, p.890), there is a dearth of research in "e-leadership in education" or "educational technology leadership". Jameson attributes this gap to the fact that leadership and educational technology tend to be viewed as distinct areas and, so, are generally considered separately in efforts to support new models of teaching and learning.

In cases where educational technology is mentioned in the context of leadership, this tends to be at a more strategic or institutional level (Devine 2015; European Commission 2014). However, in a report on strategic and leadership perspectives on digital capacity in Irish higher education, Devine (2015) argues that a broader conception of leadership is required in order to harness the potential of bottom-up innovation while also cultivating and situating localised efforts in a wider strategic institutional context. In addition, Bates and Sangrà (2011), in an examination of

technology integration in over 30 universities worldwide, found Mintzberg's (2011) broader view of leadership as encompassing those who break new ground and set the direction for others to be most appropriate. The lesson from this line of thinking is that a diversity of leadership approaches is likely to exist at institutional level, ranging from charismatic university presidents to whole executive teams, particular faculties, individual champions and learning technology professionals (European Commission 2014).

Yet, it is interesting to observe that, in the main, leadership for educational technology appears to be "relegated to specialists - usually lower down or outside the main hierarchy of institutions – who are perceived to be techies or learning technology enthusiasts" (Jameson 2013, p.892). This point is supported by Devine (2015, p.16) who found that these individuals were perceived primarily as "essential support staff". Furthermore, Jameson (2013) concludes that e-leadership, as such, is seldom identified as a feature of higher education institutions, and where it does appear, it is again "almost invariably delegated to lower, albeit specialist, positional levels" (Jameson 2013, p.911). These positions are likely to be the learning technology professionals, who Bates and Sangrà (2011, p.84) suggest "can and should play a greater leadership role . . . than they do at present".

However, Jameson (2013, p.908) also argues that this dichotomy should not be resolved by simply subsuming educational technology leadership "namelessly within wider discussions of leadership … as it cannot be guaranteed to be a routine part of leadership". Rather, the solution may lie in considering educational technology leadership as a distinct aspect of educational leadership in its own right. Likewise, within the field of educational technology there is a corresponding need for leadership to be recognised as a named individual concept, in this way, acknowledging that the challenges of integrating educational technology may require particular approaches to learning leadership.

1.2 Learning leadership

There are many different facets to learning leadership. A range of leadership skills and strategies will be required to address the challenge of integrating digital technologies and pedagogies (European Commission 2014; Bates and Sangrà 2011). In the Irish context, the National Forum for the Enhancement of Teaching and Learning in Higher Education (NFETLHE) has emphasised the importance of institutions developing strategies to identify "leadership responsibilities, structures and supports" (NFETLHE 2015b, p.19) to facilitate this integration. In particular, it is clear that educational technology leaders must play a central role in the change process. Although we need to know more about the background and experiences of these educational technology leaders, they are likely to be at the nexus of this process, situated between the rocks

and hard places of the imperative for change. They are crucial in helping to develop the strategies needed for successful implementation; in supporting senior institutional leadership in promoting the change agenda; in bridging the top-down goals of management with the bottom-up aspirations of academic staff; in assisting academic colleagues to effectively implement new technology in pedagogically appropriate ways; and, ultimately, in closing the rhetoric-reality gap.

For such leaders engaged in the change process, the importance of the experiences and insights of peers cannot be underestimated, as evidenced by a seminal Australian study by Scott et al. (2008). A key theme to emerge from this insightful study of senior higher education leaders was the support that these leaders found in realising that they were "not alone" in the issues that they faced. In discussions with others in positions of leadership in Australian universities, they were reassured to find that what appeared to be unique dilemmas and challenges were, in fact, shared by many of their peers. They also appreciated having a framework and some national empirical data to help make sense of their individual experiences. In particular, these leaders wanted specific insights into how best to make innovations work to the benefit of their students and their institutions as a whole (Scott et al. 2008).

The key point is that, as with the senior leaders in the study by Scott et al. (2008), educational technology leaders face similar issues to their peers in implementing change and they, too, are likely to value the insights of peers in helping them make sense of their individual experiences. These experiences will reflect their position in their institutions where, unlike the leaders in the Australian study, they do not occupy senior institutional roles.

1.3 Caught in the middle

In most cases, to the best of our knowledge, educational technology leaders are positioned in the middle. They are generally not in management positions where they oversee major resources or large staff teams directly (Jameson 2013; Devine 2015). Rather, they tend to be attached to units, such as centres for learning and teaching, which operate on an institution-wide basis or share responsibility with school-based units (Gaebel et al. 2014). This can be a difficult, or even weak, position from which to effect change as they are often not in academic positions or not reporting directly to a high-ranking member of the executive team (Bates and Sangrà 2011). Bates and Sangrà (2011, p.84) describe such learning technology professionals as "disenfranchised experts", who, by analogy, are often situated in the institution's "crevices". In their role, they must rely on tactics such as exerting influence on both the positional leaders and on academic and administrative colleagues. In this way, they endeavour to facilitate change as they try to extend the innovative practices of individuals and groups to the whole institution. Yet, it is from such pockets of innovation that informal or "micro-leaders" (Childs et al. 2013,

p.56) may emerge. Leaders such as these, who are widely respected by their peers, can play a vital role in the diffusion of change (Childs et al. 2013; Rogers 2003). We know from the literature these leaders can act as key influencers as their peers will tend to look to them for guidance, advice, and reassurance before implementing innovations such as educational technology tools (Rogers 2003).

Ng'ambi and Bozalek (2013) argue that formal, or positional leaders, should harness the influence of these informal or emerging leaders who have gone beyond what is expected of them and, in this way, develop a bottom-up leadership approach. This view is in keeping with Ramsden's (1998, p.4) contention that leadership "can and should be exercised by everyone". These informal leaders, individuals and groups, are those who adopt, implement, and model elements of good practice and are recognised for this by their peers. Their role is complementary to positional roles for educational technology. Such a combination of middle-out and bottom-up leadership relies primarily on influence and the networks and relationships that these leaders establish with colleagues (Childs et al. 2013). Ultimately, it is through leaders "on the ground" that appropriate technologies will be adopted and integrated into practice as these teachers and their colleagues are the gatekeepers of the classroom whether it is physical or virtual (Jeffrey et al. 2014).

1.4 Research Problem

Much of the literature on the leadership required to integrate educational technology in higher education adopts a strategic top-down perspective. In contrast, little is known about the perspectives of the leaders in formal and informal roles who work from the middle-out and bottom-up. And yet, these leaders also play a crucial role in the embedding of educational technology in practice.

This study seeks to address this gap in the literature. More specifically, it aims to build on the work of Jameson (2013) and the recommendations by Scott et al. (2008) by exploring the experiences of those in formal and informal middle-out leadership roles in educational technology and the part they play in building cultures of change in this area.

The study seeks answer the question:

What can be learned about educational technology leadership from the voices of those who work in "the middle" of implementing institutional change in Irish Higher Education?

This question will be investigated using the following more specific sub-research questions:

(a) What barriers and challenges do educational technology leaders report in efforts to promote the wider implementation of educational technology?

(b) What strategies or approaches do educational technology leaders report as effective in the pedagogical implementation of educational technology?

(c) What supports and enablers do educational technology leaders identify in efforts to promote the wider implementation of educational technology?

(d) How do educational technology leaders perceive leadership in the context of their own roles?

(e) What has influenced educational technology leaders' understanding of leadership and their leadership roles?

The study has adopted a Narrative Inquiry approach (Connelly and Clandinin 1990; Connelly and Clandinin 2006; Clandinin and Huber 2010) as the overarching methodology to most effectively answer the research questions. This approach focuses on the stories or experiences of participants and how they interpret their roles as leaders through their own voice in the context of educational technology. Such an approach is well established in the literature and ideally suited to capturing the "complex, multi-layered and nuanced understandings" of the participants' perspectives (Etherington 2011, p.2). It involves systematically gathering, analysing, and representing the stories of participants as they reflect on their experiences, consider their roles, interpret the meanings of events, and explore the values and beliefs that shape their interpretations (Etherington 2011).

The study comprised two phases of data collection and, although primarily qualitative in nature, the first phase of the study involved the collection of both quantitative and qualitative data to assist in obtaining a broad overview of the experiences of educational technology leaders across the Irish higher education sector. This phase consisted of an anonymous online survey which focused on the roles, activities, and leadership experiences of the participants in relation to embedding educational technology in their institutions. A purposive sample of 136 experienced educational technology leaders in Irish Higher Education was identified. This included staff recognised in their institutions as being responsible for the co-ordination of educational technology development in addition to those with positions related to educational technology support and those academic staff who take a leading role by using such technology and sharing their experiences. The survey received 64 responses, giving a response rate of approximately 47%.

The second phase of the study consisted of semi-structured interviews with a sample of 10 educational technology leaders in the Institute of Technology (IoT) sector.

In terms of origins, the IoT sector grew out of the Regional Technical Colleges (RTCs),the first of which were set up in the 1970's. The RTCs were established to provide vocational and technical education and training within the regions that they served. With much smaller student numbers than the traditional universities, they were designated Institutes of Technology (IoT) in the 1990's, continuing their vocational focus and industry links in the regions. The National Strategy for Higher Education to 2030 (Hunt 2011) proposed that institutes should be consolidated in regional clusters and be designated as technological universities (TU) on achieving certain performance criteria, while retaining their existing core missions. The strategy envisages that the technological universities will be distinguished from existing universities by maintaining their emphasis on career-focused provision at Levels 6 to 8 and on industry-focused research and innovation, albeit at a higher level than in the institutes. At the outset of the current study in February 2019, the first of these Technological Universities, TU Dublin, had just been constituted. During the study, a further five TUs, involving nine IoTs, have been established. Two further institutes, including the author's, are yet to join a TU consortium.

Drawn from the larger sample from the study's first phase, it was decided to focus on these leaders from the IoT sector as their institutions, although distinct in many ways, are also broadly similar in organisational structure, ranging in size from over 3,000 to under 13,000 students.

Each of the institutes have relatively small but differing numbers of staff with specific roles in providing continuing professional development (CPD) for academics in relation to learning and teaching practice and in technology enhanced or online learning. These staff, often with varying titles and roles, are generally, though not in all cases, attached to units or centres for Learning and Teaching. In addition, a small number of institutes also have specific units which have a particular focus on CPD in technology enhanced and online learning. These units are distinct from Learning and Teaching centres and have educational technology specialists attached, though titles, roles and duties may vary depending on the institution.

The educational technology training and support provided for academics by these centres or units generally ranges from one-to-one support, workshops, creation of instructional resources to guidance in module and programme design and development for blended and online delivery. In addition, staff in these units may also contribute to policy in relation to technology enhanced and blended or online learning on an institutional level.

There is variation in the sector in relation to the contractual status educational technology specialists with some being seconded from academic posts while others are on administrative or professional contracts. In addition, educational technology or related positions may involve fixed-term contracts which are linked to specific projects depending on funding.

Staff with a remit to support learning and teaching and the units to which most belong are generally positioned in the institution's reporting structure for the Vice-President with responsibility for academic affairs and registry. However, some of the units with specific responsibility for digital education report to a different member of the senior management team who may have responsibility for this area. Thus, such units are positioned centrally within institutions in that they serve and support the schools and departments without being affiliated to them.

Further, a notable feature in the IoT sector is the high teaching workload of academics. A report prepared for the Department of Education and Skills by Collins et al. (2020) points out that, in contrast to university contracts, which allow for flexibility in the distribution of academic workload between teaching, research and administration responsibilities, the teaching workload in institutes of technology is clearly defined as either 16 or 18 hours per week over a 35-week semester. Inevitably, this high teaching load affects the time available to academics for engaging in other activities and will impinge on the efforts of those involved in providing CPD for academic staff.

The formation of Technological Universities will lead to considerable change within the sector as institutes come together in consortia, each of which consists of either two or three institutes, where differing practices and structures may have evolved. In particular, it is likely to result in different contractual arrangements for academics across the technological sector. In addition, at the time of writing, the re-structuring and streamlining process for Learning and Teaching centres and Educational Technology units within consortia is in its early stages.

The sample of interviewees for the second phase of the study was drawn from eight institutions and, although there are variations in the specific titles of participants, a notable feature across the sector, the group represents roles including what may broadly be described as heads of Learning and Teaching, heads of Educational Technology units, and learning technology specialists, some of whom are partially seconded from academic posts.

This second phase of the study took place during a period of significant disruption in higher education caused by the COVID-19 pandemic. Although the primary focus of the research question and sub-research questions was on the experiences of participants prior to the COVID-

19 crisis, their experiences in response to the crisis, which placed their roles centre-stage, also provided valuable insights into the leadership they exercised during this period.

Thematic analysis (Braun and Clarke 2012; Braun and Clarke 2006) was used to analyse the data from the open-ended responses in the survey in order to identify the key themes in this initial overview of the experiences of educational technology leaders. The interview data in the second phase were analysed using Interpretative Phenomenological Analysis (IPA) (Smith et al. 2009). This approach seeks to focus first on the individual experiences of participants by fully analysing each interview before identifying areas of commonality and difference across the group of participants.

Composite narratives (Willis 2019) have been used to provide storied representations of the interview findings while also seeking to ensure participant anonymity in Irish higher education's relatively small educational technology community.

1.5 Rationale

In summary, insufficient attention has been placed on the importance of leadership in the context of educational technology. We know from the contemporary literature that successful change in large organisations requires bottom-up, middle-out and top-down leadership (Bates and Sangrà 2011), which may evolve to a more dispersed or distributed approach (Harris and Spillane 2008). The leaders involved may have defined positional roles in their institutions or play key roles as informal and opinion leaders who are modelling good practice in the area and are widely respected by their peers. There is reason to believe that, in the main, positional leaders in educational technology tend to work in the middle, at the crevices or intersection, between the bottom-up and top-down dimensions of change. They are often tasked with guiding senior management in relation to technologies, while at the same time promoting the use of these technologies with academic and administrative colleagues. That said, a considerable gap still remains in our understanding of the role of these leaders in successfully mediating the message and reducing the hard edge of top-down driven imperatives.

The study addresses this important gap in the research literature into educational technology leadership and will contribute to new knowledge in this field. It provides a snapshot of the experiences of educational technology leaders across Irish higher education, complemented by an in-depth look at the experiences of those working in the IoT/TU sector to better understand how they carry out their roles. While the experiences of educational technology specialists in the latter sector will vary due to institutional contexts and may not exactly mirror those of their peers in universities or other institutions, there is still much in common between the challenges they encounter. Importantly, in telling the story of these leaders in their own voice, the study

also aims to provide current and future leaders with insights into their own roles and the complex processes of successfully integrating technology into practice. In this respect, the study aims to enable the participants and the sector more generally to better understand the rocks and hard places of educational change.

In addition to addressing the gap in the literature, the current study is of particular importance to me on a personal and professional level. In fact, it goes very much to heart of what I do in my role as e-Learning Development Co-ordinator in Dundalk Institute of Technology. A teacher for over 35 years, I have been seconded for the past 10 years to this role in my institution's Centre for Excellence in Learning and Teaching. In addition to being responsible for supporting educational technology-related activities, I also teach on a number of modules on our MA in Learning and Teaching, a programme established to provide professional development to our academic colleagues. My work, then, is primarily with academic colleagues while occasionally providing advice to those in formal management positions.

In one sense, my role is very much in the middle of the organisation working outwards from our centre. I would primarily see myself as seeking to help bring about changes in the practices of my academic colleagues, encouraging them to make use of technology where appropriate and where, importantly, it may benefit their students' learning. While I would not initially have seen this in terms of leadership, I have increasingly come to see it as such during the course of the current study.

Working as an individual or in a small team in such a role, one can be somewhat isolated, thus making it essential to learn from those in similar positions in other institutions. Therefore, my hope is that this research will allow colleagues in similar roles learn from the experiences of their peers. In addition, it can assist institutional leaders to better understand the work of their educational technology leaders and how they can support them in the shared endeavour of embedding technology.

1.6 Thesis structure

The following chapters report on the key stages of the research.

Chapter 2 provides a review of the key areas of literature that form the backdrop to the study. Beginning with Jameson's (2013) work in identifying the gap in educational technology leadership, it considers the roles and activities of those who work in this area, then examines other similar areas in higher education in which middle-out leadership plays a key role. Finally, it considers concepts of shared leadership and lessons from the literature as to how leadership can be learned and developed.

Chapter 3 outlines the philosophical underpinnings of the study, situating the methodology within the field of Narrative Inquiry. It explains in detail the data collection methods and approaches to the analysis and presentation of the data for each phase. In addition, it includes my own story, which inevitably forms a backdrop to the current study and provides the reader with an insight into my own position within the study.

The results of the analysis for each phase are presented in Chapter 4. The sub-research questions are used to scaffold the key results from the survey, while the findings from the interviews are presented as three composite narratives, one for each participant grouping, heads of Learning and Teaching, heads of Educational Technology units, and learning technology specialists.

Chapter 5 draws together the findings from both phases to answer the sub-research questions and overarching research question and their implications.

Finally, Chapter 6 presents an overview of the study, outlines its contribution to new knowledge, and offers recommendation for practice, policy, and future research.

2 Review of Literature

This chapter presents a review of literature that focuses on key concepts and research which have informed the current study's design (Bryman 2016; Cohen et al. 2011).

The review begins by outlining the gap in research in "educational technology leadership", a concept which has emerged from "e-leadership" in organisations. It then examines the extent to which "e-leadership" has impacted higher education contexts. Shifting the focus to the topic under investigation in the current study, research on the embedding of digital technology in the Irish higher education context is outlined. Research on educational technology roles in the broader higher education Irish contexts is then considered. Other roles in higher education which appear have much in common with educational technology roles are examined, focusing in particular on the work of the more established role of academic developers. Research on such roles may provide valuable insights into the experiences of those in educational technology roles. Approaches to distributed leadership in which leadership responsibilities are devolved to those working at different levels in an organisation are outlined. The review concludes by considering the importance of learning for leadership and how this may be facilitated within institutions.

The key concepts discussed in this review of literature are shown in Figure 2.1.

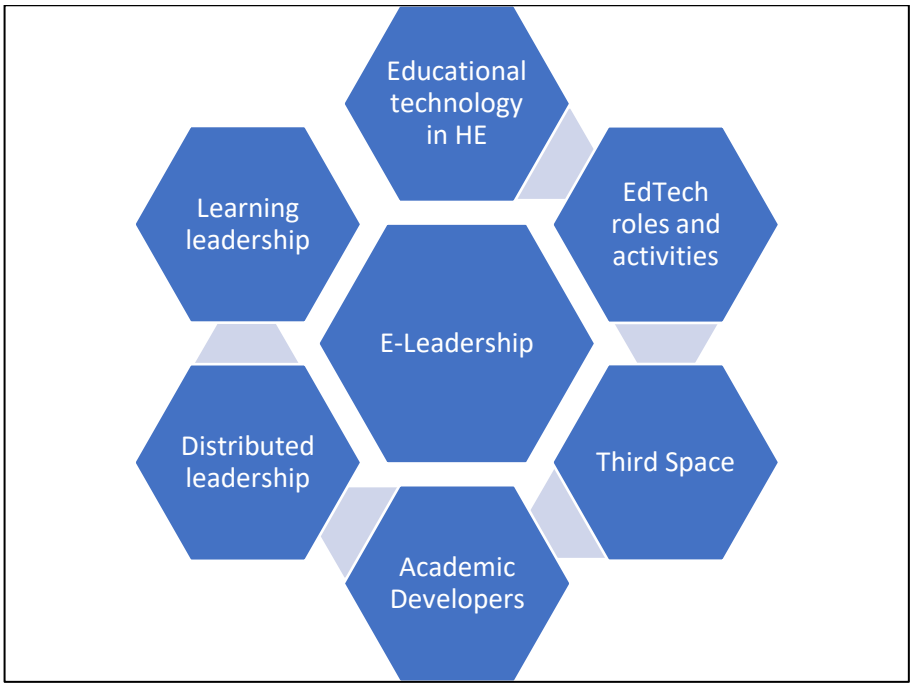

Figure 2.1 Key concepts in literature review.

2.1 A gap in the educational technology research

The starting point for the current study is Jameson's (2013) review of research in leadership in educational technology. Jameson (2013) concludes that the concept of "e-leadership" appears to have been given little attention in higher education and more particularly in the area of

educational technology in this sector. In doing so, Jameson (2013) identifies a gap in terms of research and professional practice in leadership in this area and suggests that this should be the next main area of focus for educational technology research.

Arguing that the time has come for leadership in educational technology to be included in a fifth "age" of educational technology research, Jameson (2013) asserts that, despite the proliferation of educational technology, the study of leadership in this area remains considerably underdeveloped. A review of the literature suggests that the "veritable tsunami" (Jameson 2013, p.890) in digital learning and teaching which has occurred in recent decades has not been accompanied by critical reflection, professional development, and research in leadership in this field. This, Jameson (2013) suggests, could be considered a natural progression that should occur as the field evolves. This next age of educational technology research would extend the four ages of the evolution process originally identified by Winn (2002). Each of these ages, which builds on the previous one, is characterised by a different focus which emerged as the field has matured. Each has focused on different aspects of learning environments, progressing from the age of instructional design (with an emphasis on content), to the age of message design (with attention given to formats in which information is presented to address the diverse needs of students), to the age of simulation in which constructivist approaches to building interactive environments were the priority, to the fourth age with its focus on technology-supported learning environments which incorporate artificial intelligence, social aspects of learning and distributed cognition.

It appears that all these aspects have continued to be the primary areas of attention in educational technology research. For example, a study by Hsu et al. (2013), which examined almost 3,000 international research articles published between 2000 and 2010 in six refereed journals in the educational technology field, concluded that the focus remained on learning environments, as indicated by Winn (2002), with topics such as instructional design, interaction, and simulation dominating. The authors concluded that the pedagogical use of technology and the effectiveness of instructional and learning strategies primarily concern researchers and practitioners and, hence, dominate research in the field (Hsu et al. 2013). It is notable also that the term "leadership" does not occur in their description of any of the 19 themed clusters of articles examined.

2.2 The concept of e-Leadership

Emerging in the broader context of organisations, particularly in terms of business and management, the concept of e-leadership, in one of the first instances of its use (DasGupta 2011), has been defined by Avolio et al. (2000, p.617) as a "social influence process mediated by

AIT (Advanced Information Technology) to produce a change in attitudes, feelings, thinking, behaviour, and/or performance with individuals, groups, and/or organisations". The concept acknowledges that advances in information and communications technology have created a new context in which to consider leadership. As developments in technology are changing the ways organisations work, they have added a layer of complexity to leading in such an environment, stretching the capacities of leaders, requiring that assumptions about leadership and organisations evolve, just as technology evolves (Avolio et al. 2000; Pulley et al. 2002).

Pulley et al. (2002), in considering e-leadership, wonder at the outset how the concept might differ from leadership, if at all. They suggest that within a decade the "e" may be subsumed into the word "leadership". However, they recognise that, for the moment, while in a period of transition, the "e" aspect may need to be more explicit so that organisations focus on the development of leaders who can function effectively in a technologically-mediated environment. In evaluating a blended programme which they designed for a group of participants from Xerox corporation to develop e-leadership skills by modelling them in a digital environment, Pulley et al. (2002) conclude that the concept of leadership should be extended. In contrast to a traditional focus on individuals, they concluded that, in an environment facilitated by technology, acts of leadership occur by means of communities of individuals interacting and addressing challenges together. This echoes the point made by Avolio et al. (2000, p.617) who, elaborating on their initial definition of e-leadership, suggest that technology means that "e-leadership can occur at any hierarchical level in an organization and involve one-to-one and one-to-many interactions within and across large units".

Gurr (2004) observes that the considerable conceptual ambiguity and lack of information associated with this relatively recent concept has resulted in differing approaches. One such approach is to ignore the potential impact of Information Communications Technology (ICT) on leadership in organisations and simply maintain current conceptions of leadership. Another illustrates a narrower more limited view by describing leadership training provided in an online environment as e-leadership rather than, as one might expect, preparing leaders to lead in technology-mediated environments. For others, suggests Gurr (2004), e-leadership is simply a more contemporary name for leadership with a nod to the increasing role of technology, resulting in a certain "conceptual confusion" (Gurr 2004, p.117).

In an effort to form a picture of technology leadership and the traits of technology leaders, Daugherty et al. (2013) synthesise literature on the separate areas of leadership and technology. They conclude that a technology leader is "an individual who enables others to effectively and successfully use, manage, access, and understand technologies" (Daugherty et al. 2013, p.42).

As we become increasingly dependent on technology, such leaders are critical and need to be equipped to make "informed, value-laden decisions and participate in guiding technological development" (Daugherty et al. 2013, p.42). Van Wart et al. (2017, p.529), however, take a different approach in describing e-leadership in the context of technology adoption as "the ability to effectively select and use ICT's for both personal and organisational purposes".

In defining the concept, Avolio et al. (2000) examined e-leadership in terms of the reciprocal relationship between technology and leadership as they interact and impact each other in organisations. Some organisations may look at it from the point of view of e-business, others from the perspective of operating in a digital age and how they may use technology to gain a competitive edge. Another view sees e-leadership as carrying out leadership by making use of technology, leading virtual teams, or practising virtual leadership, using the affordances of information and communications technology (Zaccaro and Bader 2003). Taking this a step further, Avolio and Kahai (2003) regard e-leadership as being a fundamental change to leadership, reflected in the way individuals and organisations relate to each other as so many human interactions are increasingly mediated by technology. This view of e-leadership as promoting relationships in an online environment or leading virtual or e-teams is similar to the approach taken by DasGupta (2011), who considers it as a new paradigm which requires the leadership to be achieved in a computer-mediated manner with virtual teams by making use of electronic communication. Thus, in the context of business organisations, the concept of e-leadership appears to be mainly focused on leading virtual teams or leading in virtual environments (Arnold and Sangrà 2018).

Taking this view, which appears to concentrate on how leaders can best utilise technology in their leadership role, it may be reasonable to conclude or predict, as did Zaccaro and Bader (2003, p.377), that "e-leadership will be the routine rather than the exception in our thinking about what constitutes organizational leadership".

In a more recent examination of the evolution of e-leadership research, theory and practice, Avolio et al. (2014) broaden their original definition, moving beyond a narrower focus on how leaders use information technology to interact virtually to also include an emphasis on the importance of context. Their revised definition describes e-leadership as "a social influence process embedded in both proximal and distal contexts mediated by AIT that can produce a change in attitudes, feelings, thinking, behavior, and performance" (Avolio et al. 2014, p.107). They build on DasGupta's (2011) contention that the relationship between leadership and technology is a recursive one in which each is not only affected by, but transforms, the other. Using a framework developed by Hernandez et al. (2011) and extended by the same group of

authors (Eberly et al. 2013), they examine the different sources of leadership and mechanisms for mediating leadership at the micro, meso and macro levels in organisations. However, they conclude that, although leadership scholars and practitioners recognise the potential impact of the interaction between information technology and leadership, these technologies have not had a significant effect on leadership in organisations, the study of that leadership, or the way such technology can transform how leaders are developed.

When the concept was first introduced in the early 2000's, it emerged at what may have been considered the dawn of a new interaction between leadership and information technology. In fact, Avolio et al. (2000, p.663), in introducing the concept, concluded by stating somewhat expectantly that "the question is not whether to study e-leadership, but where to start". Yet, some years later, in summing up how the concept has evolved in the intervening period, Avolio et al. (2014, p.126) acknowledge that there still remains much to be done in this area as "the sun is still rising and shedding light … with much more to go before it hits its zenith". In this context, then, it may not be surprising that the concept has received sparse attention in educational contexts and, where it has been considered, has taken on different meanings and interpretations.

2.3 e-Leadership in an educational context

Almost 20-years ago, Gurr (2004) predicted that, as the use of information technology increased in education, research into the concept in educational settings would clarify the extent to which it can be applied, and suggested that "e-leadership will be an important addition to our understanding of leadership in educational settings" (Gurr 2004, p.122). And yet, almost a decade later, in reviewing the literature, Jameson (2013) found that the term "e-leadership" was seldom used in relation to higher education. However, Jameson (2013) does acknowledge that, although not specifically termed "e-leadership", it may exist under other variations or may be subsumed as another facet of the general concept of leadership. In fact, it appears that "e-leadership is barely identified as an important feature of higher educational institutions, and, when identified, is almost invariably delegated to lower, albeit specialist, positional levels" (Jameson 2013, p.911). And yet, if meaningful successful technological developments are to take place rather than being confined to individual pockets of innovation, it is imperative that there is a commitment to e-leadership at all levels in higher education institutions (Jameson 2013).

Arnold and Sangrà (2018), in their exploratory literature review, extend the work of Jameson (2013) as they seek to provide a current picture of the literature in this area. They consider the extent to which Jameson's call to include research into leadership in educational technology research in higher education has been taken up as the dawn of a fifth "age" of research in the

field. Guided by the updated definition proposed by Avolio et al. (2014), their study examines the extent to which the concept of e-leadership has emerged as a lens through which to study leadership in educational technology in this sector since Jameson's call.

They classified 49 articles from the period 2013-2017 into three broad categories – empirical studies (27), theoretical analyses (16) and opinion pieces (6). Within the empirical category, they identified three main clusters based on the populations studied: studies that examined leadership from the perspectives of individuals in formal leadership roles, studies of those not in formal leadership roles in educational technology and studies which took a more holistic approach involving departments, single, or multiple institutions. Importantly, Arnold and Sangrà (2018) observe that none of these empirical studies refer explicitly to e-leadership, leading them to conclude that there remains a lack of empirical research in this area in higher education. However, this absence may not be surprising, given the relatively infrequent appearance of e-leadership as the subject of studies on organisational leadership where it originated.

Arnold and Sangrà (2018) do note, however, some interest in e-leadership in the theoretical papers, going on to suggest that the concept as defined by Avolio et al. (2014) may not adequately or accurately capture the nature of educational technology leadership in higher education. They point out that while leadership as a social influence process mediated by technology may apply in some contexts such as online learning environments, leadership interventions are not necessarily mediated using technology. Thus, they look to the literature for a definition of the concept which may be more applicable in the higher education context. They conclude that there is a need for scholars to clarify the definition to remove some of the ambiguity associated with the concept (Gurr 2004; Salmon and Angood 2013). This re-definition may see it remain confined to leading in virtual environments, extended to include leadership in relation to adoption of educational technology within organisations (Van Wart et al. 2017; Preston et al. 2015), or perhaps replaced by a more appropriate term such as "digital education leadership" as suggested by Brown et al. (2016).

It may be informative at this point to examine more closely some of the different perspectives on e-leadership in higher education that have emerged from the literature studied by Arnold and Sangrà (2018). These perspectives tend to focus on particular facets of the concept of leadership in this area. For example, Burnette (2015) explores the leadership strategies used by a group of 12 higher education administrators as they negotiate the challenges of promoting online learning. Noting a dearth of empirical data on online leadership in the literature, Burnette (2015) observes that the personal characteristics and leadership styles necessary have been of particular interest in this relatively new area of higher education. Burnette's (2015) own study,

with its focus on the leadership strategies employed by online education leaders, adds to this body of literature.

Salmon and Angood (2013) concentrate on an aspect of leadership required to address the challenges of integrating learning technology in higher education. They propose that leaders need to enable the repairing, or perhaps building, of a "landscape of trust and shared confidence amongst the professional [IT] service and academics" (Salmon and Angood 2013, p.920).

It appears that, despite the existence of studies on particular aspects, there is no overarching definition of leadership in the educational technology area of higher education on which a study can be grounded. Perhaps the reason for this, which is in turn reflected in the dearth of research literature in this area, is, as Beaudoin (2007) suggests in relation to the lack of scholarship in online education leadership, an overemphasis of research on pedagogical issues rather than administration, and the perception that leadership in online education may not be important. Alternatively, it may be that, due to the ambiguities involved (Gurr 2004; Salmon and Angood 2013), such a definition has proven to be elusive or perhaps too broad to be applicable, as appears to be the case for the definition by Avolio and colleagues in the organisational context (Avolio et al. 2014).

More recently, in the UK and Irish context, Jisc (Joint Information Systems Committee) has been active in promoting a Digital Leaders Programme for Higher Educators (Phipps and Lanclos 2017). This programme aims

> *to provide staff in institutions with an awareness, and ability to respond both to and with digital in a time of 'Supercomplexity', the shorthand term used by Barnett (2000) to describe the state of affairs in which we find ourselves: one of uncertainty, unpredictability, challenge and change."*
>
> (Phipps and Lanclos 2017, p.2)

It is predicated on the belief that leaders in education need to be effective in their own use of digital technologies as well as understanding the benefits and affordances of digital practices in leading organisations and departments. Furthermore, Phipps and Lanclos (2017) state that strong "digital leadership" will be a key feature of effective educational institutions. However, digital leadership, as promoted, does not appear to be explicitly anchored in the wider leadership literature, which again raises questions about how this new and emerging concept fits with other conceptions of leadership in higher education.

Arnold and Sangrà (2018) conclude that, due to considerable variety of interpretations and applications of the concept of e-leadership, the definition should be refined. Perhaps, though, such a term may no longer be appropriate for higher education (or indeed the broader

organisational context). We may need a new term such as "digital education leader", as suggested by Brown et al. (2016) and adopted by Jisc, or perhaps we continue with the variety of terms used in different educational contexts. Also, as appears to be the dominant trend in the education literature, it may be more appropriate to focus on the many facets of this leadership in the different educational contexts which seek to integrate technology. In this way, it may be possible to fit together the pieces of the jigsaw which comprise leadership in these areas such as the importance of such leadership, how this leadership manifests itself, the characteristics and qualities needed to be effective, challenges faced, and strategies used to overcome them. In doing this, we may be able to explore the different terrains of educational technology leadership in higher education.

Irrespective of the term used to encapsulate this phenomenon, Arnold and Sangrà (2018) conclude, as did Jameson (2013), that there is a need for further research into leadership in the integration of educational technology in higher education. Borrowing the metaphor used by Avolio et al. (2014), they finish by observing that while the sun may not yet have fully dawned on the fifth age of educational technology research, there is both "the potential and the need for this age to emerge at the intersection" of the disciplines of educational technology and educational management (Arnold and Sangrà 2018, p.25). If this is to materialise, it should be cognisant of Fredericksen's conclusion, based on a major study of leadership for online learning in the United States, that,

> *Colleges and universities are different from private sector entities. For us to understand leadership positions within higher education, it is essential to understand their nature and culture and how those in those positions work.*
>
> (Fredericksen 2020, p.26)

2.4 Educational Technology in Irish Higher Education

In its report on new modes of learning and teaching, the High Level Group on the Modernisation of Higher Education, appointed by the European Commission, acknowledges the imperative to integrate digital technologies in higher education teaching and learning (European Commission 2014). In doing so, it asserts,

> *There remains a culture of conservatism within European higher education which needs to change. This demands strong leadership and vision from both public authorities and institutional leaders.*
>
> (European Commission 2014, p.11)

While recognising the emergence of good practice, it advocates that the hitherto "uncoordinated bottom-up" (European Commission 2014, p.11) approach must be reinforced by comprehensive strategies at national and institutional level.

In the Irish context, the National Forum for the Enhancement of Teaching and Learning in Higher Education (NFETLHE) has identified "Teaching and Learning in a Digital World" as one of its four strategic priorities. Established in 2013, the National Forum is the national body responsible for leading and advising on the enhancement of teaching and learning in the sector. In relation to integrating technology, it aims to support "those who learn, teach and lead in higher education to critically apply digital technologies with the goal of enhancing learning, teaching and overall digital capability" (NFETLHE n.d.). To this end, it has published a series of reports which paint a picture of the educational technology landscape from different perspectives.

Initially setting out its vision in a "digital roadmap" (NFETLHE 2015b), the National Forum highlighted a number of challenges to achieving this goal and made recommendations for overcoming these. While acknowledging the importance and success of many small-scale initiatives in the sector, the report advises that a more coherent strategic approach is needed. Such an approach requires explicit identification of leadership responsibilities and structures, clear policies, and an implementation plan which will provide the necessary supports for academic staff and students.

Stressing that any frameworks for developing digital capacity must retain a pedagogical focus, the report emphasises the importance of the development of digital literacy among staff. This, it suggests, is of immediate importance and should involve a coordinated programme of professional development. It continues, "It is critical to the development of innovative and engaging learning through technology, that teaching staff are provided with the resources, space and time to achieve this" (NFETLHE 2015b, p.40).

The digital roadmap was informed by a study carried out on behalf of the National Forum and involving over 750 survey responses from higher education teachers (NFETLHE 2015a). From the perspective of teachers, a majority were confident in their use of technology in their practice and were willing to experiment. While a majority (80%) also agreed that their institutions encourage the use of technology in teaching, over 60% either did not agree that their institution had a clear Technology Enhanced Learning (TEL) strategy or were unaware if such a strategy existed. The results also identified key issues for teachers, including a lack of professional development, a lack of time for continuing professional development (CPD) and for implementing technology in practice, uncertainty about the benefits of technology, in addition to a sense of limited availability of technical support. Many teachers foresaw challenges in integrating technology in

the absence of motivating factors such as an imperative to use it in academic programmes, or a strategic direction in their departments, and sufficient time being made available for CPD to explore its potential and build confidence.

While the digital roadmap does not focus specifically on those charged with supporting the use of technology on the ground, it does acknowledge their role in the change process, asserting that "some learning technology staff are highly qualified and experienced in education and can act as translators/facilitators/change agents, being able to bridge the gap between specialist academics and the technologies/pedagogies" (NFETLHE 2015a, p.21). However, it points to a difficulty with central support structures in that they generally provide support to academic staff on an individual rather than department or team basis. Citing departments and schools the key units of change within institutions, the report points out that these can be enablers of change, with department or school-led approaches complementing institutional efforts and possibly making better use of limited resources. Equally, however, these units can also block or hinder change processes.

A further National Forum report (Devine 2015) examined strategic leadership perspectives on digital capacity in Irish higher education by analysing mission-based performance compacts from 26 Higher Education institutions and semi-structured interviews with senior leaders from 24 institutions. These annual compacts provide an opportunity for institutions to explicitly state their goals in relation to improving performance and ensure alignment between their strategic priorities and national priorities. They are used as a basis for the allocation of performance funding to institutions as an incentive to improve overall performance. Devine notes that, while the compacts may identify institutional aspirations, the interviews with senior leaders offer insights with which to balance these.

Devine (2015) examined the compacts to identify references and specific targets relating to digital capacity. In particular, the study sought to identify indications of "both the stated appetite and capacity for change, from incremental to transformational and the extent to which digital capacity underpins this" (Devine 2015, p.6).

The report concludes that "the overall pattern is something of a patchwork that does not present a picture of a higher education sector with a shared understanding or cohesive vision for digital capacity" (Devine 2015, p.8). Noting the existence of a gap between intentions or aspirations and attaching explicit targets to these, the report suggests possible reasons such as uncertainties about resources and budgets or a lack of clarity about the specific actions required to turn aspirations into reality.

Of particular relevance to the current study is the Capability category of the analytic framework used, which comprises three elements:

- availability of staff such as educational technologists to support TEL;
- professional development of academic staff in their teaching roles and
- development of the technical infrastructure to facilitate educational technology.

Continuing Professional Development for academic staff is the element where there is greatest agreement among the institutions. However, while 70% agree on its importance, only 40% of institutions have articulated explicit targets in their compacts. Given that this is reliant on support activities for TEL, which are available in the majority of institutions, the report expresses some surprise that the compacts contain little mention of the staff required to support TEL, with only four institutions indicating specific targets. It is a similar case for mentions of TEL infrastructure. The report suggests the relative absence of these from the compacts may indicate that these two elements are seen primarily as enabling small-scale bottom-up initiatives rather than supporting strategic objectives in this area.

In the second element of Devine's (2015) study, the senior academic leaders interviewed all had significant operational roles in relation to programmes and quality assurance, many being Registrars or Vice Presidents for Academic Affairs. While there was strong support for and recognition of the importance of CPD for academic staff, there was less evidence of strategic or top-down initiatives at institutional level in relation to integration of educational technology. Instead, institutions appear to rely on innovation deriving from bottom-up initiatives. The report assesses current approaches to educational technology as generally conservative, concerned with adding new capabilities to traditional approaches and placing emphasis on appropriate integration of technologies. That said, there appears to be agreement that digital learning needs to move from being an add-on to being fully integrated across the curriculum. Yet, this is not without its challenges. These academic leaders agree that institutions have tended to focus on bottom-up initiatives, supported by champions and educational technologists, and resulting in incremental change. They recognise that, to build sustainable digital capacity and to ensure a consistent student experience, institutions need to bring into the mainstream these innovative practices, which often exist only at module level. In addition to challenges related to funding for appropriate infrastructure, this movement will bring challenges around organisational culture and change. These leaders also expressed concern about scalability, recognising that current numbers of support staff will not be able to facilitate the scaling up of initiatives or integration. The report identifies the number of educational technology specialists as "a real challenge, not just for reasons of cost or recruitment restrictions, but also because of the culture change at

faculty level that is required" (Devine 2015, p.17). It also notes that contract issues will need to be addressed, particularly in the Institute of Technology (IoT) sector where academic contracts are highly prescriptive in terms of class contact and schedules. The report concludes that, notwithstanding these challenges which severely constrain developments, there is evidence of a supportive stance on the part of senior academic leaders.

In 2018, the National Forum assessed progress in digital capacity since its establishment by reviewing developments in building digital capacity and examining perspectives of groups involved in influencing teaching and learning (NFETLHE 2018). One such group is the National Forum Associates, teaching and learning leaders chosen by their institutions to engage with the Forum in its efforts to enhance learning and teaching. This group reported increased showcasing and advocacy for informed use of digital technology in teaching and learning, improved structures, and longer-term contracts for learning technologists. However, while they agreed that progress had occurred, it was variable. For example, these leaders saw room for improvement in areas such as support for those who support digital teaching and learning, more flexible approaches to professional development, and a greater emphasis on digital teaching and learning in their institutions.

This study also sought the views of senior managers from 30 institutions, some of whom had been interviewed in Devine's (2015) study. Again, while these senior managers reported progress in key areas such as embedding digital practices, extending the reach of these practices and increasing the level of flexible delivery to address diverse needs, they noted that two challenges identified in the earlier study still remain: the planning and funding IT infrastructure and the scaling up of initiatives in the context of "ongoing system rigidities" (NFETLHE 2018, p.28).

Agreeing on the importance of a national vision for digital teaching and learning, these managers stressed that individual institutions will need to address this through "leadership and implementation targets that permeate through institutional units" (NFETLHE 2018, p.28). The report notes that thinking on digital capacity has continued to evolve towards organisational transformation. As it does so, these managers believe that focused attention on understanding and managing organisational change in this area is required.

In summary, the evidence suggests that in Irish higher education there is general acceptance and, in many cases, a positive disposition towards the need for institutions to embrace and integrate educational technology. However, it appears that, for many institutions, this has yet to translate into a strategic priority, requiring supporting structures and policies. Although there has been

success in integrating technology incrementally through small-scale initiatives and pilots, institution-wide integration has been less successful.

There is widespread agreement on the requirement for professional development and support for academic staff in the use of educational technology. Yet, the key issues of academics' lack of time for such professional development, the prescriptive nature of academic contracts in the IoT sector, and funding for infrastructure persist. So, too, with the challenge of insufficient personnel, such as educational technology specialists, to provide training and support.

Senior leaders, in particular, recognise that institute-wide integration will necessitate change in the organisational culture. It is also acknowledged that learning technologists and others who support educational technology are positioned to take on the role of change agents in bridging the gaps and helping make these aspirations a reality (NFETLHE 2018).

2.5 The roles and activities of educational technologists

Oliver (2002) included learning or educational technologists in the category of "new professionals" in higher education identified by Gornall (1999) as associated with the support of teaching and learning but not falling into the categories of academic, technical or non-teaching support staff. These roles were new to existing structures and assigned a range of titles. Particularly notable is the paradoxical marginality of the roles, frequently fixed-term and insecure, while simultaneously linked to strategic priorities and change processes. Noting the difficulty of finding an agreed definition of an educational technologist, Browne and Beetham (2010) point out that is usually represented as a list of activities and roles.

Beetham et al. (2001) examined the roles and activities involved in embedding learning technologies in UK higher education. Extrapolating from an audit of 23 institutions (approximately 25% of UK Higher Education institutions), they estimated that there were about 7,500 specialist staff working in this area, 4,500 of whom were working in central units and at least 3,000 in more peripheral locations in departments. The authors identified 11 distinct roles. Individuals frequently took on multiple roles, had a wide range of job titles and descriptions with sometimes poorly articulated functions, and operated on varying contracts and grades.

In a study of the roles and practices of six learning technologists, Oliver (2002, p.249) found that these were "shaped by a distinctive combination of autonomy, a lack of authority and responsibility for initiatives". While afforded relative autonomy and often left to their own devices, participants noted that they had little or no formal authority, relying instead on building goodwill and collaborations, and using persuasion to influence developments and decision-making. They stressed that the wide range of activities involved in the role were pedagogy-led

rather than technology-led, with an emphasis on improving pedagogy and, hence, the student experience. Also evident was a tension between the marginal nature of the roles and their frequently articulated importance for institutional change.

Understanding the context and tailoring the support provided for embedding technology was seen as a key element, with academics more likely to engage with technology if they could see the benefit for themselves and their students rather than having it imposed by institutional management. The roles primarily involved collaboration with different groups, an activity which made heavy demands in terms of time and yet often yielded intangible outputs. Importantly, these collaborative endeavours can be influenced by how learning technologists are perceived and the level of credibility they have with academics.

Browne and Beetham (2010) note that literature suggests that educational technology is central to strategies for enhancing the student experience. Yet, although staff development is almost universally regarded as critical to these strategies, they conclude that "the role of educational technology staff in delivering on these agendas is barely noted in the mainstream literature" (Browne and Beetham 2010, p.13). Despite educational technology being regarded by institutions as mission critical, this is "poorly translated into commensurate recognition for educational technologists" (Browne and Beetham 2010, p.5). The contractual and status position of many educational technology staff is "more likely to be at the margins of the HE labour market" (Browne and Beetham 2010, p.17), where they may be seen as "peripheral and expediently replaceable" (Browne and Beetham 2010, p.21).

As educational technology roles are less established than others, they are often hybrid in nature, falling between boundaries and categories, frequently operating below the radar. There is also a potential tension between their location in either central units or individual departments. Working in the latter allows technologists to establish closer links with a community of academics and better understand their context. However, there is also the risk that "going native" in this way can limit the role of such technologists whose expertise can be enhanced by working in different contexts.

Browne and Beetham (2010) assert that supporting transition and managing change are now at the core of the educational technology profession. In their roles, educational technologists work at multiple levels and locations within institutions, using skills of brokerage and negotiation, crossing boundaries, and building collaborative partnerships. In addition, participants in Browne and Beetham's (2010) study believed that educational technology work is incontestably academic. Yet, despite the growing status of educational technology research and the numbers

of educational technology staff engaging in academic activities, educational technologists rarely have academic status.

Echoing other studies, Shurville et al. (2009), in their review of literature on the roles and experiences of educational technologists, contend that their roles straddle both sides of the divide between academic and academic-related staff. They argue that the competencies required by educational technologists include change management, education, leadership, learning design, research, and staff development. They again point to considerable variation in their career paths and positions within institutions, noting that the latter can have implications for career progression. In particular, they suggest that hybrid academic-related positions can "lead to nowhere on either the academic or professional ladders" (Shurville et al. 2009, p.217). They see the precarious nature of educational technology roles as a systemic weakness that needs to be addressed to provide a sustainable career structure for educational technologists, particularly those in senior positions.

2.6 Educational technology roles in Irish Higher Education

In the Irish context, despite the strategic importance attached to embedding educational technology (Hunt 2011; European Commission 2014; NFETLHE 2015b), there is a dearth of research on educational technology-related roles (NFETLHE 2016). This may be due to the fact that such roles are not long established in Irish higher education and may not yet fit neatly into institutional structures (McNutt 2013; Oliver 2002).

McNutt (2010) examined the roles of a group of 23 educational technologists and academics who innovate in this area of Irish higher education. Focusing on their motivations and beliefs, the study concluded that, despite their roles being frequently viewed by others as technical or techno-centric, they primarily took a learner-centred approach to technology and were optimistic about the potential of educational technology to positively impact learners' experiences. In their efforts to achieve this goal, they use their ability to persuade and influence, key competencies identified by McNutt (2010), in working with academics. However, this involves a tension between promoting affordances of technology that may be of benefit to academics themselves, but which have the ultimate goal of benefitting students.

Their roles are a "balancing act" (McNutt 2013, p.117), requiring that they also negotiate tensions on other fronts. As advocates for technology, they navigate the tension between seeking to maintain a learner-centred pedagogical focus and aligning the use of technology with educational objectives while not being seen as promoting it for its own sake.

Noted previously by Oliver (2002), McNutt (2010) also detects a tension between the apparent marginal nature of the roles and their importance in influencing change. Despite being in a pivotal position at a "busy intersection" (McNutt 2010, p.145) between academics, administration and technical areas, these educational technologists describe a sense of powerlessness and the struggle to have their voices heard, resulting in a "frustration at not being listened to or not being valued" (McNutt 2013, p.120). Identifying this as a major challenge for future development of educational technology roles, McNutt (2013) recommends that such roles be recognised and valued as a professional career in higher education, one in which the practitioners are seen as "educators first and technologists second" (McNutt 2010, p.220).

More recently, a National Forum study focused on the backgrounds and work environments of 13 learning technologists from 13 Irish higher education institutions (NFETLHE 2016). Although the title "learning technologist" is used to describe their roles, it is notable that, despite there being a relatively small number of institutions in the sector, the titles varied considerably. Participants had come to their roles from diverse backgrounds, skills, expertise, and experience but with a shared commitment to learning design and pedagogical innovation, reflecting findings in earlier studies (McNutt 2010; Beetham et al. 2001; Oliver 2002; Browne and Beetham 2010).

Roles had grown organically, reflecting a bottom-up approach in response to institutional requirements. For 11 out of 13 participants, their roles were inconsistently or ill-defined, yet expanding, suggesting that "flux, uncertainty and unclear structures" (NFETLHE 2016, p.3) may be the norm rather than the exception. The report concludes that, in the absence of clearly defined structures and positions, the route to development and progression in the role, if any, is unclear.

Echoing previous studies (Beetham et al. 2001; Oliver 2002), 27 different areas of responsibility were cited with the main responsibility being staff support through one-to-one sessions and workshops (Murphy 2016). Technical tasks were also noted as a large part of the role resulting in a certain tension for some participants between performing technical tasks and enabling staff to carry out these tasks themselves.

The report identified some factors that affect the work of learning technologists:

- Unsurprisingly, a significant factor is the level of engagement by academic staff. However, as academic staff become more proficient and technologically independent, learning technologists can move beyond basic support activities.
- The level of engagement by staff is, in turn, dependent on there being strategic direction within the institution and support from management, indicating what is expected and valued.

- If learning technologists are to move beyond basic support and operational tasks, then institutional support must be reflected in the numbers of personnel and the nature of the contracts for those involved in this area.
- Factors relating to their campus profiles and work environment, such as structure, resources, access to senior management, and visibility on campus, can affect learning technologists' ability to successfully carry out their roles. An absence or a deficiency in these aspects can have a detrimental effect.

The report recommends greater institutional recognition for the work of learning technologists. It stresses the importance of a clear link between the strategic goals of institution in relation to educational technology and the level of support experienced by learning technologists. This link will be reflected in decisions on the numbers of personnel and the resources assigned to the integration of educational technology.

In relation to professional development, the report emphasises the importance of unstructured, non-accredited professional development, such as experimenting with new technology tools, staying current by reading blogs, journals, and social media. These activities are fundamental to learning technologists remaining up-to-date in their roles and, as such, should be recognised and valued as part of the role. In addition, the study identifies a need for accredited professional development to allow learning technologists to enhance their skills and create a professional identity, echoing McNutt (2010). It also suggests that collaborating and networking with colleagues in similar roles in other institutions should be seen as a core activity related to professional development in the role.

It is notable, however, that this report does not allude to a leadership or change management dimension arising in the interviews examining the roles and professional development needs of these learning technologists.

2.7 Working in the Third Space

Mitchell et al. (2017), in their analysis of advertised educational technology role descriptions in 13 Australian universities, categorise these roles along with those of academic developers and instructional designers as "Third Space" roles, as described by Whitchurch (2013; 2008). Third Space is an in-between space inhabited by academic and professional staff whose roles do not necessarily match the binary categories of academic and non-academic. A blurring of traditional boundaries means that these roles, which frequently originate in new forms of institutional activity such as cross-institutional projects, do not fit neatly into organisational structures (Whitchurch 2013). Those who work in this space may be professionals with an academic background but not an academic contract or academics who remain on academic contracts .

Thus, their roles are often "imprecisely articulated and understood in relation to institutional settings" (Whitchurch 2015, p.82).

Based on a study of 42 higher education staff with mixed professional and academic roles in nine institutions in Australia (2), the UK (5) and the US (2), Whitchurch (2015; 2013) identified paradoxes and dilemmas that affect the identities of those who work in third space roles. These include:

A safe and risky space	• Safe in that it may not be impacted to the same extent by organisational pressures and may allow those to be questioned. • The lack of clear boundaries can be challenging and exhausting. • The effort required to negotiate organisational issues can lead to frustration. • Being detached from formal structures can bring a sense of isolation, which can be further exacerbated by the lack of interaction with like-minded people and a lack of social capital within the organisation. • The latter can be addressed by building of external networks.
Academic credentials but not an academic	• Academic experience and qualifications such as a doctorate, although perhaps not necessary for the role, lend credibility. • Yet, one may still not be regarded as a "real academic". • Credibility may also be affected by organisational position. • Being less affected by organisational constraints may provide an increased sense of authenticity.
Non-partisan yet politically aware	• Operating at organisational interfaces requires that one be cognisant of political issues and tensions in the organisation. • This can involve a delicate balancing act in which one attempts to be impartial and objective, requiring political nous.

	• The ability and the confidence to express an independent view is considered valuable. • The extent of one's influence can be dependent on how one is perceived by others.
People-oriented but diffident about managing others	• Involves a strong people orientation, reflected in serving others and team members yet a diffidence about managing others and being seen in a supervisory role. • Relationships with one's own team is seen as a partnership of equivalents, where, rather than exercising authority, the focus is on mentoring, guiding, and building confidence and competence. • This is also reflected in how they wished to be managed themselves, appreciating a level of autonomy.
Managing through leadership	• Leadership is viewed primarily as empowering others through the building of relationships to motivate and bring others along and facilitate change. • This leadership requires interpersonal and negotiating skills for communicating in different directions within the organisation and beyond. • Within a team, leadership is seen as being shared by members. • This approach to leadership and management might be described as "leverage", involving the use of influence and persuasion.
The institutional interface	• Some roles are well-defined and intentionally designed into existing structures; others are so ill-defined that individuals have to carve out their own niche within the organisation. • Agency involves striking a balance between being limited by the constraints of institutional structures and the scope afforded by low visibility or ambiguous positioning to decide on courses of action.

	• Structures are seen as a way of getting things done, with projects often succeeding in spite of rather than because of these structures.
Parallel tracks	• Being outside organisational structures can mean that activities often take place parallel to formal structures and processes. • One may have to contend with historical issues, political tensions, and possibly personal agendas, frequently bridging the gap between local initiatives and institutional policies.

Table 2.1 Third Space paradoxes and dilemmas (Whitchurch 2015)

Whitchurch (2015) concludes that, while they may be frustrated by certain aspects of their roles, Third Space inhabitants are attracted at the prospect of making a difference, undertaking research-oriented activity, and shaping their roles. In addition, the inherent ambiguity of these roles may be seen as an opportunity rather than a threat.

2.8 Academic Developers working in the middle

The more established, yet still relatively new, role of academic developer (Debowski 2014), which has evolved since the early 1970's (Gibbs 2013), appears to be positioned in this in-between space (Sugrue et al. 2018; Little and Green 2012). Also known as educational developers or faculty developers (Green and Little 2016), they, like educational technologists, have a remit to change academic practice. Thus, their experiences in leading change and negotiating their roles may provide valuable lessons for the work of educational technology specialists.

Little and Green (2012, p.214) suggest that,

> *"much of academic development exists in a liminal state, located between and among other units, as simultaneously inside and outside, and neither completely dominant over, nor subordinate to, other overlapping cultures within a given institution, but lying 'betwixt and between'".*

Despite initially assuming that marginality would have negative connotations, they now envisage that developers can act *from* the margins, between different cultures, without being marginalised. Distinguishing between developers working in the margins and being marginalised, they see the latter as a state which is imposed and disempowering resulting in them being peripheral or insignificant and their work being marginally important. Using the image of a margin as it occurs in between the pages of a book, rather than the margin on the outside of a page, Little and Green (2012) refer to academic developers working in the margin in

the middle, a "central" yet marginal role. They argue that this space in the margins may be one that academic developers choose to occupy due to the possibilities it may offer, a space where they may be able to operate with integrity and authenticity. However, they suggest that it can be difficult to distinguish the centre position from the periphery due to factors such as "institutional priorities, the status of individual developers; the roles they play as managers or course leaders; the structural settings of their units; the temporary nature of some developers' contracts; their varied disciplinary provenances; and the disparate activities that developers undertake" (Green and Little 2013, p.527) – factors which mirror those affecting the roles of educational technologists.

Using Stonequist's (1937) work on marginality in migrant and minority populations, they propose a framework (Green and Little 2013) to assist academic developers in understanding their identities and negotiating the institutional terrain. This framework (Figure 2.1) comprises two dimensions along which academic developers work. The vertical dimension addresses structures within which developers work and ranges from senior management to teachers and researchers. The horizontal dimension distinguishes between two categories of discipline, differentiated by their epistemological stances. They argue that extramural disciplines, such as medicine or engineering, focus on subject areas beyond the institution whereas intramural disciplines, such as higher education studies, focus on the university itself. Individual disciplines, then, may be positioned at different points along this horizontal continuum.

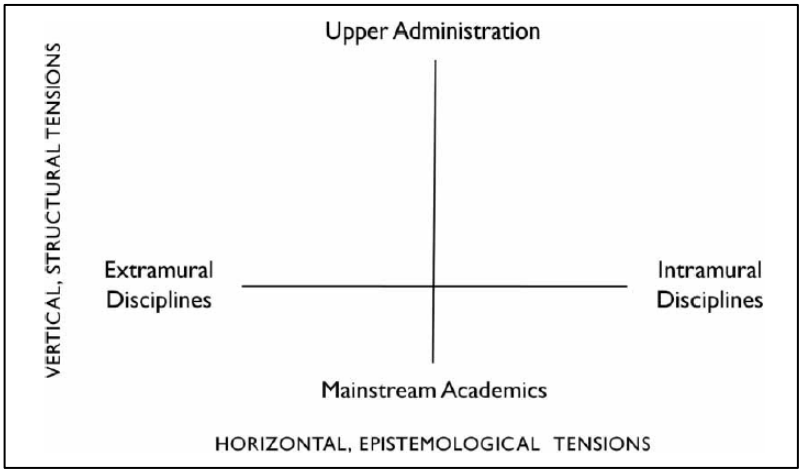

Figure 2.2 Academic Development Marginality Framework

(Green and Little 2013, p.527)

Green and Little (2013) suggest that academic development activities occur at different points on this diagram, with developers being distinct from each group and located at different points relative to each axis, depending on the context. They argue that the level of marginality of

academic developers will depend on where they are positioned in relation to the dominant groups along either dimension.

Describing academic developers as academic migrants who have moved into this territory from another discipline, Green and Little (2013) draw parallels with the migrant and marginal people in Stonequist's (1937) model. As such, they have left one group but have not fully adjusted to the new group with which they live, being on the margins of each and members of neither, echoing Manathunga's (2007) notion of unhomeliness. To explore how academic developers might navigate their positions along each of the axes, Green and Little (2013) have adapted the three forms of adjustment which, Stonequist argues, marginal or minority people adopt in such situations. These accommodations are:

- **Nationalist** - one identifies with the subordinate group while advocating for and possibly leading it;
- **Intermediary** - one acts as mediator between the groups, representing the positions of each to the other; and
- **Assimilation and passing** - one is completely integrated into the dominant culture or passes as a member while possibly feeling an outsider.

They suggest that by fluctuating between these roles developers may be able to act in a deliberate, effective, and authentic way.

Green and Little (2013) use the metaphor of an isthmus, a strip of land connecting two landmasses and separating two bodies of water, to capture the complex landscape that academic development occupies. This "isthmus of academic development" (Green and Little 2013, p.533) lies between the oceans of senior management and academics and connects the territories of extramural and intramural disciplines (Figure). Academic development, while situated in the middle, belongs to neither landmass nor is it a body of water.

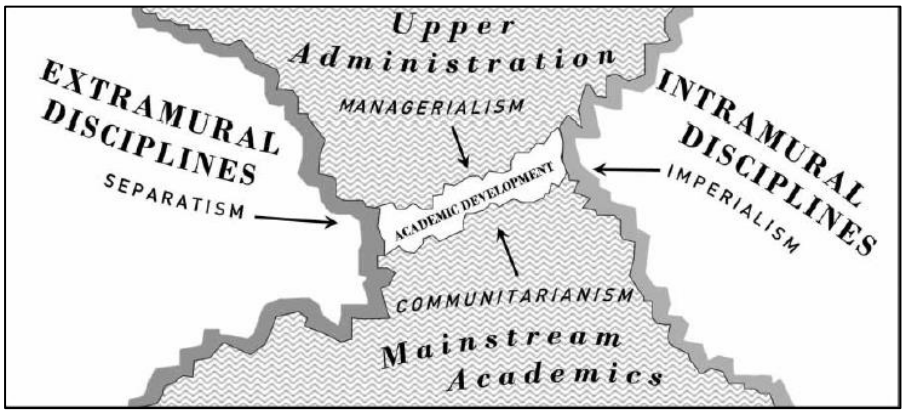

Figure 2.3 Isthmus of Academic Development
(Green and Little 2013, p.534)

They suggest that living in this terrain requires developers to frequently gauge and adjust their approaches, possibly being an intermediary in one context and an advocate in another. As they navigate this terrain, they may sometimes be in a vulnerable or precarious position on the margins, possibly mirroring difficulties highlighted by Stonequist (1937) for marginal identities, which include double consciousness, an inferiority complex, and divided loyalty. Green and Little also warn of the danger of developers seeking to "colonise" other territories with their own views. In addition, developers may only have "tangential involvement" (Green and Little 2013, p.534) in policy-making, left on the sidelines in relation to decisions despite their pedagogical expertise and familiarity with relevant research. They may see evidence-based recommendations ignored, becoming an "unwitting fig leaf of due diligence and credibility" (Green and Little 2013, p.535) in such situations. Such encroachments, albeit subtle ones, into their territory, resulting in reduced influence, can lead developers to adopt reactive and defensive positions.

However, Green and Little (2013, p.535) point to advantages of working in these margins, suggesting that "while geographically insubstantial, isthmuses sustain a strategic importance as a crossing place or shortcut between zones". Locating themselves at these intersections, academic developers, by looking in different directions, may have an independence which allows them to be "constructively critical" (Green and Little 2013, p.535) and act as collegial provocateurs or benevolent subversives. The academic developer can be one "who spots discrepancies and contradictions, who names or questions the unspoken agendas, and who plays devil's advocate to sharpen colleagues' thinking if no alternative viewpoints materialise" (Green and Little 2013, p.535). Thus, developers can assess a situation, position themselves as proactive, and exercise agency, even subversively, to promote change.

In a small-scale study, Little and Green (2012) examined the vertical dimension of their framework against the experiences of 15 developers, mainly directors of units or programme leaders, working in institute-wide contexts. In doing so, they sought to establish the extent to which this hierarchical dimension, ranging from senior administration to academics, might explain the behaviours of academic developers who move along this continuum (Figure 2.1), working in the margins.

For most participants, being in this marginal space was a positive experience, providing independence and the privilege of being involved at multiple levels. For others, however, it brought a sense of powerlessness and marginalisation. For two participants, where teaching was valued in their institutions or their input was sought, there was little sense of being marginal.

Based on these findings, Little and Green (2012) added a scoping phase to the original framework, resulting in the following categorisation of the approaches developers say they use.

Scoping: Developers seek to understand particular contexts through a process of scoping or getting a feel for a situation, maintaining judicious silence and listening to getting the lay of the land, as it were.

Advocating: Many respondents saw advocacy for under-represented groups, such as academics and students, as a key part of the role, representing those whose voice may not be heard in decision-making processes. This also involved being proactive in championing ideas related to good practice, taking the role of activist or lobbyist.

Intermediary: This role was seen by some as the essence of their work, allowing them maintain a neutrality or independence. Participants embraced this role, extending it to include acting as translators, mediators, or brokers who connect groups, bridge gaps, and facilitate conversations.

Assimilation: Participants were resistant to the idea of assimilating or merging into the dominant group, either management or academic, where they may be seen as too closely aligned with the group, possibly leaving them feeling compromised.

Passing: Passing involves fitting in and speaking the language of the other group. For some participants, this had negative connotations of secrecy, hypocrisy or, at the very least, camouflaging behaviour. For others, it was a feature of their roles. However, as opposed to assimilation ,which appears a more permanent position with undertones of "selling out" (Little and Green 2012, p.212), participants seemed to view the conscious adopting of passing role as a temporary, "short-lived masquerade" (Little and Green 2012, p.213).

Green and Little (2013) conclude that, in taking a marginal position and staking a claim to these in-between spaces, they can act as advocates, brokers, and bridge-builders (Sugrue et al. 2018). In doing so, developers can act with integrity from within the margins without being marginalised, placing them in an advantageous position from which to lead change.

2.9 Academic Developers as Leaders of Change

As the work of academic developers has evolved from supporting individual academics to include a broader institutional focus (Taylor and Schönwetter 2002), Dawson, Mighty and Britnell (2010) argue that they are increasingly seen as a resource for leading change in relation to learning and teaching. While change management has been identified as a key competency for directors of teaching and learning units in particular, Dawson, Mighty and Britnell (2010) also contend that, irrespective of their position, all academic developers can effect change. In extending their focus

from the micro level of one-to-one support and workshops with academics to one which influences institutional approaches, academic developers are moving from the periphery to the centre in terms of organisational change. Taylor (2005, p.31) places academic development within the leadership domain, arguing that it involves a "complex and challenging leadership role", which requires key competencies in change management. However, developers themselves feel less knowledgeable about this than other aspects of their role (Dawson, Britnell, et al. 2010). In addition, Dawson, Mighty and Britnell (2010) point out that few developers have senior positions, which may further limit their ability to shape and lead change, requiring instead that they rely primarily on their powers of persuasion.

Grupp (2014) draws on personal experiences as a director of a centre for Teaching and Learning to explain how academic developers can act as leaders of change, particularly in smaller campus settings. On the unique position of developers, Grupp (2014, p.55) concludes that,

> *some things cannot be imposed top down, yet they won't grow from the bottom up either. Somewhere in between administrators and faculty, where faculty developers may be located, is where much of the work of change can be done.*

Despite the challenges on a small campus due to limitations on staff, resources, and time, Grupp (2014) contends developers are still positioned to shape institutional culture, identifying three contributing elements of the role that can facilitate this: faculty development focusing on individual faculty, instructional development focusing on course design, and organisational development involving campus-wide initiatives. While developers are initially more likely to focus on the first two aspects, over time and with experience, they begin to focus on organisational development. Importantly, the quality and depth of interactions with academics in one-to-one or small group settings, discussing specific experiences, making incremental changes albeit with what may appear to be small numbers, raises the profiles of these developers and their centres, enhancing their credibility and laying the essential groundwork for broader institutional development (Grupp 2014).

Recognising that attempting to effect organisational change may have negative connotations of being "stuck in the middle", Grupp (2014, p.51) points out that "the middle may be the most desirable place to occupy, because that is where progress is made", echoing Little and Green (2012). This unique position allows developers to employ top-down and bottom-up approaches, working closely with academic leaders but also providing support to academics. Describing the small campus as a complex setting, where developers work collaboratively across the campus community, Grupp (2014) argues that not alone should they be poised to lead change from the middle but this position may be even more advantageous in such a setting as they may be well placed to make connections, facilitate conversations, and build relationships.

Facilitating such change was also identified as the purpose and essence of their work by all five participants in Timmermans' (2014) multiple case study of experienced academic developers from Canadian universities. This study classified three categories of threshold concept, or "ways of knowing and being" (Timmermans 2014, p.301) that guide developers in the change process. The first category comprises those that focus on facilitating change in academics' practices. Developers do this by respecting academics' expertise, appreciating their situations, and enabling them to realise their potential. A second category captures the work of developers in facilitating systemic change through exerting influence at multiple levels, providing guidance and advice, advocating, understanding change processes, and thinking and acting strategically. Finally, Timmermans (2014) identifies fundamental or core ways of knowing and being that permeate developers' activities. These include building relationships, reflecting, adopting a scholarly approach, communicating effectively, and appreciating and adapting to the various contexts within which they work.

In a more recent study involving developers from the US and Canada, Grupp and Little (2019) argue that, as academic development roles have expanded to include areas such as technology, policy and organisational culture, leadership, and change management, so too has the range of competencies required. While they identified meta-competences that mirror Timmermans' (2014) core ways of knowing and being, they also point to others that developers use to leverage change, such as being able to determine one's position and assess the institutional terrain, establishing credibility, earning respect and building trust using evidence-based approaches, and respecting colleagues' positions, particularly when working with individual faculty.

Echoing Whitchurch's (2015) description of leadership as leverage, Grupp and Little (2019) suggest that academic developers can be "levers for change" and, if effectively positioned in relation to an appropriate fulcrum or even acting as the fulcrum, can maximise their impact. Developers in their study, as in Grupp's (2014) earlier paper, suggested that their own unique in-between position may be a favourable vantage point from which to assess the institutional landscape and work in different directions vertically. Further, they need to discern when to advocate or remain neutral, striking a balance between being perceived as advocates for academics and students, and acting on behalf of administration (Manathunga 2007; Beach et al. 2016). Maximising their leverage requires that developers monitor and understand institutional dynamics, politics, perspectives, and priorities. While remaining true to their core values, their position in the middle allows them to move between the two territories of faculty and administration, frequently acting as interpreter or translator, facilitating conversations between territories in which the language may be very different. As they do so, they need to be adaptable and appreciate multiple perspectives as they navigate different contexts, effecting change

through a supportive and empowering approach rather than directing. In addition, participants highlighted the importance of humility, setting aside one's ego, remaining out of the limelight, and demonstrating a collaborative approach.

These approaches resonate with those identified by Taylor (2005) who, in exploring the leadership experiences of 23 academic development specialists in 17 Australian universities, concluded that the multiple dimensions of leadership in their roles involve a "synergy between variable characteristics of the person, the academic development role, development strategies, and institutional context" (Taylor 2005, p.44). While the competencies and approaches of these developers are similar to those discussed earlier, Taylor's study highlights a number of others. In terms of personal qualities, integrity, reflected by visibly working in the interests of student learning, was identified as essential. In relation to their roles, developers viewed them as academic endeavours in which they adopt an academic disposition, demonstrated by their academic expertise, scholarly work, and understanding academic culture. For this reason, developers believed they should be recognised with academic positions.

Yet, over a decade later Green and Little (2017), in collating data on academic roles in four countries, Australia, Canada, UK and US, found that an average of only 37% of academic developers held academic positions. While 46% of academic developers in the UK had academic contracts, this was the case for only 16% of US respondents. Although the authors expressed particular concern at this anomaly in the US, the differing contractual status of academic developers in other jurisdictions is also a cause of concern. Despite large proportions of academic developers having doctoral qualifications, teaching, and engaging in research, activities which enhance their credibility with academic colleagues, this apparent discrepancy between their work and contractual status persists for many. While the reasons for this are unclear, Green and Little (2017) suggest that if institutions, particularly those in the US, wish to promote educational change, then they need to reconsider this anomalous positioning of academic developers. Similarly, Sugrue et al. (2018, p.2346), in their systematic review of academic development, note a "particular silence in the literature" in relation to disparities in the status and location of academic developers within institutions. They stress that, as this work becomes more mainstream, these issues need to be addressed as a priority.

Thus, there are many facets woven into the fabric of academic developers' practice, reflecting their identity, credibility, and integrity, supporting Shulman's assertion that in carrying out their roles such professionals "not only have to understand and perform, they have to *be* certain kinds of human being" (Shulman 2005, p.3).

2.10 Distributed models of leadership

The Higher Education Funding Council for England (HEFCE) defines educational leadership as

> *agreeing strategic direction in discussion with others and communicating this within the organisation; ensuring that there is the capability, capacity and resources to deliver planned strategic outcomes; and supporting and monitoring delivery.*
>
> (HEFCE 2004, p.35)

In a learning and teaching context, the Australian Learning and Teaching Council (ALTC) defines institutional leadership as

> *contributing to an institution's capacity to effect change in learning and teaching either through specific roles and structural arrangements through the support of staff with expertise and passion who engage with colleagues to strengthen learning and teaching as part of their general duties.*
>
> (Jones, Lefoe, et al. 2012, p.69)

The HEFCE definition appears to be directed at those in formal and possibly more senior leadership positions whereas the ALTC definition reflects a shared or distributed model of leadership that is more directly relevant to the middle leaders who are the subjects of the current study. That said, leadership remains a "complex and contested notion and practice" (Devecchi et al. 2018, p.1) that is challenging to capture .

Distributed models of leadership have increasingly been espoused in higher education as an alternative to individual or leader-centric models (Bolden, Petrov and Gosling 2009). Described by Spillane et al. (2004, p.5) as being "stretched over the social and situational contexts" of an institution, this approach envisages leadership as a collective endeavour, dispersed across the organisation, rather than being confined to individuals in formal positions. Bolden, Petrov and Gosling (2009, p.260) point out that it offers a "powerful post-heroic representation of leadership and appears well-suited to complex, changing and interdependent environments" such as higher education. In many ways, this echoes Ramsden's assertion that leadership in universities is

> *a practical and everyday process of supporting, managing, developing and inspiring academic colleagues . . . leadership in universities should be by everyone from the Vice-Chancellor to the casual car parking attendant, leadership is to do with how people relate to each other.*
>
> (Ramsden 1998, p.4)

The de-facto devolution of the main responsibility for integration of educational technology to middle educational technology leaders such as the participants in the current study might be described as a distributed approach to leadership.

Bolden, Petrov and Gosling (2009), in a study involving 152 interviews with academic leaders at different levels in 12 UK HE institutions, examined how leadership of academic work is experienced at the school or department level. The majority of participants saw a necessity for distributed leadership as higher education leadership is "too complex and important to leave to a small group of individuals in formal roles" (Bolden, Petrov and Gosling 2009, p.261). The authors note, however, that despite this general acceptance, the concept varies in interpretation and even more so in implementation. Writing about the same study, Gosling et al. (2009, p.303) suggest that the term has become almost commonplace to the extent that "it is not really obvious what it refers to, and yet everyone seems to know what it means". They continue,

> *People using this phrase may have quite different notions of what it describes, and very different ideas about what it prescribes but at least they feel able to engage in conversation with one another.*
>
> (Gosling et al. 2009, p.306)

Bolden, Petrov and Gosling (2009) identify two interrelated approaches to distributed leadership - devolved and emergent. For most interviewees in their study, the experience of distributed leadership was one of devolution and delegation in which leadership responsibilities were assigned further down the institutional hierarchy. Thus, distributed leadership was coordinated from the top and rolled out across the institution. In an emergent approach, leadership is more informal, emerging from across the institution with individuals and groups taking on responsibility, recognising that everyone has a part to play in the leadership of the institution and echoing Ramsden's (1998) view. The authors suggest that the latter most closely resembles distributed leadership but appears to be much less evident in their data.

Despite acknowledging the necessity for a distributed approach, a majority of academic leaders saw it as essential to also have formal leaders who would provide vision and direction and monitor progress, to implement distributed leadership in practice, thereby giving others confidence that they are supported in their actions. The authors conclude that both approaches are necessary, with each being appropriate in different circumstances. The challenge, then, is to strike a balance between vertical and shared leadership. This chimes with approaches that combine these two aspects, such as the blended leadership (Collinson and Collinson 2009) or hybrid leadership (Gronn 2009).

Gronn (2009) proposes a hybrid approach suggesting that individual and collective approaches to leadership are necessary and complementary. Arguing that hybrid more accurately describes what occurs in practice rather than a purely distributed approach, Gronn (2009) suggests that a distributed perspective on leadership is only part of the picture and notes that formal leaders

also play key roles in distributed situations, resulting in a hybrid model that combines different degrees of individual and distributed approaches. Similarly, Collinson and Collinson (2009), in examining perspectives of effective leadership in the Further Education sector, found that employees valued a blended approach which combined elements of individual and collective approaches. They concluded that, rather than these two approaches being in opposition, a blend, which draws on practices from each, may be more effective.

In their evaluation of four distributed leadership projects in Australian higher education, Jones, Lefoe, et al. (2012), sought to identify a common understanding of distributed leadership in a learning and teaching setting. Echoing previous studies, they conclude that distributed leadership is hybrid in nature, involving a collaborative approach in which formal leaders and informal experts, including academics, executive and professional staff, work together. Such an approach can be enabled by a focus on "practices underpinned by valuing, trusting and enabling the input of many people who offer different forms and types of expertise, and greater preparedness to share responsibility for outcomes" (Jones, Harvey, et al. 2012, p.30) rather than a narrower focus on policies, procedures and structures. This focus on actions could be supported and sustained by a collective engagement in a cyclical reflective process. Davis suggests that this aligns with what she terms "Leadingful Leadership Literacy", a distributed approach that "moves the spotlight from the leader to the work of leading" (Davis 2012, p.117).

In their model of shared leadership, Fletcher and Kaufer (2002) present leadership as a relational process, occurring at different levels and dependent on social interactions and networks of influence. They envisage leadership as a set of practices that should be enacted by people at all levels rather than personal attributes of individual formal leaders. These practices are a collaborative effort involving "numerous acts of enabling, supporting, facilitating" (Fletcher and Kaufer 2002, p.22). While creating conditions for individual achievement, they focus primarily on collective achievement and shared responsibility, emphasising the interdependent nature of leadership with tasks and responsibilities of leadership distributed in multiple directions across the organisation. In this model, leadership is a social process key to which is mutual learning, shared understanding and, ultimately, action that can emanate from the interactions involved.

Interestingly, Fletcher and Kaufer (2002) note that actions which reflect relational leadership, such as acts of appreciation, availability, sharing information, or asking for help, sometimes may appear so routine that they are not recognised as acts of leadership. Rather, people who practise such skills of relational leadership are often seen not as leaders but as "nice" or "thoughtful" people.

In relation to the concept of distributed leadership itself, Gosling et al. (2009, p.303) conclude that, despite its prevalence in the discourse, it may not "hold up under scrutiny as a true descriptor of leadership practice within the sector". Nevertheless, it may have an important rhetorical value as it reflects a collegial view of higher education that may resonate with those in formal positions, offering an ideal to which they can aspire. However, it also includes "inherent ambiguity" (Gosling et al. 2009, p.306) with connotations of leadership "being distributed from above, like blessings from heaven or leadership emerging from distributed sources, like a river from its tributaries" (Gosling et al. 2009, p.306).

Bolden, Petrov and Gosling (2009) point out that, in reality, the concept has so many facets, including individual, formal, top-down, shared, bottom-up, and emergent aspects, which leads them to question if it is distinguishable from "leadership" as a description. However, they suggest that the multiple guises that distributed leadership has in practice may serve to highlight the many ways that leadership can be enacted across an institution.

In their examination of effective leadership in higher education, Bryman and Lilley (2009) took the innovative approach of seeking the views of 24 leadership researchers in UK higher education, anticipating that these researchers would offer a distinctive perspective as they applied their theoretical expertise to their experiences in their own institutions. However, they disappointedly found that these perspectives did not deliver the depth of insights expected. This may possibly be explained, they suggest, by the challenge of taking a reflexive approach to one's own familiar context rather than external organisations, as these leadership researchers normally do. Many of these researchers, believing that context profoundly influences leadership effectiveness and the competencies required, suggested that higher education is a distinctive context into which principles from other areas may not easily translate. That said, while no single aspect of leadership behaviour emerged as particularly effective, characteristics such as personal integrity and trustworthiness featured prominently. Other factors identified included supportiveness for staff, willingness to consult, displaying unambiguous values, having a clear sense of direction, protecting staff, and the fostering of collegiality.

For academic leaders in formal positions, such as heads of school or department, Bolden, Petrov and Gosling (2009) point to a tension between their identities as an academic and as a manager. Participants in these roles describe being torn between allegiance to one's academic colleagues and the broader institution. Similarly, Bryman and Lilley (2009, p.340) describe these leaders as being in the middle, positioned between "competing expectations of the centre and their departmental staff", sandwiched between requirements of institutional leaders and the expectations and needs of their own staff.

Where leadership is shared, it tends to involve delegation and devolution of decision-making. However, it appears that the location of budgetary control is a key issue, leading Bolden, Petrov and Gosling (2009, p.263) to conclude that "without devolution of financial control it is unlikely that a culture of shared or 'distributed' leadership will flourish". Gosling et al. (2009, p.304) explain,

> *Those devoid of budgetary control (or direct influence over those who control the finances) somewhat disempowered and frequently bypassed in decision making. . . . it appears that control of the financial resources is crucial to the experience of exercising leadership in mid-level roles in HEIs. More specifically, it is control of spending reserves, rather than simple accountability for pre-determined budgets, that makes a difference and also leads to an uneven distribution of power and capacity to influence.*

This is likely to be an issue for middle leaders, who may have been given the "blessings" of devolved responsibility while those in more senior positions maintain control of financial resources.

Jones (2014) critically analyses the applicability and effectiveness of a distributed leadership model by examining a multi-level distributed leadership approach in a large Australian university project relating to effective use of student feedback, an area identified as requiring change. Findings suggest that the distributed approach improved collaboration between academics, formal leaders, and professional staff at different levels and multiple directions across the university, allowing the expertise of a large number of people to influence change. However, while successful in this aspect, the decision-making process and power structure did not change, meaning that the project "relied heavily on endorsement, support and indeed continual public 'championing' from the formal leadership hierarchy" (Jones 2014, p.138). This leads Jones (2014) to argue that a distributed leadership approach should supplement rather than replace traditional individual leadership, echoing Bolden, Petrov and Gosling (2009) and Gronn (2009). Further, while the approach contributed to cross-institutional change in this context, its transferability to other issues or its sustainability in the longer term is uncertain. Importantly, Jones (2014) attributes the increased collaboration in the project not only to a distributed approach but also to the key role played by employing an action research approach. Through such an approach, involving action and reflection cycles, those engaged in the change process can learn to lead and effect change.

2.11 Learning for leadership

The key role of learning for leadership is highlighted in a seminal study by Scott et al. (2008), which sought to identify the capabilities of effective academic leaders in Australian universities. Having surveyed 513 senior learning and teaching leaders at different levels of formal

responsibility, ranging from Deputy Vice-Chancellor to Head of Programme, in 20 Australian universities, the researchers discussed the results at meetings and workshops with up to 600 other national and international higher education leaders to identify key implications for leading institutional change.

Describing change as a "complex learning and unlearning process for all concerned" (Scott et al. 2008, p.xiv), requiring those that promote it to address gaps in their knowledge and expertise, Scott et al. (2008, p.xiv) emphasise that the learning process involved in change "does not just happen – it must be directly assisted and deftly led". In their examination of leadership, they draw parallels, as does Ramsden (1998), between approaches, attitudes, and interpersonal strategies for leading change and those used by effective educators. Leadership involves facilitating change to learn new practices; teaching involves facilitating or leading change to extend students' learning. Leaders, they assert, also need to appreciate the importance of culture and context as they seek to create a supportive environment that fosters engagement with the learning needed to make the change. Further, "change, like learning, is a profoundly social experience" (Scott et al. 2008, p.xviii), which can be impacted positively or negatively by one's peer group. Such learning for leadership is enabled by the "large and small actions of many people working individually and collectively in relationship to change" (Childs et al. 2013, p.7). In this context, one senior leader speaks of the importance of modelling in "teaching, leading, parenting, everything" (Scott et al. 2008, p.85). Thus, Scott et al. (2008, p.85) assert that academic leaders need to

> *recognise that the top-ranking items for individual leadership capability are identical to the values that pervade a positive, change capable culture and, for that matter, a productive classroom. In this way individual and organisational capability are intimately connected.*

Analogies used by academic leaders suggest that,

> *leading is a complex, constantly changing, relatively uncertain and highly human endeavour; that not everything can be pre-planned or can be expected to turn out in the way intended; that leadership is a team not a solo effort; that culture ('the way we do things around here') counts.*
>
> (Scott et al. 2008, p.50)

While it may at times feel like an individual endeavour, it requires collaboration from multiple sources and, as some of these leaders' analogies suggest, it can be frustrated by an overemphasis on bureaucracy or when faced with resistance or lack of response.

Analogies used by some of those who primarily lead through influence, such as Directors of Learning and Teaching or Associate Deans, are relevant to the current study. For some of these

leaders, leading is compared to "being a minister in a church to which only the converted come", or "voting Labour in a safe Liberal seat" or "trying to drive a nail into a wall of blancmange" (Scott et al. 2008, p.51), underscoring the challenges they encounter in their endeavours and the frustration that these can bring, particularly in the face of resistance or disengagement.

Many leaders in the study report that their ability to lead as they would wish is often hampered by the context and culture in which they operate. They speak of not having room to lead due to the many demands made on them. These demands distract from the core purposes of their roles, leaving them little time to think and operate strategically. The study also notes that this culture can have similar effects on academics who are also limited in what they can do by time constraints.

Yet, Scott et al. (2008) conclude that, despite these frustrations, the majority of the academic leaders in the study persevere, continuing in their efforts to lead, guided in doing so by a moral purpose. However, they also note that analogies like "Groundhog Day" suggest the need for a focused and clearly shared vision that all can follow. In addition, they point to the need greater clarity of roles, alluded to by those leaders who spoke of the challenge of wearing multiple hats.

A particular challenge for leaders such as Directors of Learning and Teaching, who tend to have a cross-institutional role with limited authority or control of financial resources, is that funding may be attached to local units, such as schools and faculties rather than cross-institutional units such as their own (Gosling et al. 2009). These schools and faculties, in turn, may prefer to focus on their own priorities and budgetary requirements rather than taking a broader institutional focus. Therefore, these leaders need to be particularly adept at leading through influence.

The study concludes that,

> *leadership in universities is not something that happens 'at the top' - it must be spread appropriately and operate in an explicitly understood and complementary way throughout the organisation. It shows that everyone is a leader in their own area of expertise and that the institutions that manage change best have realised this.*
>
> (Scott et al. 2008, p.68)

Just as leading change involves learning for those implementing change in their practice, so too is leadership itself a learning process. In considering how leadership may be learned and developed, Scott et al. (2008) draw attention to Ramsden's (1998, p.254) assertion,

> *Leadership is a balancing act. We might wish it were systematic and predictable; in reality, it is disordered and episodic: and each leader's history is scattered with omissions, confusion and failures . . . This task cannot be taught. It can only be*

> *learned by doing the job, seeking feedback and instruction from colleagues, actively interpreting that information, and doing the job again.*

Arguing that effective leadership extends beyond competencies, which although necessary are not sufficient, Scott et al. (2008) contend that leaders need to be able to self-regulate their own leadership learning and development, looking at leadership from the inside out. Such "learningful dispositions" embody a "learningful leadership literacy" (Davis 2012, p.115), which recognises that learning is central to leadership.

When asked how best they might develop their leadership capacity, academic leaders identified this learning on the job as a key element, as Ramsden (1998) suggests. Rather than generic professional development approaches, these leaders seek opportunities to learn by doing, but supported by focused professional development which is

> *just-in-time, just-for-me; more focused on learning by resolving real-world problems and dilemmas of daily practice as they arise; that they need to use peer support more directly and foster reflection on experience . . . and be change-focused.*
>
> (Scott et al. 2008, p.102)

A further key insight from follow-up discussions and workshops to this study is the encouragement and support that the leaders in find in realising that their dilemmas and challenges are not unique to them but actually shared by many of their peers, with the study's empirical findings helping them make sense of their own experiences. In addition, while they identify the value of support networks for those in similar roles, they suggest that these are particularly important for those leaders who rely on influence, do not control resources, and have limited authority.

The report also recommends that professional development for leaders should follow a cyclical yet directed process of action learning cycles in which they identify gaps in learning, address these through practice-based learning and appropriately timed leadership development and support. This echoes the iterative process described by Jones, Harvey et al. (2012) in the context of distributed leadership – one of action, reflection on action followed by change and adjustment.

2.12 Chapter Summary

Jameson (2013) has identified a gap in educational technology leadership research at the intersection of educational technology and educational leadership. However, the term "e-leadership", which has emerged from the broader context of business organisations, may need to be refined or perhaps subsumed under a more appropriate term for educational contexts

(Arnold and Sangrà 2018). Recognising that such leadership can be exercised at all levels in an organisation, the current study focuses attention on those who tend to be charged with the responsibility to promote the integration of technology in Irish higher education, doing so from the "middle" of their organisations, often without formal positional roles. While the activities of such educational technology specialists have been reported in the literature, little attention has been given to their key roles as leaders of change, which parallels the work of the longer established roles of academic developers. To address this gap, the current study seeks to explore the experiences of this group as they endeavour to lead change in educational technology in their institutions.

The next chapter details the background and stages in the research design for the study. This includes its philosophical underpinnings, the overarching methodology, the data collection methods in each phase, and the methods of analysis and representation of the findings.

3 Methodology

This chapter describes the research design and implementation for the current study. Beginning with the philosophical setting for the study, it examines the underlying assumptions which guide the research. It discusses the background to Narrative Inquiry as the overarching methodology for the study, explaining the positioning of the study in the Narrative Inquiry space. It describes the phases of data collection, analysis, and representation of the findings. Finally, it outlines the steps taken throughout the study to ensure its trustworthiness, finishing with an overview of my own story to make visible the values and perspectives that I bring to the study.

3.1 Research paradigms

In embarking on this study, I am conscious that I come with certain beliefs and assumptions that inevitably shape the research process (Creswell and Poth 2018; Creswell and Plano Clark 2011). These principles and beliefs comprise the research paradigm for the study (Creswell and Poth 2018; Denzin and Lincoln 2005), the lens through which the researcher views the world for the purposes of the study (Guba and Lincoln 1994). This paradigm includes beliefs about ontology (how one views the nature of reality and what one believes can be researched), epistemology (what counts as knowledge and how one can come to know about reality), and methodology (how one can obtain this knowledge). It informs and impacts every decision made throughout the research process to the extent that it "influences what should be studied, how it should be studied and how the results of a study should be interpreted"(Kivunja and Kuyini 2017, p.26).

There are various approaches to representing research paradigms, with some authors representing them diagrammatically (Grix 2002; Crotty 1998) and others in table form (Creswell and Poth 2018; Lincoln and Guba 2000). Authors also differ as to whether epistemological or ontological assumptions are the starting point in defining a paradigm. While some authors such as Crotty (1998) include ontology as a part of epistemology in a research paradigm, Grix (2002, p.179) argues that while "the two are closely related, they need to be kept separate, for all research necessarily starts from a person's view of the world, which itself is shaped by the experience one brings to the research process". Grix suggests that it is only when we make explicit our ontological assumptions about what constitutes reality and, thus what can be researched, that we can proceed to examine the epistemological assumptions about what we can know about it. Yet, both are fundamental to the process as it is "our ontological and epistemological positions that shape the very questions that we may ask in the first place, how we pose them, and how we set about answering them" (Grix 2002, p.179)

Grix (2002) presents the following diagram adapted from Hay (2002, p.64) to represent the research paradigm, but cautions that its directional and logical relationship between the

components may provide an over-simplification of the nature of the relationships between the various elements.

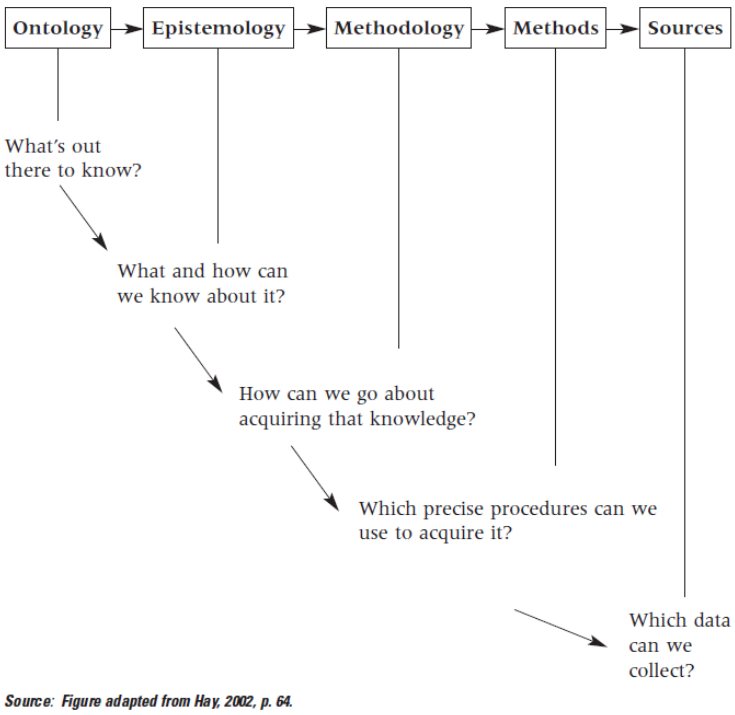

Figure 3.1 The building blocks of research
(Grix 2002, p. 180)

Nevertheless, it can be argued that, while it may be "somewhat mechanistic and rigid to suggest a directional relationship between the key building blocks of research, … this simplified overview can help to demystify an often impenetrable discussion" (Grix 2002, p.179).

Grix (2002, p.179), in pointing out that the choice of methodology is underpinned by the researcher's ontological and epistemological assumptions, also stresses that "what the figure does not show is the impact and influence of the questions one is asking, and the type of project one is undertaking … on the methods chosen". In relation to methodology, Crotty (1998, pp.13–14) notes that "in a very real sense, every piece of research is unique and calls for a unique methodology. We, as the researcher, have to develop it . . . [and] forge a methodology that will meet our particular purposes in this research".

What the various representations of research paradigms have in common is their emphasis on the importance for the researcher of making these elements explicit so that the research process can be scrutinised and defended. Kim (2016) compares our grappling with these aspects to walking in the swampy lowland that is full of dilemmas, challenges, complexities, and puzzles. During this process, we must at the very least identify these assumptions and, importantly, interrogate ourselves by questioning our taken-for-granted truths and accepted values (Creswell and Poth 2018). In Crotty's (1998, p.17) view, "without unpacking these assumptions and

clarifying them, no one (including ourselves!) can really divine what our research has been or what it is now saying". Therefore, to ensure the coherence and rigour of the study, it is essential, then, that not only am I aware of these assumptions and beliefs but that I articulate these and the extent to which they may influence the research.

As the current study examines the experiences of the participants, it will be guided by an interpretivist paradigm. It seeks to understand these lived experiences from the perspective of those who live them and the meaning that they attach to them (Andrews 2012; Cohen et al. 2011). An interpretive approach recognises that to understand such experiences, we are dependent on interpreting the words and actions of the participants, as we can never fully walk in their shoes. A key tenet of this approach is that social phenomena and their meanings are constructed by those who interpret them. Hence, the interpretivist paradigm is often also called the constructivist paradigm.

Characteristics of this paradigm, as outlined by Cohen et al. (2011, pp.219–220), include:

- "*humans actively construct their own meanings of situations;*
- *meaning arises out of social situations and is handled through interpretive processes;*
- *behaviour and, thereby, data are socially situated, context-related, context-dependent and context-rich. To understand a situation, researchers need to understand the context because situations affect behaviour and perspectives and vice versa;*
- *realities are multiple, constructed and holistic;*
- *knower and known are interactive and inseparable;*
- *the attribution of meaning is continuous and evolving over time*".

In the following sections, I will outline the key elements of the interpretivist-constructivist research paradigm which has guided the design of the current study.

3.2 Philosophical setting of the study

The overarching research question for this study is "What can be learnt about educational technology leadership from the voices of those who work in "the middle" of implementing institutional change in Irish Higher Education?". In seeking to answer this question, the study examines the experiences of these leaders, an endeavour grounded in phenomenology, a philosophical approach to the study of human experience (Smith 2016). To better understand the principles which have guided the design of the study, it may be useful to briefly consider some perspectives on phenomenology which emanated from the work of Husserl and were further developed by philosophers such as Heidegger and Merleau-Ponty.

Husserl (2001, p.168) argued that in examining how humans experience phenomena we should focus on things in their own right, going "back to the things themselves", resisting our tendency to fit them into our pre-existing conceptions. The emphasis in Husserl's view of phenomenology is primarily epistemological and is concerned with an individual inquiring into his or her own experience rather than that of others. In doing so, it is necessary for the person to recognise, and then set aside, or bracket, taken-for-granted assumptions and preconceptions that may impinge on the experience. The uncovering of the essence of an experience for an individual may, in turn, help illuminate inquiry into the experiences of others but this is not its primary focus.

Heidegger, rather than focusing on an individual's inquiry into the essence of a phenomenon, was more interested in the experience of "being" in the world and what it is like as a human to "be" in the world. He used the term "Dasein" to refer to the uniquely situated quality of "human being". In Heidegger's view, humans live in particular contexts and it is through the activities and relationships that constitute these contexts, that human experiences are made meaningful. Intersubjectivity, which refers to the shared and relational nature of our experiences of the world, accounts for our ability to make sense of the world and enables us to communicate with each other. Further, viewing inquiry as an interpretive process, Heidegger also emphasises that the temporal dimension of the contexts must be considered in making meaning of experiences (Smith et al. 2009).

As with Heidegger, Merleau-Ponty emphasises the situated and interpretive aspects of how humans can know the world and contends that our perception of others always develops from our own point of view, as we see ourselves as different from everything else in the world (Smith et al. 2009). In addition, we can never share entirely in the other's experience because experiences are always personal to the person experiencing them. Even though we can observe and experience empathy for another, we can never really walk in their shoes. For the other, experiences are lived through, whereas for the observer these are only displayed. Inquiring into the experiences of others, therefore, will involve interpretation which needs to be contextualised, because "we are not fully transparent to ourselves, nor is the social world fully transparent to us" (Gorski 2013, p.662).

Smith et al. (2009) note that Husserl's work established the importance of focusing on experience while Heidegger and Merleau-Ponty saw the person as immersed in a world of objects, relationships, and other facets of their particular context. They maintain that inquiring into experience has an interpretive dimension, which recognises that such inquiry is not done in

isolation but must also consider the web of relationships in which the person lives and through which they see the world.

In the following sections, I will attempt to make explicit the key assumptions that underpin the current study beginning, as Grix (2002) suggests, with consideration of ontological assumptions.

3.3 Ontological assumptions

Ontological assumptions are concerned with what we believe constitutes reality and, hence, what we may be able to know. They are the "assumptions we make in order to believe that something makes sense or is real, or the very nature or essence of the social phenomenon we are investigating" (Kivunja and Kuyini 2017, p.27). This raises the question as to whether there is an objective reality to a phenomenon, which exists independently of individuals, or if the meaning of such a phenomenon depends on how it is constructed by individuals and shaped by their context, including language, culture, and social interactions (Scotland 2012). The former is a realist position which posits that there is a single independent reality which we can come to know. This contrasts with the relativist position, which holds that there are multiple realities dependent on the meanings that individuals attach to them.

Implicit in seeking to examine the experiences of educational technology leaders is the assumption that there is not simply one definitive answer to the research question. Rather than a single reality or answer to be uncovered in addressing the question, there will be multiple versions of the reality, depending on participants' experiences which are, in turn, dependent on their individual contexts. From this perspective, as Crotty (1998, p.64) points out, "we need to recognise that different people may well inhabit quite different worlds. Their different worlds constitute for them diverse ways of knowing, distinguishable sets of meanings, separate realities". Therefore, I am adopting a relativist approach in assuming that there are many different possible constructions of reality. However, while this may be the case, there may be common threads that emerge from their experiences just as there will also be differences, reflecting the various facets of the experiences of these leaders.

The question then arises as to how one can come to know about these realities as constructed by participants, in other words, the epistemological assumptions underlying the study.

3.4 Epistemological assumptions

Epistemology is concerned with the nature of knowledge, what counts as knowledge and how we know what we know. A central tenet of the current study's interpretivist paradigm is the epistemological position that meaning, or knowledge, is constructed through our cognitive

processes rather than simply being discovered. Furthermore, this knowledge has a social dimension involving interactions with others and the world around us.

Crotty (1998) refers to this stance as *constructionism*, an epistemological position which recognises this key social dimension. He contrasts this with *constructivism*, which he describes in terms of meaning making by individuals. Noting that the terminology around these terms is far from consistent, Crotty defines constructionism as the view that,

> *all knowledge and therefore all meaningful reality as such is contingent upon human practices being constructed in and out of interaction between human beings and their world and developed and transmitted within an essentially social context.*
>
> (Crotty 1998, p.42)

Thus, while constructionism points to the unique experience of each of us and suggests that each one's way of making sense of the world is valid, it also recognises "the social origin of meaning and the social character with which it is inevitably stamped" (Crotty 1998, p.52). As humans, we see the world not only through our own cognitive processes but also through "lenses bestowed on us by our culture. Our culture brings things into view for us and endows them with meaning and, by the same token, leads us to ignore other things." (Crotty 1998, p.54).

Therefore, in the current study, I am adopting a constructionist or social constructivist view of knowledge, explicitly recognising the key social dimension in the construction of knowledge and aligning with Crotty's view of constructionism. However, in naming this position, I am conscious of Miles and Huberman's reminder that such positions are often located in the blurred boundaries, between the rocks and hard places of different stances as they assert,

> *In epistemological debates it is tempting to operate at the poles. But in the actual practice of empirical research, we believe that all of us – realists, interpretivists, critical theorists – are closer to the center, with multiple overlaps.*
>
> (Miles and Huberman 1994, p.4)

The epistemological position adopted here aligns, in turn, with the ontological stance outlined above that, by individuals constructing their views of phenomena, multiple views of such phenomena can emerge.

3.5 Axiology

Recognising that what the researcher considers to be of value and worthwhile (Hiles 2012) can affect all aspects of a study, Guba and Lincoln (1994) emphasise the importance of outlining one's axiological stance. As their thinking on this has evolved, they have further highlighted the critical importance of axiology, warning that it should not be subsumed under the headings of

epistemology or methodology. Instead, values need to be discussed and critically explored in their own right (Guba and Lincoln 2005; Hiles 2012). More recently, Lincoln et al. (2018, p.132) have reflected that "if we had to do it all over again, we would make values or, more correctly, axiology (the branch of philosophy dealing with ethics, aesthetics and religion) a part of the basic foundational philosophical dimensions of paradigm proposals".

In this study, as I am an active participant in the process of interpreting the meanings that participants attach to their experiences, I must be conscious that the resulting interpretation is likely to be influenced by factors such my background, my context and experiences, and the values that I bring to the study. Therefore, it is essential that I attempt to articulate my own values and remain conscious of how these may impact on in the study. It is crucial also that I recognise my position within the research and how it might affect the process, acknowledging that the knowledge produced is not independent of the researcher (Berger 2015), and, in this way, enhance the quality of the research and the credibility of its findings (Cutcliffe 2003). In addition, rather than simply acknowledging the role played by my values in the process, this is an aspect of the study that I must monitor and make explicit at all stages. Berger (2015) advises that, at a minimum, this can be done by providing transparent reports of decisions and their rationale.

Adopting a reflexive approach to my position in this study will allow me to mitigate the potential impact of my personal values on the process. This reflexivity is a "process of continual internal dialogue and critical self-evaluation of the researcher's positionality as well as active acknowledgement and explicit recognition that this position may affect the research process and outcome" (Berger 2015, p.220).

A crucial aspect of this study is my position as an insider, as it were, in the area of educational technology. My role as e-Learning Co-ordinator in my own institution has much in common with the roles of many participants in the study. Also, as the number of colleagues working in this area nationally is relatively small, a sizeable proportion of the participants are known to me through collaborative projects, conferences, and other networking events. This position, in which I am studying the familiar, can provide advantages for the study such as easier access to potential participants, a knowledge of the area being studied, and appreciation of the nuanced reactions of participants (Corbin Dwyer and Buckle 2009; Padgett 2008; Kacen and Chaitin 2006). Furthermore, my role in my own institution and my familiarity with educational technology issues has informed the design of both the survey and interview questions. In the interview process, this shared experience helped in building trust and rapport with the participants, allowing me to probe more deeply into areas of particular interest. However, to balance this, I was careful not

to unduly shape or influence the conversation in particular directions. While my role may have allowed me to understand and empathise with experiences of participants, I was also conscious that the participants might frame their responses based on the knowledge that I am involved in the area. In some cases, this could result in them being more open. In others, it could result in a reticence or reluctance to let the barriers down to expose their vulnerabilities and concerns.

While sharing a common experience in terms of role may have allowed me to develop insights and identify nuances in the data from the study, I was mindful throughout that I must not allow the conduct of the study and the interpretation of data to be influenced by my own perspectives (Corbin Dwyer and Buckle 2009). Furthermore, it was essential that I mitigate the risks that my familiarity with the area may have involved, such as "blurring boundaries, imposing own values, beliefs and perceptions … projection of biases" (Berger 2015, p.224). Berger (2015) also points out that participants may omit information on the assumption that it is already familiar to the researcher and, similarly, the researcher may take certain similarities for granted and thus overlook aspects of a participant's experience. To address these potential issues, Holloway and Wheeler (2009, p.5) suggest that researchers should "question their own assumptions and act like strangers to the setting or as 'naïve' observers", thus making the "familiar strange".

The challenge, then, is to exploit the intimate familiarity and, hence, potentially deeper understanding that my own experience can offer while, at the same time, being careful not impose this on the study's participants (Pillow 2003). Ongoing critical reflection on my own position in the study and how it might potentially influence the outcomes has, therefore, been an essential aspect throughout the study (Holloway and Wheeler 2009; Guillemin and Gillam 2004).

3.6 Theoretical framework for the study

This section provides an overview of the theoretical framework which has guided the scope and design of this study in an effort to ensure coherence in its implementation (Green 2014).

The study is anchored in the seminal paper by Jameson (2013) in which leadership in educational technology was identified as an underdeveloped area of research. Although situating the work in the concept of "e-leadership" as defined by Avolio et al. (2000), Jameson points out this term has been little used in higher education contexts. Jameson (2013) focuses on e-leadership in relation to educational technology or "educational technology leadership". Located at the intersection of leadership and educational technology, such is the importance of educational technology leadership that Jameson (2013) identified it as an area which should be included in a fifth "age" of educational technology research (Winn 2002). In responding to Jameson's call for research in this area, the focus of this study is on the leadership involved in integrating

educational technology into higher education practice. Although commitment to such leadership is required at all levels in higher education institutions (Jameson 2013), this study focuses, in particular, on the experiences of those who have responsibility for leading educational technology change from the middle of their institutions., where Jameson (2013, p.911) suggests that such leadership is "almost invariably delegated". In examining educational technology leadership in the "middle", the study is also guided by Arnold and Sangrà (2018) who examined the extent to which e-leadership had emerged as a lens to study leadership in educational technology since Jameson's paper. They concluded that the concept has a variety of interpretations and should be refined or even replaced with a more appropriate and less ambiguous term. Like Jameson, they identify a need for further research into leadership required to integrate educational technology in higher education.

Thus, rather than adopting the term "e-leadership", this study uses with the term "educational technology leadership" as a starting point with a view to examining what can be learned about it from the experiences of those who lead educational technology change from the middle. In doing so, it also recognises the need to refine the term further in the absence of an overarching definition of leadership in educational technology (Arnold and Sangrà 2018).

The research question and sub-research questions (Section 1.4) have been informed by the seminal study by Scott et al. (2008) which provided insights into leading academic change from the perspective of senior higher education leaders. Thus, the research questions focus on challenges encountered, approaches that are effective in addressing these, the supports educational technology leaders require to effect change, the ways these leaders manifest their leadership in their practices, and the influences on this leadership (Figure 3.2). In particular, the design of the online survey in Phase 1 has been guided by the approach in Scott et al. (2008), although the focus of particular questions inevitably differs due to the different context.

Figure 3.2 Overview of research question and sub-research question areas.

The study design and scope were also framed based on key areas of focus and insights from the literature in a number of related areas. These included:

- National reports on the educational technology landscape in Irish higher education (NFETLHE 2018; NFETLHE 2016, Devine 2015; NFETLHE 2015b);
- Roles and activities of educational technology specialists (NFETLHE 2016; Browne and Beetham 2010; McNutt 2010; Shurville et al. 2009; Oliver 2002; Beetham et al. 2001);
- Related roles including the concept of working in Third Space roles (Whitchurch 2008; 2013; 2015) and parallels with Academic Developers leading change from the middle (Sugrue et al. 2018; Timmermans 2014; Grupp 2014; Little and Green 2012; Green and Little 2013; Taylor 2005)
- Distributed or shared approaches to leadership (Fletcher and Kaufer 2002; Spillane et al. 2004; Harris and Spillane 2008; Bolden, Petrov and Gosling 2009, Jones, Lefoe, et al. 2012)

These key areas, in turn, provided a lens through which to examine the data from the online survey and the more in-depth semi-structured interviews.

An overview of the framework used to guide the study is shown in Figure 3.3.

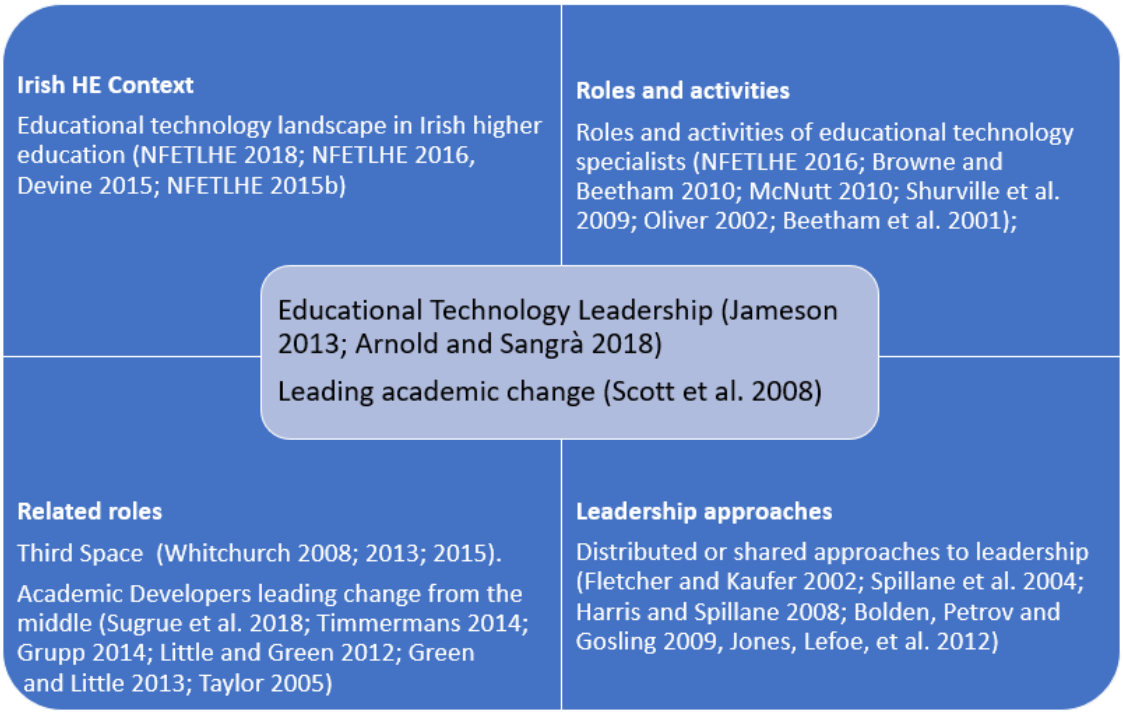

Figure 3.3 Theoretical framework for the study.

Details of the overarching methodology used in the study, data collection methods, and data analysis will be presented in the sections which follow.

3.7 Narrative Inquiry

Methodology, which refers to the approach that we use in the study to acquire the knowledge that we seek (Creswell and Poth 2018; Grix 2002), is a further key element of the research process. As this study focuses on the experiences of participants and is underpinned by a phenomenological philosophy, methodologies such as phenomenology, case study or narrative inquiry may be used to answer the research questions.

In identifying a suitable methodology for this research, I am conscious of the counsel of Miles et al. (2014, p.7) that "no study conforms exactly to a standard methodology". Therefore, although hermeneutic (interpretive) phenomenological methodologies such as Interpretative Phenomenological Analysis (IPA) would also have been an appropriate means to examine the experiences of the educational technology leaders in this study, coming as they do from an interpretivist stance, Narrative Inquiry was chosen as the overarching methodology due its particular understanding of experience in terms of story. While stories or narratives can also be used in phenomenology and in case studies (Clandinin 2013), these approaches do not have this explicit focus on the understanding of experience as story. It is this view of experience in Narrative Inquiry that has influenced its choice as the methodology for this study. However, in doing so, it is important to acknowledge close kinship between phenomenology and narrative

inquiry noted by Kim (2012). In fact, for Kim (2012, p.634), narrative inquiry "espouses phenomenology and it fits well into the phenomenological tradition that focuses on people's lived experiences". Thus, it is rooted in phenomenology but with a particular view of how it views experience as it "explores the nuances of meaning and the complexity of different human experiences that are maintained in stories" (Kim 2012, p. 634). Nevertheless, although not specifically using phenomenology as the methodology, the study does make use of approaches grounded in phenomenology as evidenced by the analysis of the data making use of the approach taken in Interpretative Phenomenological Analysis (Smith et al. 2009), outlined in Section 3.11.2.

Narrative inquiry is a research methodology for engaging in the study of people's experiences, based on the way humans make sense of their world and experiences by telling stories (Clandinin 2006). Such stories are "at the heart of how we make meaning of our experiences of the world" (Huber et al. 2013, p.214) and are so important that "our very identities as human beings are inextricably linked to the stories we tell of ourselves, both to ourselves and with one another" (Huber et al. 2013, p.214). In their seminal work, Connelly and Clandinin (1990) developed a narrative approach to the study of experience and identified it as Narrative Inquiry. For them, narrative inquiry provides a framework through which researchers can investigate the ways humans experience the world as articulated in the stories of their experiences. Clandinin (2013, p.13) points out that narrative inquiry has two dimensions: it is both a "way of understanding and inquiring into experience". First and foremost, then, narrative inquiry begins with a way of thinking about the phenomenon of experience as made up of the stories that individuals construct to represent their lives. Secondly, from the methodological perspective, the inquiry involves the study of this phenomenon (Connelly and Clandinin 2006).

3.8 The phenomenon - experience as narrative

Connelly and Clandinin (2006, p.375) explain that, "people shape their daily lives by stories of who they and others are and as they interpret their past in terms of these stories". For Polkinghorne, a significant figure in the shaping of narrative inquiry, this storied approach is the "primary scheme by which human existence is rendered meaningful" (Polkinghorne 1988, p.1). Narrative inquiry adopts a particular view of human experience as the phenomenon being studied (Connelly and Clandinin 2006). In this view of experience, humans are considered to lead storied lives, both individually and socially (Clandinin and Rosiek 2007). Therefore, for narrative inquirers, "experience happens narratively" (Clandinin and Connelly 2000, p.19). In this view, our experiences are part of our life stories and our life stories are those of our experiences. Thus, experience is considered a narratively composed phenomenon (Clandinin 2013) and it is this phenomenon of experience, manifested as narrative, that narrative inquirers study.

A core influence in Connelly and Clandinin's view of experience as a narrative is Dewey's (1981) ontology of experience which is characterised by the continuous interaction of human thought with our personal, social, and material environment. Echoing this view, Connelly and Clandinin (2006, p.479) envisage narrative inquiry as consisting of three dimensions or "commonplaces of narrative inquiry":

1. Social - interaction between the personal and social.
2. Temporal – attending to the past, present and future.
3. Place – the place or situation where stories are lived and told.

For Connelly and Clandinin, any narrative inquiry is defined by this three-dimensional space in which humans live their storied lives. As humans, then, we are living a story or living in a story that is continuously unfolding through various interactions that occur in different places and times. We live *by* stories and we live *in* stories, our own and those of others (Clandinin 2013). These interconnected and multi-faceted stories include personal, social and institutional, past and present elements, all of which shape who we are and who we are becoming. In addition, all stories are partial, unfolding, and part of the stories of others. When we talk about our experiences, we are telling that story, or part of it, as we interpret it at a particular point in time. In linking our past, present and future, "stories preserve our memories, prompt our reflections, connect us with our past and present, and assist us to envision our future" (Kramp 2004, p.107).

However, our stories are also in a constant state of flux over time as are the other stories that shape our lives, in the same way as ice packs float on sea, bumping up against each other. Mertova and Webster (2019, p.2) suggest that, while we make sense of our lives according the narratives available to us at any point in time, our understanding of people and events changes as our "stories are constantly being restructured in the light of new events because they do not exist in a vacuum but are shaped by lifelong personal and community narratives".

Building on these dimensions, Clandinin and Connelly (2000, p.20), define narrative inquiry as:

> *A way of understanding experience. It is collaboration between researcher and participants, over time, in a place or series of places, and in social interaction with milieus.*

From the point of view of narrative inquiry, then, when we investigate experiences, it is the narrative that individuals create to represent these experiences that is the phenomenon we are investigating. Kim (2016) points out that narrative inquiry as a phenomenon is the "what" of the study, that is, the study of experience as phenomenon. This "what", Kim suggests, is always shifting, moving and complex.

In response to the question "Why narrative inquiry?" Clandinin and Murphy (2009, p.601) point to the answer given by Connelly and Clandinin (2000), "Because experience". Thus, it is the narrative view of experience as the phenomenon under study that makes it appropriate for investigating the experiences of the participants in the current study. In examining their experiences through the stories they tell, we also seek to gain insights into the stories they live, the stories in which they live and by which they are shaped. Echoing Moen's (2006) case for using narrative to study teachers' experiences, a narrative approach in this study provides a means of presenting the complexity of the practice of educational technology leaders to a broad audience including their peers, institutional leaders, and the teaching and learning community at large.

Polkinghorne, in conversation with Clandinin and Murphy (2012, p.632), distinguishes between narrative inquiry and other forms of qualitative research and contends that "narrative is quite different, that it really deals with individual lives". Narrative inquiry results in a knowledge of the particular, asserts Polkinghorne, who cautions against "losing the uniqueness of the experience in looking for the commonality of the experience" (Clandinin and Murphy 2012, p.633). Dwyer and Emerald (2017, p.5) suggest that taking such a phenomenological approach adopts a constructivist-interpretivist epistemology as it is concerned with the lived experiences of individuals, seeking to develop an in-depth understanding of this experience and conscious that in the context of such experiences "reality is multiple and situational", thus aligning with the philosophical assumptions which guide the current study.

3.9 Narrative inquiry as a methodology

At the heart of narrative inquiry are the stories that people tell to make meaning of their experiences. However, narrative inquiries focus not only on the individual's experience but on the broader context or narratives within which individuals' experiences are shaped and enacted (Clandinin and Rosiek 2007).

Narrative research also has an essential relational dimension (Clandinin and Murphy 2009). Such is the relationship between participants and inquirers as their stories intertwine that "no one leaves a narrative inquiry unchanged" (Clandinin 2013, p.201). As a narrative inquirer, one becomes part of the story (Clandinin and Connelly 1998), so involved in the world being studied that, to use Silko's (1997) metaphor, one is as much a part of the landscape as the boulders one stands on to view it. Thus, by engaging in narrative inquiry, the narrative inquirer both shapes and is shaped by the landscape. Therefore, the narrative inquirer negotiates the rocks and hard places of investigating such a terrain, understanding that they cannot entirely bracket or separate themselves out of the inquiry (Clandinin and Rosiek 2007). As an inquirer, I am

investigating a landscape of which I am part and which influences me. The stories that I hear or explore affect me and, in turn, impact my own story. I need to be aware of how this can affect my interpretation and representation of the stories of the participants, particularly if these are different or do not align with my own.

There appears to be no single formula for a narrative inquiry study (Squire et al. 2013; Clandinin and Murphy 2012; Moen 2006). Squire et al. (2013) identify a number of areas which are uncertain or, at least, contested. These include the definition of narrative, the starting and ending points for narrative research, methods of analysing data, and clarity on methods of investigation and appropriate data. Davis and Dwyer (2017, p.225) observe that this may be seen as "a strength or a weakness; as diverse applications of a flexible approach, and/or as inconsistent interpretations of theory". A difficulty with such a wide variety of approaches and lack of clearly defined processes is that this can make "the journey of becoming a narrative researcher perilous and uncertain" (Dwyer and Emerald 2017, p.2). However, having interviewed a number of noted scholars of narrative research, Davis and Dwyer (2017, p.237) conclude that, while there may be a need to develop a common understanding of narrative methods, the lack of clarity may actually provide a productive space which may perhaps be "more desirable than a homogenous common ground without diverse edges and unexpected pitfalls and the richness of navigating these obstacles can often bring".

To address the lack of clarity, Dwyer and Emerald (2017, p.21) identify a number of key areas that they believe, if addressed in a narrative research design, will "set a course for coherent and rigorous research". These include the ontological and epistemological basis of the research, the relationship between the researcher and participants and the extent to which the research focuses on individuals or on broader societal concerns. Other key aspects relate to methods used, including the nature of evidence gathered, the analytical processes, and the representation of the findings.

3.9.1 Barkhuizen's Dimensions of Narrative Inquiry

Barkhuizen (2019) provides a framework which, in addressing some of these aspects, can be used to locate a study within the Narrative Inquiry space. This framework consists of five core dimensions reflecting fundamental features of narrative inquiry. As narrative inquiry studies come in different forms, a study may be characterised by its position along each of these dimensions. Although these dimensions are presented separately for the purposes of clarity, Barkhuizen notes that they may be interconnected and not always present to the same extent in every narrative inquiry.

The following section outlines these five core dimensions as presented by Barkhuizen (Figure 3.2) and then attempts to position the current study in relation to these.

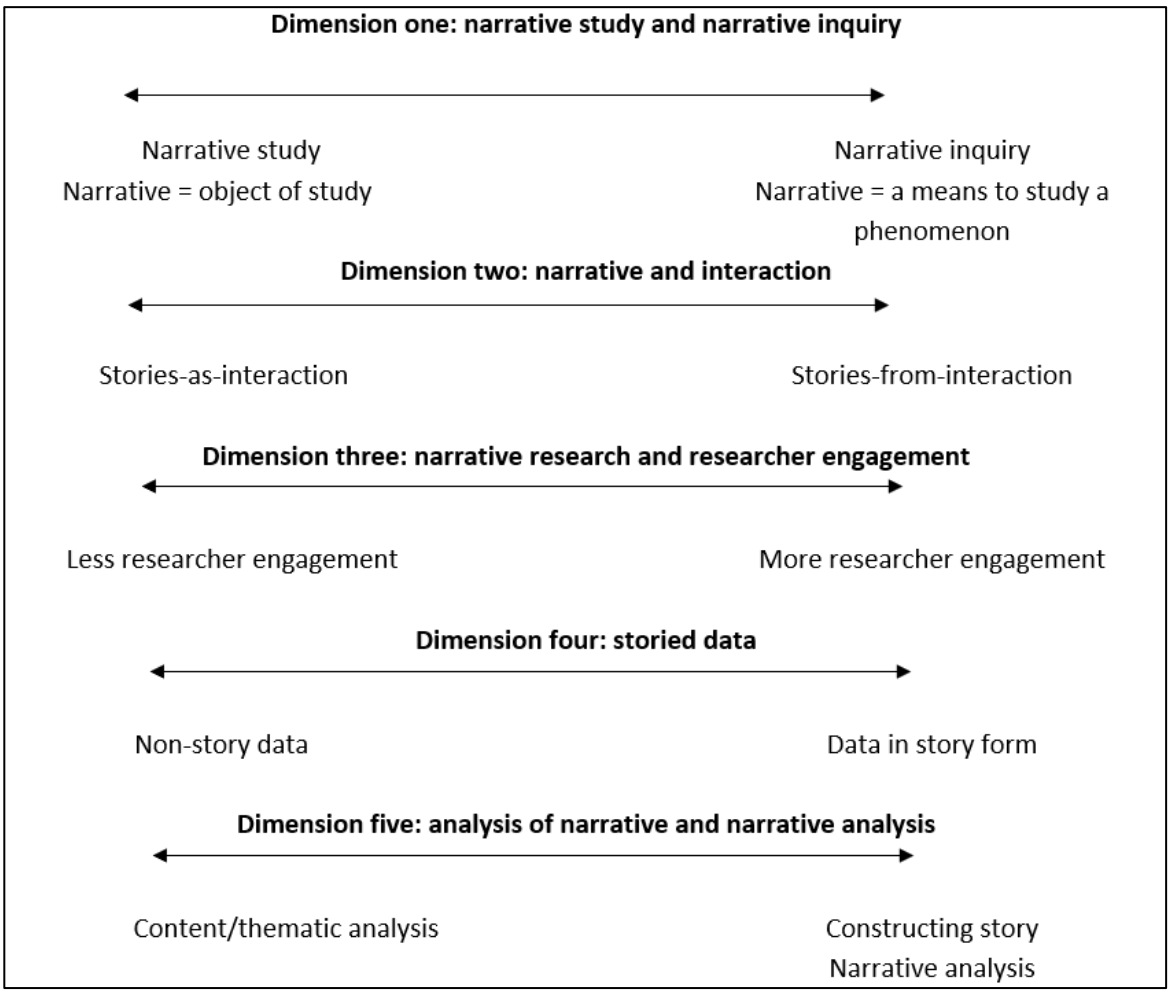

Figure 3.4 Dimensions of Narrative Inquiry
Adapted from Barkhuizen (2019)

3.9.1.1 Dimension one: narrative study and narrative inquiry

This dimension ranges between narrative study and narrative inquiry. Narrative study is primarily concerned with examining the linguistic and organisational structure of texts that result from the inquiry process. Narrative inquiry, on the other hand, focuses on using narrative to investigate a phenomenon, determine the content of the narrative or what the narrative is about. Thus, the inquiry employed in the current study is located towards the latter end.

3.9.1.2 Dimension two: narrative and interaction

Stories are generally told in interaction with others. In such interactions, stories tend to be co-constructed by the participants, albeit to varying degrees. This second dimension of narrative inquiry concerns the analysis of stories that are "constructed in the process of talk-in-interaction, where the talk is considered to be the storytelling" (Barkhuizen 2019, p.192). Distinguishing

between stories as interaction and stories in interaction (Kasper and Prior 2015), Barkhuizen (2019) suggests that these are situated at either end of the continuum for the second dimension.

Stories *as* interaction focus primarily on the interaction itself and are concerned with how the stories take shape or are constructed collaboratively through the interaction. Discourse or conversational analysis may be used to investigate this aspect. On the opposite end of this dimension, the focus is on analysing stories extracted *from* the interaction, examining excerpts, or possibly whole interviews, for their content. In this case, analysis is primarily concerned with the content of the interaction data and identifying what is going on in the story extracted from the interaction.

3.9.1.3 Dimension three: narrative research and researcher engagement

This dimension concerns the level of researcher engagement in the collection of the data and subsequent analysis. Narrative inquiry is, in the words of Josselson (2007, p.537), "inherently a relational endeavour. Every aspect of the work is touched by the ethics of the research relationship". Thus, in this context, researcher engagement has a particular significance.

The level of researcher engagement in a narrative inquiry can range from a more removed engagement which might involve analysing texts without any, or perhaps minimal, contact with participants (Choi et al. 2016) to immersion with participants in their daily lives (Clandinin and Connelly 2000).

3.9.1.4 Dimension four: storied data

This dimension relates to the nature of the data that emerges in a narrative inquiry and the extent to which it is in conventional story form. Barkhuizen (2019) observes, firstly, that there is no single definition of what story means. Meaning different things to different researchers, it can range from "long autobiographical accounts (big stories), to snippets of conversation that to some do not look much like stories at all (small stories) to extracts of interview data in story form (short stories)" (Barkhuizen 2019, p.189). Consequently, sometimes data will look like a conventional story as recounted by a study participant, perhaps through interviews, journals, or memoirs, whereas in other instances data elicited from interview prompts may not resemble the conventional view of a story. Yet, such small stories or snippets of conversation can still make up an individual's story (Barkhuizen 2016).

3.9.1.5 Dimension five: analysis of narrative and narrative analysis

This dimension is concerned with analysis of the data and reporting of the findings in a narrative inquiry. Using Polkinghorne's (1995) distinction between analysis of narratives and narrative analysis, Barkhuizen (2019) places these two forms of analysis on either extreme of the

continuum. On one side, analysis of narrative refers to the process of thematic or content analysis which involves coding, identifying and categorising themes, and seeking connections between them. At the opposite end, narrative analysis involves the researcher "configuring data content into a coherent storied whole" (Barkhuizen 2016, p.195), an academic story, as it were. Barkhuizen (2019) notes that these two approaches are not necessarily distinct in the sense that, in presenting the themes derived from the analysis of narratives approach, a researcher may then seek to construct stories based on these, thereby moving towards a process of narrative analysis.

3.9.1.6 Positioning the current study

Figure 3.3 shows the approximate positioning of the current study in relation to each of the five core dimensions identified by Barkhuizen.

The focus is on using narrative as the means to explore the experiences of participants, taking the narrative view of experience as the phenomenon being investigated. The study is concerned with the stories that participants relate about their experiences. These stories are stories-from-interaction, the content and meaning of which is the primary focus. In terms of researcher engagement, the relationship with the participants was facilitated initially in communications relating to the survey, with greater interpersonal engagement during the interview process.

The storied data in this study tends towards the non-story data in Dimension four as it is made up of small stories, excerpts or snippets from interviews and short answers to questions.

Finally, the analysis process seeks to identify themes within individual stories and across the stories of the participants, falling under the category of analysis of narrative. Findings are presented in narrative form, where appropriate.

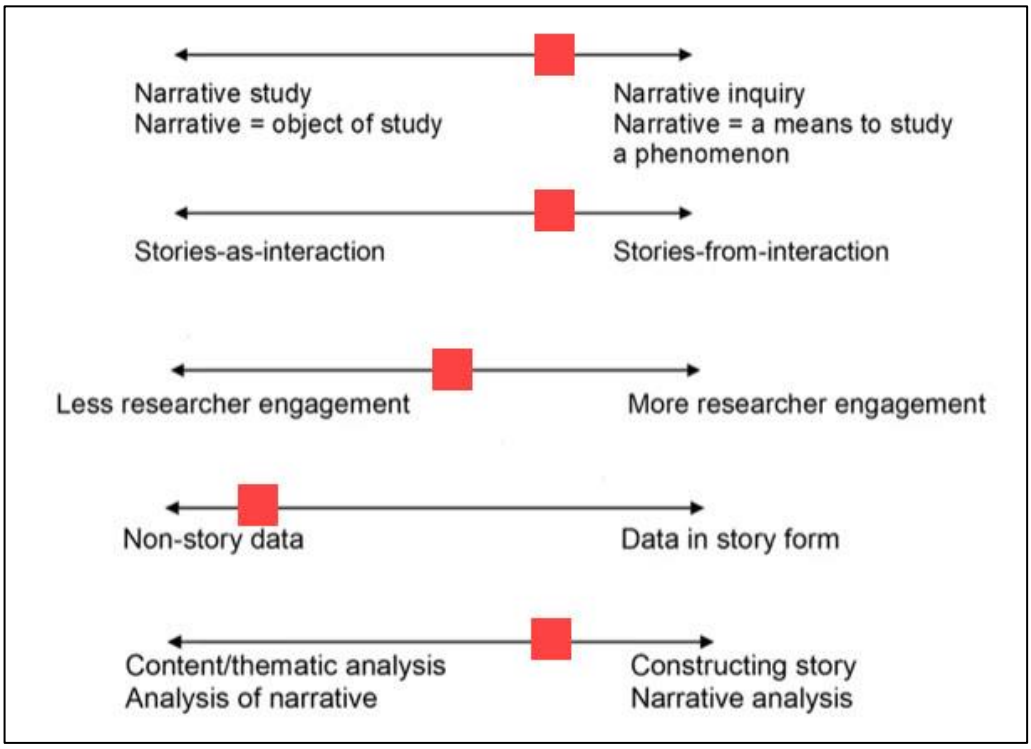

Figure 3.5 Positioning of current study in the Narrative Inquiry space.

The representation of Barkhuizen's (2019) dimensions of Narrative Inquiry as continua underscores the range of possible approaches to implementing this methodology. This is echoed by Miles et al. (2014), who emphasise the flexibility that should apply to the use of methodological approaches in general. For them,

> *research is actually more a craft (and sometimes, an art) than a slavish adherence to methodological rules. No study conforms exactly to a standard methodology; each one calls for the researcher to bend the methodology to the uniqueness of the setting or case.*
>
> (Miles et al. 2014, p.7)

3.10 Data collection methods

In pointing out the individual's experience is "storied both in the living and the telling", Clandinin and Rosiek (2007, p.9) note that it can be studied in many different ways (Barkhuizen 2019). The most common starting point is listening to individuals telling their stories, involving commonly used methods such as conversations or interviews. This may also include living alongside participants, situating the inquiry in their lives and stories, observing and becoming part of their stories (Clandinin 2013). Other data-gathering techniques include surveys and analysis of texts (Barkhuizen 2019; Mertova and Webster 2019; Elliott 2005).

The current study involved two phases of data collection. As little research has been carried out to date on the experiences of educational technology leaders, in general, and in the Irish Higher

Education context, in particular, the first of these phases sought to construct an overall perspective on the experiences of such leaders. Thus, an online survey was chosen for this task. Although the study is primarily qualitative in nature, this survey instrument gathered some relevant quantitative data in addition to qualitative data from a range of open questions. The second phase, which aimed to explore the experiences of participants in greater depth, consisted of ten semi-structured interviews. Each data collection method and its implementation is outlined in the following sections.

3.10.1 Phase 1: Online survey

This phase consisted of an anonymous online survey. Online surveys are increasingly used in research as they can be easily distributed, are relatively inexpensive, and can make use of the features of survey design software (Bryman 2016; Sue and Ritter 2012). Bryman (2016) emphasises the importance of designing such surveys so that they have clear instructions, are easily navigable for participants, and are of an appropriate length. To improve response rates, links to the surveys should be accompanied by a cover letter explaining the research and can be followed up afterward with reminder emails.

Although perhaps not commonly used in narrative inquiry studies, the survey in this phase provided an opportunity to get an initial view across the landscape of educational technology in Irish higher education. Due to the geographical spread of the potential respondents and the likelihood that, given their role in relation to technology, they would be comfortable with such a method, using an online version seemed the most appropriate approach. Consisting of a mixture of closed and open questions, the survey was designed in SurveyMonkey, a commonly used web-based application for designing, sharing, and collating online surveys.

The survey (Appendix H) was divided into sections focusing on the roles, activities, and experiences of the participants in relation to the embedding of educational technology in their institutions, as follows:

1. About you
2. Your role
3. Areas of focus in your role
4. Effectiveness of Professional Development activities
5. Challenges in integrating educational technology
6. Educational technology in your institution

Consisting of 23 questions, the survey was estimated to take approximately 20-30 minutes to complete. Multiple choice questions were used to gather demographic data about participants and their roles. Other questions used Likert scales to ask participants about areas such as the

importance of activities associated with their roles, effectiveness of approaches to integrate educational technology, the level of challenge posed by a range of factors, and level of agreement with statements about aspects of institutional culture in relation to educational technology. Free-text questions allowed participants to elaborate on activities associated with their roles, indicate the most satisfying and most challenging aspects of these roles, the professional development approaches they have found to be effective in promoting the use of educational technology, why these have been effective, and how their institutions might better support them in their efforts in this regard. In addition, participants were asked to suggest an analogy which would best describe what it is like to be an education technology leader in their institution. While the term "educational technology" was used throughout the survey, participants were advised to note that it should be interpreted in the broader sense of including educational technology tools which can be used for a range of activities from face-to-face to fully online delivery.

3.10.1.1 Identifying potential participants

As the study sought to explore experiences of leading educational technology, a purposive sample of educational technology leaders was identified with this specific purpose in mind (Bryman 2016; Cohen et al. 2011). This sample included three broad categories of potential participants:

1. Staff identified in their institutions as being responsible for the co-ordination of educational technology;
2. Staff holding positions related to educational technology;
3. Academic staff who take a leading role through their use of technology and their sharing of their experiences.

This list of educational technology leaders was compiled using three publicly available sources of data: institutional websites, EdTech conference presenters, and Horizon Report expert panellists. Although these sources of data were not mutually exclusive, it was hoped that drawing on a range of such sources would increase the chances of identifying a comprehensive list of those who lead in educational technology in the sector. Additionally, to ensure that there would be no conflict of interest and to avoid potential bias in the sample, my doctoral supervisory team and potential participants from my own institution were excluded from the sample.

3.10.1.1.1 Institutional websites

Firstly, a list of institutions was compiled using data available on the website of the National Forum for the Enhancement of Teaching and Learning (NFETLHE). This list of institutions consisted of universities, institutes of technology, colleges of education, and independent

colleges, which are members of the Higher Education Colleges Association (HECA), the representative body for twelve colleges in Ireland's private education sector (HECA n.d.).

The next step was to review institutional websites to identify people in middle leadership roles in educational technology. These included those who are leading teams whose remit includes responsibility in this area, members of such teams, and individuals who have a designated responsibility for the integration of educational technology in their institutions.

The search terms used to identify potential participants and/or the centres or functional areas to which they are affiliated included "learning technologist", "educational technologist", "instructional designer", "technology enhanced learning", "e-Learning", "learning and teaching", and "teaching and learning". This search identified individuals and the areas to which they were attached which, in turn, frequently yielded the names of other colleagues in the area. Persons of particular interest were those identified as having a role in educational technology, online learning, learning development with an educational technology element, heads of learning and teaching, or those with similar academic development roles.

3.10.1.1.2 EdTech Conference participants

Secondly, the sample was supplemented by identifying academics who have demonstrated leadership in this area through presenting on their use of educational technology at the annual EdTech conference in the period 2011-2018. Focusing primarily on educational technology in Irish higher education, this conference is organised by the Irish Learning Technology Association (ILTA). Details of presenters and topics for each conference are publicly available on the ILTA website. Although many of these presenters may not have positional leadership roles in educational technology, their sharing of practice through EdTech indicates that they are taking a lead in this area which is, in turn, recognised by their peers.

Details of presenters, including name, institution, and year were recorded in an Excel worksheet. Some presenters who had educational technology roles were already included on the first list and could be removed from this list. For others, if a Google search indicated that they had an educational technology role, they were added to the first list and removed from the EdTech list. For those remaining, who were in academic roles, only those who had presented at three or more conferences were added to a final list of potential participants. It was felt that presenting at the conference on three or more years was an indication of a consistent engagement with educational technology and demonstrating a leading role by sharing practice. Consideration was only given to presenters affiliated to higher education institutions.

This process outlined above yielded 117 potential participants in specific educational technology roles of whom 65 were from the university sector, 41 from the institutes of technology, 4 from

the colleges of education, and 7 from the independent colleges. In addition, a further 19 academics were identified from the list of EdTech presenters.

3.10.1.1.3 Horizon Report expert panellists

Finally, potential participants were identified from the 50-member expert panel of Irish Higher Education professionals who contributed to the New Media Consortium (NMC) Horizon report, The 2015 NMC Technology Outlook for Higher Education in Ireland (Johnson et al., 2015). Many of the members of this expert panel had already been included in the previous lists. Yet, this process yielded a further 10 potential participants, resulting in a final potential sample size of 146.

3.10.1.2 Pilot survey

Prior to distribution, a draft of the survey was piloted with five colleagues, who would have been potential participants were they not from my own institution. These consisted of the Head of Learning and Teaching, two colleagues who have an academic development/educational technologist role, and two academic staff who play a leading role in the use of educational technology and are regular presenters at the EdTech conference. The feedback from this pilot was then used to make minor adjustments to the survey, primarily in the clarification of the wording of a small number of questions.

3.10.1.3 Implementing the survey

Invitations containing a link to the survey were sent to the 146 potential participants via email in the third week of February 2019 (Appendix D). The timing of the survey was chosen in the hope that it would be more convenient for participants, occurring as it did after the busy period of the initial weeks of the second semester in most institutions. By distributing the survey at this time, it was hoped to maximise the response rate. Although the survey was to be conducted online, the invitation email also contained a link allowing participants to download a copy of the survey as a PDF document, if they wished. The purpose of this was to allow participants to review the survey in advance of participating, giving them an opportunity to reflect on the questions and estimate the time they might need to complete the survey.

No specific information relating to participants themselves or their institutions, which might make them identifiable, was requested. Furthermore, to reinforce the anonymity of the survey, IP addresses of respondents were not recorded by the survey software, thus ensuring that the survey data contained no identifying information for individuals.

A further brief reminder containing the link was sent three weeks later. The survey remained open until the first week of April 2019, after which the responses were downloaded to a password-protected PC.

Out of the 146 email invitations issued, 136 were delivered. In total, 67 responses were downloaded. However, for three of these, the participants responded only to a small number of the early questions but not to the questions which dealt with the key areas being examined by the study. These partially completed responses were omitted from the analysis. The 64 responses yielded a response rate of 47%, which is in excess of the 44% average response rate identified by Wu et al. (2022) in their meta-analysis of 1071 online studies in published research between 2007 and 2014.

3.10.2 Phase 2: Semi-structured interviews

The second phase of the study consisted of 10 semi-structured interviews with educational technology leaders in the Institute of Technology(IoT)/Technological University(TU) sector. This approach was chosen to explore the research questions and areas of interest in greater detail than had been possible in the survey.

The use of such interviews aligns with the interpretivist-constructivist view of reality, knowledge, and understanding which underpins the study. Kvale (1996, p.14), describing the qualitative interview as "a construction site for knowledge", also argues that a strengths of the interview is its ability to "capture the multitude of subjects' views of a theme and to picture a manifold and controversial human world" (Kvale 1996, p.7).

Kvale (1996) contrasts two metaphors for the interviewer's role – that of the miner and the traveller, the latter aligning with the guiding philosophy of this study. In contrast to the miner metaphor, in which knowledge is compared to nuggets waiting to be unearthed, the traveller metaphor presents the interviewer as being on a journey, wandering through a landscape, conversing with people encountered as they too navigate the landscape and finally telling the tale of the journey on returning home. In this metaphor,

> *the interviewer wanders along with the local inhabitants, asks questions that lead the subjects to tell their own stories of their lived world, and converses with them in the original Latin meaning of conversation as 'wandering together with'.*
>
> (Kvale 1996, p.4).

A semi-structured interview format, as opposed to structured or unstructured formats, was chosen as the most appropriate approach to use. Bryman (2016) recommends such an approach if the research has a clear focus with specific issues to be addressed, as is the case in this study. While providing a scaffolding, organised around key questions, this approach also has the flexibility to allow the interview to depart from the interview guide, adjusting the order and the wording of questions, depending on the dynamics of the particular interview, in an effort to ensure rich, detailed answers (Bryman 2016).

The original plan for this phase of the study was to conduct number of semi-structured interviews with volunteers from the Phase 1 survey. The survey had included a link to a Google Form on which any respondent who wished to volunteer could supply their name and email address so that they could be contacted for interview. The inclusion of the link to a separate form was again to protect anonymity in the original survey by ensuring that there was no connection between survey responses and those in the Google Form. In total, 31 out of the 64 participants volunteered to be interviewed. These represented a cross-section of institutions and roles within the sector.

In determining the volunteers to be interviewed, the study sought to achieve a balance of participants representing different institutions and a range of roles within the institutions. Following a discussion with my supervisors in May 2020 to finalise arrangements for the interview phase, it was agreed to focus the study primarily on those in middle and management roles in the Institute of Technology (IoT)/Technological University(TU) sector as all of the institutions operate in broadly similar contexts.

As six of the volunteers from this sector had middle and management roles identified for the interview phase, it was agreed to carry out interviews with them in June 2020. Of these volunteers, two were heads of Learning and Teaching units and four were in Educational Technologist-type roles, albeit with differing titles.

The interview guide and supplementary prompts were finalised in the light of preliminary analysis of the survey results and agreed with my supervisors. In addition, two questions to take account of participants' experiences of the COVID-19 situation were included.

3.10.2.1 Pilot interview

The interview process was first piloted with a colleague from my own institution, who was in a similar role to the intended interviewees. In the invitation email, I briefly outlined the key areas on which the interview would focus. The intention was to flag these areas to give an opportunity to reflect on them in advance if she wished. Due to COVID-19 restrictions, it was not possible to conduct the interview in a face-to-face environment, and so a link was provided to a Zoom meeting, making use of a by then familiar web conferencing application.

After a brief welcome and introduction, the interview was recorded. On completion, the recording was processed and the audio recording, which would be used for analysis, was downloaded and stored on a password-protected PC.

Although a key focus of the study is on participants' experiences of being a leader, I began with some questions relating to her role and then moved to strategies, approaches, and challenges as

I felt that these were questions that would be more easily answered by the interviewee. Having discussed these, we then moved to focus on the questions specifically related to leadership and the interviewee's perspectives on it.

In feedback afterwards, the interviewee agreed that this was a good approach as it had allowed her to feel at ease during the interview prior to what may have been the more challenging questions on leadership.

She also welcomed having the topic areas in advance as it gave her an opportunity to reflect on these and provide more considered responses than might have been the case if she had encountered them for the first time in the interview. Apart from being helpful, she felt that this was a courteous way for the researcher to approach the interview.

An initial review and analysis of the pilot interview prompted me to make some minor clarification changes to the questions and prompts for the actual interviews. In addition, I further adjusted the questions to make them a little more conversational in tone. I also devised two versions of the interview, one aimed specifically at those in roles overseeing learning and teaching and the other for those in a specific educational technology role. While these versions were broadly similar, a small number of questions were included or re-phrased slightly for those in supervisory roles in learning and teaching. The final interview guide is available in Appendix K.

3.10.2.2 Interview process

In early June 2020, once the end-of-semester assessment process was drawing to a close in the institutes, invitations were sent to each of the six volunteers, recalling the background of the study and asking if they still wished to participate in the interview phase. Each accepted the invitation and, on doing so, was sent the participant information and consent form in both Microsoft Word and PDF format. This email also contained a brief overview of the aim of the study and the broad topic areas that I hoped to explore in the interview (Appendix J).

The first six interviews were carried out during June 2020. Due to continuing the COVID-19 restrictions, these were carried out with participants' agreement using Zoom. Each interview, which was of approximately one hour duration, was recorded with the permission of the interviewee. Echoing findings by Archibald et al. (2019), an advantage of using web conferencing software for the interviews was that, in the context of emergency remote teaching during the COVID-19 pandemic, all participants were comfortable conversing in this environment. In addition, it facilitated access to participants who were geographically dispersed at times that were convenient to them and was particularly suitable in circumstances where social distancing

was mandated (Lobe et al. 2020). Furthermore, the recording of the interviews happened in the background of the conversation, as it were, and was much less intrusive or obvious than the use of a specific recording device which one might use in an in-person interview.

The conduct of the interviews was guided by criteria provided by Kvale (1996) and supplemented by Bryman (2016). At the beginning of each interview, after a short greeting and introduction, I once again briefly explained the purpose of the study as outlined in the invitation email. All the interviewees were aware of my position in my own institution in a role similar to many of them. Prior to this, I had worked with some of the interviewees on multi-institutional collaborative projects, or met some at conferences or other learning and teaching fora. Of these six interviewees, there was only one whom I had not met previously. I explained that all of us are working in the "middle" of our institutions and that essentially the study aimed to find out what it is like to work in the middle while leading in an area such as educational technology.

Providing the interviewees in advance with the list of broad topics to be discussed in the interview allowed participants to see which aspects of their experiences that the study was focusing on. It also gave them an opportunity to reflect on these aspects in preparation for the interview. It even prompted some to prepare notes or memory aids to use during the interview. Furthermore, having the list of topics allowed them to interpret or respond to the topic areas as they felt appropriate. In addition, my own supplementary question prompts allowed me to follow-up, re-direct, or guide the conversation as necessary. Importantly, this also allowed me to focus primarily on listening to the interviewees, responding, affirming, and probing where appropriate.

The early questions in the interview were less personal and focused more on the roles of the participants and how they carry these out. While these aspects contributed to answering the research questions, the primary aim was to ensure that the interviewees would be comfortable in answering them and give them an opportunity to settle into the interview prior to discussing more personal experiences and views on leadership.

I was conscious of the potential sensitivities of the interviewees telling their stories to a peer in a similar position in a similar institution, particularly in articulating their personal views, experiences of leadership and motivations, perhaps even exposing vulnerabilities. Therefore, throughout the interviews, I was careful to limit my own voice to ensure that the voices of the interviewees took priority. In doing so, I was mindful of Bryman's (2016, p.475) assertion that "one of the main ingredients of the interview is listening – being attentive to what the interviewee is saying or even not saying". Taking such an active listening approach, which is in keeping with the Narrative Inquiry approach, allowed me to be attuned and responsive to what

the interviewees were saying and doing (Bryman 2016). I am most appreciative that the participants appeared to articulate their experiences in such an open and honest way.

To ensure a comprehensive representation of roles, it was decided to seek a number of other participants at a later date. In early 2021, I contacted four potential participants all of whom were in management roles in relation to educational technology. Of these, one was responsible for Learning and Teaching while the other three had a management position with responsibility for educational technology and/or online learning. All four agreed to participate and, following the process outlined for the previous interviews, these interviews were carried out in March 2021.

Thus, this second phase of the study consisted of ten semi-structured interviews with participants from three main categories of role, which may be loosely described, though not always titled, as Head of Learning and Teaching, Head of Educational Technology and Educational Technologist. The interviewees represented a cross-section of eight institutions in the Institute of Technology/Technological University sector, with the roles shown in Table 3.1.

Role	Number
Head of Learning and Teaching	3
Head of Educational Technology	3
Educational technologist	4

Table 3.1 Interview participant categories

This cross-section of roles and institutes provided for a range of perspectives on the experiences of educational technology leaders.

3.11 Analysis of Data

The study yielded three sets of data, quantitative data from the closed questions in the survey, qualitative data from the open-ended questions, and more in-depth qualitative data from the semi-structured interviews.

3.11.1 Analysing the survey data

Although the study is primarily qualitative in nature, the demographic information and Likert-type questions in the survey returned quantitative data which were used to provide an overview of some aspects of participants' experiences. The data from these questions were analysed in Microsoft Excel to produce frequency tables and calculate descriptive statistical measures as appropriate. Each question was analysed in a separate workbook with additional worksheets added as the data for the question was refined. Some of the closed questions contributed to understanding the roles and activities of participants across the sector. Others, such as those relating to challenges, effective activities, institutional issues, and leadership orientations were

more directly related to the sub-research questions. Demographic data was represented using pie-charts and histograms, while data from Likert-type questions was presented in terms of frequency tables to facilitate comparisons.

The open questions on areas such as the most satisfying and challenging aspects of participants' roles, supports for their roles ,and effective approaches to professional development, related specifically to some of the sub-research questions. The question in which participants suggested an analogy to best describe how they experience leading educational technology in their institutions related to the leadership elements of the sub-research questions. The responses to each question were treated separately and were analysed systematically, guided by Braun and Clarke's (2006) six-stage Thematic Analysis framework as outlined below.

1. Familiarisation with the data
2. Initial coding
3. Identifying themes
4. Reviewing themes
5. Defining themes
6. Writing-up

This framework is commonly used to thematically analyse qualitative data from interviews and focus groups but can also be used for open-ended questions (Swart 2019). Its purpose is to identify meaningful patterns across a dataset. Thus, for each of the open-ended questions, this process seeks to identify what is common across each of the relatively small datasets in order to build a picture of participants' perspectives and the meanings they attach to them (Braun and Clarke 2012). The analysis adopted an inductive approach, driven by the data, while recognising that the analysis cannot be fully isolated from my own experiences, my interests, personal orientation, and prior reading, for example. In acknowledging that analysis cannot be exclusively inductive, Braun and Clarke (2012) assert that a commitment to such an approach signals the prioritisation of a data-driven approach.

While such analysis may be carried out manually with printed versions of the data or by means of commercial data analysis software, Microsoft Excel can also be used systematically and effectively for organising and analysing data as suggested by Eliot (2011) and Meyer and Avery (2009). These authors outline possible approaches in using Excel for this purpose, arguing that its easy-to-use data manipulation and display features make it eminently suitable. They point to a range of particularly useful features, such as wrapping text, copying, moving, counting, formatting, sorting, finding, colouring, and counting. Eliot (2011) also stresses that, irrespective of the system used, it is ultimately the researcher who interprets the data and carries out the

analysis. Thus, the system, contends Eliot (2011), primarily provides a means of organising the data and carrying out the analysis in a meaningful and systematic way.

A systematic process, adapted from methods used by Eliot (2011) and Bree and Gallagher (2016), was used to analyse the responses, which tended to consist of two to three sentences at most. The steps in the process are outlined below. Further details illustrating the analysis of one of the questions (Question 22) are shown in Appendix M.

Step	Actions
Organising the data	• All the survey data from SurveyMonkey was downloaded into a single worksheet of an Excel workbook. • This file was copied, copied and renamed to indicate the number of the question to be analysed e.g. Question 22 – Analogy, leaving the original dataset intact. • The question responses, contained in a single column, were copied to a separate worksheet in this file and an appropriate name assigned to this worksheet e.g. Question 22 Data. • Some of the demographic data e.g. Gender, Age, Institution type and Role was also copied into this worksheet to facilitate tracking of responses. These could be used to sort the data and codes later, if necessary. • Each response occupied a single cell in the column. The column width was adjusted and the WrapText feature used to ensure responses were easily readable either on screen or in printed form.
Familiarisation	• The responses were read a number of times and printed off to allow for further reading. • Brief notes were added to the printed version and also added as comments to cells in the worksheet.
Initial coding	• In this study, there were no pre-determined codes. Rather, an initial pass through the data consisted of extracting of key phrases from the responses. • These phrases were placed in separate cells adjacent to the original response i.e. along the same row. Each code was assigned a prefix indicating the participant number e.g. “04 prophet in a foreign land” to facilitate subsequent sorting and searching or tracking of data.

	• These phrases were then copied to a single column in a new worksheet, which was named appropriately e.g. Q22 – First pass. Initial codes were then entered in the row adjacent to each phrase. If more than one code could apply, then a row was inserted, the phrase copied to this row and the code inserted in the adjacent cell. These codes might be a single word, a phrase, or the phrase itself from the data. This process resulted in a list of phrases and a set of initial codes. If necessary, these columns could be sorted based on participant number.
Identifying themes	Clarke and Braun (2013, p.121) describe this phase as "a bit like coding your codes to identify similarity in the data". • The worksheet from the previous stage was copied and renamed for this stage e.g. Q22 - Themes • Codes were reviewed to identify those which fell into similar categories or themes and naming the category. These were eventually listed in a block of cells on the worksheet. • A brief description of each theme was included as a comment in the relevant cell. • Each theme was assigned a colour using the Fill/Shading feature. • Individual codes associated with a theme were assigned the theme's colour. • The block of cells containing the theme names were sorted by colour. • The column containing the codes was also sorted by colour to ensure that the groups of codes appeared together and in the same order as the themes.
Reviewing themes	This stage involves reviewing the initial themes, checking that they reflect the data and refining them. It may involve combining, splitting, or discarding some of the initial themes to arrive at a final list. • Codes were reassigned, colours adjusted, and new themes/colours added as necessary. • Themes and codes could again be sorted by colour as previously to produce a revised framework.
Defining themes	This stage involves defining the themes by describing each one and identifying relationships between them, if any.

	• The previous worksheet was again copied to a new sheet for this stage. • The benefit in making a copy of each worksheet for the following stage is that this resulted in an audit trail in which one could refer or revert to a previous stage in the process, if necessary.
Writing-up	This phase took place during the write-up stage of the study.

Table 3.2 Thematically analysing open-text responses

3.11.2 Analysing the interview data

In an effort to take sufficient account of the experiences of individual participants (Clandinin and Murphy 2012), I have adopted the analytic approach outlined in the broader research methodology of Interpretative Phenomenological Analysis (IPA) (Smith et al. 2009). Although IPA is a methodological approach grounded in its own philosophical underpinnings of phenomenology, its method of data analysis has been used in other phenomenological studies and appears to be particularly suited to the context of the current study. In the following section, I will explain the key principles of IPA and outline why its method of analysis is appropriate for use with the interview data in this study.

3.11.2.1 Interpretative Phenomenological Analysis (IPA)

IPA is an approach to qualitative inquiry developed by Jonathan Smith in the discipline of psychology in the 1990's. Since then, its use has extended into a wide range of other disciplines including medicine, education, social work, public health, and sport (Wagstaff et al. 2014; Smith 2016). It is now a well-established approach (Smith 2016) and is applicable in qualitative studies where the focus is on examining the lived experiences of participants and, in particular, how participants make sense of these experiences (Smith 2016).

IPA is based on the three major theoretical orientations: (i) phenomenology, (ii) hermeneutics and (iii) idiography.

(i) **Phenomenology**: IPA's phenomenological orientation means that in seeking to identify the essential components of an individual's experience it is primarily concerned with the individual's perception of that experience. To do this, the researcher needs to bracket, or suspend, his or her preconceptions, biases, and assumptions insofar as possible to allow the participant's experiences to speak for themselves (Tufford and Newman 2012).

(ii) **Hermeneutics**: As IPA researchers try to view experiences from the perspective of the participant, they attempt insofar as possible to walk in the participant's shoes, as it were, and then interpret the experience as articulated to them by the participant. This is the

hermeneutic aspect of the analysis process. IPA recognises that there is in fact a double hermeneutic or dual interpretation process at play here. Firstly, the participant makes sense of their experience, interpreting it and then articulating it. Then, the researcher, in turn, attempts to make meaning of this experience as expressed by the participant, to "make sense of the participant making sense of x" (Smith 2016, p.219). This interpretative dimension of the process acknowledges that "there is no such thing as an uninterpreted phenomenon" (Pietkiewicz and Smith 2014, p.8).

(iii) **Idiography**: IPA's idiographic commitment, or commitment to the particular, means that each case is explored separately before considering or producing any general statements across various cases. So, in studying a group of participants, the researcher begins by first analysing a single case, identifying its themes and patterns. Only when a case is analysed in this way does the researcher move to the next case. In moving from case to case, the researcher should avoid looking across cases for commonality. Proponents of IPA recognise that it will be challenging for the researcher to bracket findings from previous cases when analysing a new case but argue that potential influences from previous cases can be mitigated to a certain extent by following a rigorous and systematic process with each case (Smith et al. 2009). Thus, in Smith's (2016, p.219) words , "the process of analysis is one of moving slowly from case to case and only cautiously making claims for the group as a whole". It is only when the analysis of each case is complete that the researcher begins to compare and contrast themes and patterns across the cases using "nuanced analysis of convergence and divergence" (Smith 2016, p.219). At this point, the researcher may be able to make general claims but should also pay attention also to individual differences between cases.

As IPA focuses on taking a deep approach to each participant and only then takes a broader approach, sample sizes are usually quite small (Smith 2016; Smith et al. 2009). In addition, it tends to be used with relatively homogenous samples. In the case of this study, the sample of interviewees is homogenous in terms, at least, of working in broadly similar institutes, with similar purposes and encountering similar issues. However, there are some important differences that may impinge on the experiences of the participants such as their job descriptions, responsibilities, and positions within their institutions. Therefore, IPA's strong idiographic commitment renders it appropriate to use in analysing the interviews to give in-depth consideration to each individual case.

3.11.2.2 Implementing Analysis in IPA

Smith (2016) argues that IPA's approach to analysis has been well-developed with supporting guidelines, noting that it is particularly suited to the analysis of semi-structured interviews. This

analytic approach appears to be a key strength of IPA. Although considered a methodology in its own right, IPA is frequently used solely for analysis in studies where the overarching methodology, while phenomenological, is not IPA as such (Elliot et al. 2017; Mihelicova et al. 2016; Chapman and Ogden 2009; Shaw et al. 2008; Braun et al. n.d.).

In a study in which eight researchers from different countries and disciplines reflect on their experiences of using IPA in research studies, Wagstaff et al. (2014), point to a number of its strengths, including its flexibility and capacity to be adapted to researcher preferences and abilities. However, they also note that IPA is not without its challenges, the most frequent dilemma encountered being the tension between the idiographic commitment of IPA and the development of general themes. This is reflected in the authors' concerns that the search for common themes should not adversely affect the representation of individual perspectives. One of the contributing authors, in referring to the danger of trying to "herd" or shoehorn individuals' words into broader categories, leaving potentially important aspects of their stories behind, describes this as "pushing and shoving themes into boxes in order to produce the 'correct' number of super-ordinate themes under nice pithy titles" (Wagstaff et al. 2014, p.7).

Wagstaff et al. (2014) compare the process of developing and then reducing themes across participants to playing an accordion, as the number of themes would expand, collapse, and then begin to grow again. One way of resolving this tension is to provide, as Wagstaff did, idiographic portraits of individual participants. However, I am conscious that this may give rise to an issue in the current study, in which participants are coming from a relatively small educational technology community. So, the challenge in reporting the results of the analysis will be to remain true to the idiographic focus while not compromising the anonymity of the participants.

While Smith et al. (2009) point out that there is no prescribed single method for analysing interview data in using IPA, they do provide guidelines that can be followed in the process. They emphasise that these are intended to be flexible enough to be adapted depending on the research objectives rather than a recipe to be followed (Wagstaff et al. 2014). The interviews in the current study have been analysed following these guidelines, guided by Bazeley's (2013) suggestions for implementing them in the qualitative data analysis application NVivo. The steps in the analysis process are outlined below. Further details of the process in NVivo are included in Appendix N. Again, I take an inductive approach to the analysis, yet remaining conscious that it is impossible to be purely inductive.

All interviews were transcribed verbatim from the audio recordings and transcripts uploaded into a folder structure in NVivo. Steps 1 to 4 were then carried out for each interview before moving to the final stage of seeking areas of convergence and divergence across the cases.

Step	Actions
1. Listening, reading, and re-reading	To familiarise oneself with the data, read the transcript a number of times and also listen to the recording while reading the transcript to "hear" the participant's voice with the words. Each reading and listening can provide new insights. Initial observations or reflections should be recorded, possibly in a research diary. The purpose of doing so is to help the researcher bracket these insofar as possible to ensure that they do not unduly influence the process of analysis and interpretation. Once recorded, the researcher can return to these at a later stage in the process.
2. Initial noting	This step involves developing a detailed set of notes or exploratory comments from an initial line-by-line analysis of the text. Although these comments may be descriptive, linguistic or conceptual, questions, or initial interpretations, Smith et al. (2009) suggest that it is likely at this stage that there will be a strong emphasis on more descriptive comments focusing on the content of what the interviewee has said. The main purpose at this stage is to engage with the text in detail, explore different avenues of meaning, and begin to move the analysis to a more interpretative level. This can be done in NVivo by adding Annotations to the transcript file. These are numbered and appear in a separate window from the transcript file. They can be exported to Microsoft Word for review in preparation for the next stage.
3. Developing emergent themes i.e. codes	This stage involves developing concise and pithy statements of what is important in the comments attached to excerpts from the transcript to identify codes, or what IPA researchers call "emerging

	themes". These are usually presented as phrases which are at a slightly higher level of abstraction. This is essentially the equivalent of the initial coding process used in some other methods of analysis. The focus is on capturing what is crucial at this point so that the emergent themes reflect an understanding of the participant's experiences. Each emergent theme is represented as a code in NVivo (Bazeley 2013) and a description can be recorded to explain the relevance of the code.
4. Superordinate themes – searching for connections across emergent themes	The result of this step will normally be a list of superordinate themes and subthemes. This involves looking for connections between emerging themes and drawing them together to produce a structure that represents the "most interesting and important aspects of the participant's account" (Smith et al. 2009, p.134). This clustering of emergent themes can be done in a number of ways, such as: • **Abstraction** - cluster related themes. • **Subsumption** – an emergent theme subsumes other related themes. • **Polarisation** – focus on difference rather than similarity. • **Contextualisation** – cluster themes related to a particular time or situation. • **Numeration** – cluster themes based on their frequency, which may indicate their relative importance to the participant. • **Function** – cluster themes that reflect how the participant is presenting the self in the text through, for example, language use.

	Some themes from Step 3 may be dropped if they do not fit with the emerging structure or if they have a weak evidential base. Throughout this stage, it is important to keep notes of how the analysis is conducted, either in a research diary or in NVivo. Smith et al. (2009) recommend a table or graphic as a particularly useful way of representing these clusters of emergent themes. Bazeley (2013) suggests that in NVivo one might carry out these four steps independently for each participant by maintaining the codes and clusters in separate folders for each participant. The process of synthesising and reviewing across all participants can be carried out in a later stage.
5. Moving to the next case	Steps 1 to 4 should then be carried out for the next case, with the researcher attempting insofar as possible to bracket or set aside the ideas which have emerged from the previous case, so that each case is examined on its own terms, in keeping with the idiographic approach of IPA. Smith et al. (2009) acknowledge that one is inevitably influenced by what one has already found. However, they suggest that the rigour of systematically following these steps in the analysis process may help mitigate this tendency.
6. Looking for patterns across cases	This stage involves looking for patterns and connections across the cases. Themes and super-ordinate themes in individual cases may represent higher order concepts that the cases share. There will also be cases where the super-ordinate themes diverge. Smith et al. (2009, p.149) point out that "doing IPA with numbers of participants constantly involves negotiating this relationship between

	convergence and divergence, commonality and individuality".

Table 3.3 Implementing IPA in NVivo

3.11.2.3 Using IPA to analyse the interview data in this study

In this study, the analysis of the interview data can be described as an interpretative phenomenological analysis of the experiences of the participants. Barkhuizen (2019) contends that different analytical approaches can be used along the analysis continuum in narrative inquiry. At one end, guided by Polkinghorne's (1995) distinction between analysis of narratives and narrative analysis, Barkhuizen (2019) places thematic analysis, which has many parallels with IPA (Braun et al. n.d.), with a key difference being the idiographic focus of the latter. This suggests that IPA can be situated on the analysis of narratives end of the continuum for this dimension of narrative inquiry.

To summarise, the qualitative data in the study have been analysed by using Thematic Analysis for the open-ended questions in Phase 1 and IPA for the semi-structured interviews in Phase 2. Table 3.4 briefly compares each of these approaches.

Thematic Analysis	**Interpretative Phenomenological Analysis**
Philosophically neutral. Its flexibility makes it suitable for a phenomenologically grounded approach as taken in this study.	Arises from the philosophy of phenomenology and the study of experience.
Identified by Braun and Clarke as suitable for investigating participant experiences.	Designed to investigate experiences.
Suitable for a larger samples as in the survey.	Generally used with a smaller homogenous sample.
Suitable for analysis of open-ended responses.	Suitable for semi-structured interviews.
Focuses on entire dataset, which aligns with the purpose of the survey.	Focuses on first examining each individual's experience; only then does it consider convergence and divergence across the dataset.

Table 3.4 Comparing Thematic Analysis and IPA

3.11.3 Presenting the interview finding using composite narratives

As outlined in Section 3.8.1, Barkhuizen (2019) positions the reporting of the findings of a narrative inquiry along a continuum ranging from analysis of narratives to narrative analysis. In distinguishing between these approaches, Polkinghorne (1995) uses Bruner's (1985, p.11) distinction between paradigmatic and narrative ways of knowing about the world, "each providing distinctive ways of ordering experience, of constructing reality". Polkinghorne (1995)

argues that humans use both approaches to make sense of their experiences and both generate useful knowledge.

Analysis of narratives, based on the paradigmatic mode, involves researchers examining data to identify themes and categories, testing and revising these "until they provide the 'best fit' of a categorical scheme for the data set" (Polkinghorne 1995, p.10). This is a primary method used by humans to make meaning of experiences as "ordered and consistent", allowing us to "construct experiences as familiar by emphasising the common elements that appear over and over" (Polkinghorne 1995, p.10).

Narrative analysis, based on Bruner's concept of narrative cognition, results in a coherent account in the form of a story. This involves synthesising the data into a coherent whole to "bring an order and meaningfulness that is not apparent in the data themselves" (Polkinghorne 1995, p.16) while also remaining consistent with the data. Thus, the purpose of narrative analysis is to make the data cohere so that it can ultimately be judged in terms of "its capacity to provide the reader with insight and understanding" (Polkinghorne 1995, p.20). The paradigmatic approach, then, adopts a categorising approach whereas on the other end of the continuum the narrative approach retains the complexity while seeking to also maintain coherence.

What Barkhuizen (2019) adds to this distinction is to emphasise that it is not binary. Rather, a narrative inquiry may be positioned along the continuum ranging from thematic analysis and presentation only to a narrative analysis that results in the data being "re-storied" and presented in story form.

The different combinations of approaches that can be used to analyse and report narrative inquiry data, storied and non-storied, are captured in the following diagram (Figure 3.4) from Dwyer and Emerald (2017).

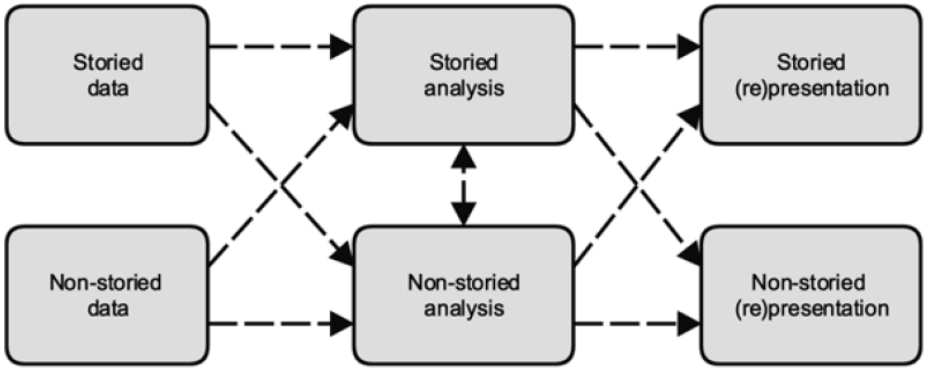

Figure 3.6 Positioning of narrative research design
(Dwyer and Emerald 2017, p.11)

While the IPA analysis process identified themes in the interview data in this study, the challenge in reporting the findings was firstly to collate these while remaining true to individual experiences of the participants. During the process, participants were divided into three groupings: heads of Learning and Teaching units, heads of Educational Technology units, and Learning Technologists. Within each grouping, key themes capturing the experiences of the members were identified. While presenting these thematically would bring a level of order to the findings, there remained the challenge of presenting these coherently for the reader and avoiding the risk of confusion due to slightly different contexts even within a relatively small group of three or four participants.

A further issue in presenting the findings was to ensure the anonymity of the participants, who are members of the small Irish higher education Educational Technology community. Saunders et al. (2015, p.617) define anonymity as "one form of confidentiality – that of keeping participants' identities secret". They suggest a continuum of anonymity ranging from fully anonymous to very nearly identifiable, along which researchers need to balance two competing priorities: maximising protection of participants' identities and maintaining the value and integrity of the data.

One approach is to disguise personal identities by using pseudonyms. However, as participants in this study are drawn from a relatively small Educational Technology community most of whom are known to each other, pseudonyms were unlikely to be sufficient as information on titles, roles, unit name, institution size or structure might allow participants to be identifiable. Thus, to maintain anonymity, it was also considered necessary to remove any such potentially identifying details while simultaneously trying to minimise the loss of the contexts within which the participants' experiences are situated (Willis 2019).

For each of the three groups of interviewees, the data was initially presented as a set of themes with appropriate quotations woven together and attributed using pseudonyms to each interviewee within the group. However, a further issue highlighted by Saunders et al. (2015), is that of attributing a number of data extracts to the same person which might, when combined, make them identifiable. To address this, the findings for each group are presented as a third person narrative based on a composite character, with all quotes attributed to this character, providing a greater level of anonymity to participants.

Such composite narratives, told in either first or third person, have been increasingly used in the context of protecting anonymity (Johnston et al. 2021; Creese et al. 2021; Willis 2019; Wertz et al. 2011). Willis (2019, p.472) uses this approach to present an "authentic yet anonymous story", by creating a narrative in which "a number of interviews are combined and presented as a study from a single individual". By combining individual accounts into a single composite, Willis (2019)

seeks to present a picture of the group as a whole , using “a singular point-of-view to tell a story that is based on multiple participants’ accounts” (Johnston et al. 2021, p.3). This approach allows the researcher to present different aspects of the experiences of the group, some of which are common while others, although pertaining to individuals, may be considered sufficiently important to include. In this way, the composite narrative can be used to represent the multi-faceted experiences of the members of the group. In addition, composite narratives may make the research findings more accessible for readers (Johnston et al. 2021; Wertz et al. 2011).

This is a relatively recent approach to presenting findings from narrative and phenomenological research and, as there are no guidelines for this process, it is largely dependent on the researcher’s skill in accurately reflecting participants’ experiences (Johnston et al. 2021). To address this limitation, its use in this study is guided by the key principles of maintaining the connection to the data and ensuring that the voices of the participants are evident (Willis 2019; Johnston et al. 2021).

The following process, adapted from Willis (2019), was used to ensure clear links between the data and the final representation. Importantly, as in Willis’ own study, the “only modification is to present data from several interviewees as if it were from a single individual” (Willis 2019, p.475). In addition, Willis (2019) advises that the researcher should have a level of familiarity with the context of the study to judge what makes a meaningful composite, which is the case in this study.

Defining a transparent and rigorous process for creating the composite and connecting it to the data in this way aims to increase confidence that the composite provides a valid and accurate representation of the data.

1. Each composite is based on a group of three or four interviewees.
2. Themes and subthemes were identified.
3. Key quotes, taken directly from interview transcripts (Willis 2019; Johnston et al. 2021), were identified for each group.
4. Findings were initially written up, making use of pseudonyms and weaving in quotes from the different members of the group while attempting to present each theme coherently.
5. Identifying details were removed from quotes.
6. Composites were then written from the point of view of a single participant, removing any elements of repetition that occurred by having similar quotes by different participants.

7. A brief quote, where appropriate, was chosen as the title of each subtheme to act as a signpost for the reader.

As indicated by McElhinney and Kennedy (2021), the process of constructing the composite narrative is an iterative one of writing and re-visiting the data and analysis. In this case, the resulting representation of the interview data consists of three composite narratives, one for each of the categories of interviewee. Two narratives are presented from the point of view of single individuals while the third presents the perspectives of two composite characters with similar roles but differing contexts.

This is the final element in the methodological aspect of the study's research design, an overview of which is shown in Figure 3.7.

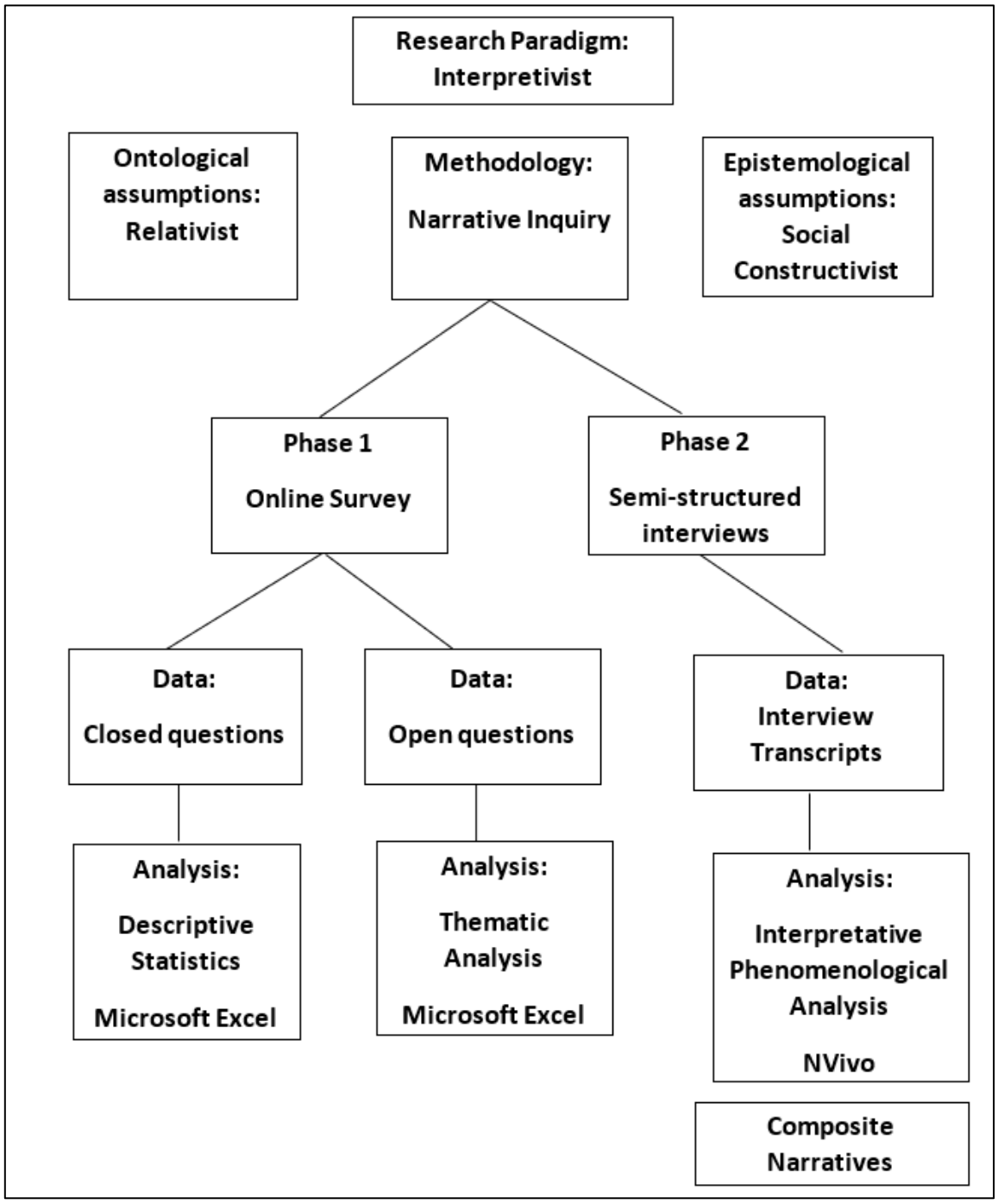

Figure 3.7 Overview of the research design for the current study

3.12 Enhancing the trustworthiness of the research

3.12.1 Validity and reliability

Validity and reliability are two primary criteria for evaluating the quality of research. Derived from the field of quantitative research, these are concerned with the integrity of the process and the ultimate conclusions drawn by a study. Internal validity is concerned with how well the findings of the study are derived from the data. External validity refers to the extent to which the findings can be generalised beyond the specific context of the study. Reliability is concerned

with the extent to which a study is replicable over time, meaning that if it were carried out in a similar context then similar results would be found (Bryman 2016; Cohen et al. 2011).

As qualitative research has evolved, researchers have grappled with defending its rigour when judged against such criteria associated with quantitative approaches (Morse 2017). Scholars have questioned the relevance and suitability of these criteria to qualitative research, as they presuppose a more positivist approach (Cohen et al. 2011). Some researchers have taken the approach of redefining the criteria for application to qualitative studies (LeCompte and Goetz 1982; LeCompte and Preissle 1993), whereas others such as Lincoln and Guba (1985) have argued that these criteria should be replaced by different terminology particular to qualitative research.

A more recent emphasis in ensuring quality in a research study has been what Morse (2017, p.803) describes as the "rather slow recognition that quality of qualitative research was something that should be achieved during the process of inquiry, rather than something . . . awarded after completion". This shift to researchers using quality criteria throughout the inquiry to continuously monitor their work and provide descriptions of procedure, implicit in a reflexive approach, is a means of ensuring rigour and confidence in a study. In the current study, key criteria used to carry out this self-monitoring include trustworthiness and authenticity as proposed by Lincoln and Guba (1985).

3.12.2 Trustworthiness

Lincoln and Guba (1985) argue that trustworthiness encompasses four criteria, each of which corresponds to a criterion for evaluating quantitative research, as shown in Table 3.5.

Criterion	Parallel criterion
Credibility	Internal validity
Transferability	External validity
Dependability	Reliability
Confirmability	Objectivity

Table 3.5 Validity and reliability in qualitative research
(Lincoln and Guba 1985; Bryman 2016)

3.12.2.1 Credibility

Credibility is concerned with the believability of the findings of a study. To achieve this, the research should be carried out using principles of good practice, beginning at the design stage and continuing throughout the entire process. For Narrative Inquiry, Mertova and Webster (2019, p.75) assert that rather that producing conclusions of certainty, the concept of validity as applied to such research is concerned that it is "well-grounded and supportable by the data".

Cohen et al. (2011) suggest that processes such as member-checking and triangulation also add to a study's credibility.

In this study, to ensure the interview data was accurate, each participant was sent a copy of their transcript for review, in addition to an explanation of the composite narrative approach to be taken in representing the story of the members of their group.

Triangulation provides a means of checking the data and its interpretation (Lincoln and Guba 1985) by examining a phenomenon from more than one perspective by using two or more methods of data collection in an attempt to explain it more fully and possibly arrive at same conclusions (Cohen et al. 2011; Mertova and Webster 2019). However, the appropriateness of using triangulation is contested, particularly as there may be an implicit assumption that it will confirm a single view of reality rather than multiple truths or realities, as is the approach taken in this study. In considering such criteria for credibility, Mertova and Webster (2019, p.77) argue that, if multiple interpretations are valid, then "the real test of validity of any research should ultimately be done by those who read it and . . . they should be the ones to decide on whether an account is 'believable'".

The two methods of data collection in the current study, an initial survey followed by interviews, may offer a certain level of triangulation in that they provide an opportunity to compare the perspectives of the larger survey sample with the more in-depth discussions with the interview participants. Similarly, the interpretation and representation process for the interviews compares and contrasts the perspectives of participants who occupy similar roles within the three different categories, all the while bearing in mind that the study recognises that there will be multiple interpretations of reality.

3.12.2.2 Transferability

The criterion of transferability relates to the extent to which the findings of a study apply in other contexts. As the findings of qualitative research tend to be situated in a particular context, Lincoln and Guba (1985) argue that researchers should provide sufficient description of the details of the context to allow readers judge the transferability of the findings to other contexts. Such descriptions recognise that the perspectives of participants in the study and the subsequent interpretation of these can best be understood when the particular context is clarified.

3.12.2.3 Dependability

Dependability mirrors the criterion of reliability in quantitative research, which includes the notion of replicability of results. However, the specific contexts in which qualitative research, such as narrative inquiry, is carried out and its interpretive nature mean that this view of

replicability may not be an appropriate criterion. Mertova and Webster (2019, p.77) contend that, as narrative inquiry is concerned with individual human experiences of reality, "differences between individuals are to be expected, indeed valued". Therefore, they argue that reliability is measured by the accuracy and accessibility of the data. Other facets of reliability include persuasiveness and coherence of the data, the former being achieved when claims are supported by the data and when consideration is also given to alternative interpretations (Mertova and Webster 2019; Riessman 1993).

Lincoln and Guba (1985) advise that, to establish dependability of a study, researchers should maintain an audit trail, consisting of complete records of all phases of the research process from initial problem formulation to selection of methods, selection of participants, implementation of methods and data analysis decisions, and interpretation of decisions.

3.12.2.4 Confirmability

Confirmability refers to the extent to which the findings of a study can be confirmed by others (Korstjens and Moser 2018). Essentially, this criterion, while recognising that complete objectivity is not possible, is concerned with ensuring that the researcher has not allowed personal values or theoretical inclinations to influence the conduct of the research (Bryman 2016) and, in particular, that the findings that have been derived from the data. Central to ensuring the rigour and quality of the study, therefore, is the reflexivity that I bring to the process. In adopting a reflexive mindset throughout the study, I remain conscious that the meaning I make from participants' experiences may be affected by my own particular context. Thus, it has been essential that I reflect on my own assumptions, biases, and values and how these may impinge decisions made throughout the study and that I make the research process transparent for the reader.

3.12.3 Authenticity

In relation to the overall criterion of authenticity, Lincoln and Guba (1985) suggest a number of criteria that can enhance this characteristic. These include fairness, ontological authenticity, educative authenticity, catalytic authenticity and tactical authenticity (Amin et al. 2020; Bryman 2016). Fairness refers to presenting a balanced representation of the phenomenon under investigation; ontological authenticity requires that the research provides an enhanced understanding of the phenomenon; educative authenticity seeks to ensure that the research allows others to better appreciate the perspectives of the participants involved; catalytic authenticity is concerned with the extent to which the research encourages or stimulates action and, finally, tactical authenticity refers to the degree to which participants are empowered to take action (Guba 2004). However, these criteria for authenticity have received less attention

than the trustworthiness criteria and have been less influential in qualitative research (Bryman 2016). Guba (2004) remarks that, while there has been a lack of development of these criteria, perhaps their very existence suggests that it may be possible to think in different ways about the quality of research.

The following table summarises how I have sought to ensure that the study meets the criteria of trustworthiness and authenticity as recommended by Lincoln and Guba (1985).

Criterion	What I did
Credibility	Presented interim findings and methodology to peers at a number of conferences. Provided interview participants with the transcripts of their interviews, which they could compare with the relevant composite narrative. The survey and semi-structured interviews permitted a means of triangulating perspectives.
Transferability	Provided details of contexts to allow reader judge transferability to other contexts.
Dependability	Maintained a research diary to record details of each element of the study and the decisions made. Discussed these decisions in detail with my supervisors. Details of decisions and implementation are included in this chapter.
Confirmability	Adopted a reflexive approach and have included details of steps taken and decisions made.
Authenticity	Bracketing my own assumptions insofar as possible has enabled me to provide a fair representation of the experiences of the participants and, in doing so, contribute to the understanding of those experiences. I hope that the research will provides insights for educational technology leaders and those in formal institutional leadership positions, acting as a guide in how they can further promote educational technology. In addition, while a number of participants indicated that the study caused them to reflect on their role, it is hoped that the findings of the study will allow them to learn from the experiences of their peers and, in this way, better carry out their leadership role.

Table 3.6 Ensuring trustworthiness and authenticity

3.13 Ethical considerations

The inherent relational dimension of narrative inquiry means that ethical considerations "are never far from the heart of our inquiries no matter where we are in the inquiry process" (Clandinin and Connelly 2000, p.170). Clandinin and Connelly (2000) believe this ethical disposition, should be grounded in an ethics of care (Noddings 1986), extending beyond requirements of "do no harm" to responsibilities that stem from the relationships at the core of the inquiry. These relationships respect the role of the participants, recognising that the research is being conducted in interaction with them as they share their stories and experiences. They

depend on an inherent trust between the participants and the researcher, built on attentive and empathetic listening. While guided by this overarching ethical orientation, the study, which received ethical approval from the DCU Research Ethics Committee (Appendix D), also adheres to standard ethical principles and procedures.

Anonymity and confidentiality are a priority throughout the study, particularly given the relatively small community of educational technology leaders in Irish Higher Education. These two priorities, which take on added importance as participants relate the stories of their experiences (Clandinin and Huber, 2010), are reflected in the data collection and reporting methods.

Participation in the online survey was voluntary and all questions were optional. To ensure anonymity, IP addresses of respondents were not recorded. Nor were participants asked to provide any information which could identify either themselves or their institutions.

Similarly, in volunteering to participate in the interviews, respondents to the survey added their contact details to a Google Form which was separate from their responses to the survey questions. Prior to the interview phase, volunteers were contacted to invite them to take part and had the option to decline or to opt out at a later stage. All interviews were digitally recorded with the permission of the participants. The transcribed data and subsequent analysis were anonymised so that neither individual participants nor their institutions would be identifiable.

Further, all data and analysis material have been stored on a password-protected laptop access to which is restricted to the researcher.

No information which will compromise anonymity or confidentiality has been included in the findings or discussion. In presenting the interview findings, composite narratives have been used to protect these two priorities.

3.14 My own story

In terms of my personal orientation, I am conscious that I must not allow interpretation of data be influenced by my own perspective in my role as e-Learning Co-ordinator in my own institute. However, it is acknowledged that in the process of narrative inquiry, the "stories" of both inquirer and participants will be bound together to some extent (Connelly and Clandinin 2006). Rather than detracting from the objectivity of the study, I hope that my experiences in my current leadership role in educational technology, complemented by over 35 years' experience as a teacher and as an informal leader in learning, teaching, and educational technology, will enable me to better understand and identify with the perspectives of the participants. A brief look at some key parts of my own journey may help to explain my orientation and make visible the values

and perspectives that I bring to this study in which my own story naturally impinges on the participants' stories.

My first encounter with computers took place in 1985-86 during a part-time diploma on computers in education that I took while studying for my Higher Diploma in Education. The stand-out memory for me was a programming project in which the programme had to read text and, as in a word processor, distribute spaces randomly between words, so that the final output was justified on both sides. To complete this project, I borrowed an Apple computer and spent my Easter holidays attempting to solve the problem. The programming and problem-solving aspects were what motivated me, as these were similar in approach to my first love, Mathematics. As in so many Mathematics problems, the challenge was to stick with the problem, trying many different approaches to eventually solve it.

During my eight years as a teacher of Mathematics and Computers in second-level, although primarily teaching Mathematics, I learned how to use word processing and other applications packages and provided training on these to my colleagues and to students. My interest led me to complete a Master's in Computer Applications at Dublin City University during my final two years there .

In 1994, I joined the Mathematics and Computing Department in what is now Dundalk Institute of Technology (DkIT) as a Mathematics lecturer. In the early 2000's, two of my colleagues in the department introduced us to Moodle. As one of the early adopters, I was attracted initially by its potential in allowing me to share notes and examples with my students. By this time, I had also begun to teach Programming and, in time, graduated to using other features of Moodle in my practice.

Teaching has always been my passion, irrespective of whether it was Mathematics or Programming. When teaching Mathematics at second level and later in DkIT, my focus was on finding the best ways to explain and build up my students' confidence in a subject that many struggle with. Similarly, in teaching programming, the challenge again was to help students "get their heads around" the concepts and build their confidence in their ability to solve the problems. This is what drew me to looking more deeply at how to approach my teaching by engaging with the literature. At the same time, I continued to experiment in my own practice, trying various programming languages that might be more suitable for those struggling with the concepts, extending my use of Moodle, creating screencasts, and piloting the use of a student response system, all of which focused on improving student learning. In addition, I introduced some of these practices to my colleagues. Looking back, these were my first forays into taking a lead in educational technology, although I didn't see it in that way. I was simply trying to find better

ways to help my students learn and, if they were useful, to encourage some of my colleagues to also use them.

Apart from my teaching duties, I also had department-level roles which included developing retention initiatives, coordinating programme development, leading the move to an outcomes-based approach and providing training on this. In 2006, I took on the role of acting Head of Department for a year. Although I enjoyed this experience, I opted to return to teaching as this was where my passion lay. All of these roles have been an important part of my learning journey as a teacher and middle-out leader.

When the Centre for Excellence Learning and Teaching (CELT) was established in my institute and the MA in Learning and Teaching (MALT) set up for staff in 2008, I was invited to act as a tutor and supervisor for colleagues on the programme, while continuing to teach in the Computing department. In 2013, I was seconded full-time to the role of E-Learning Development Coordinator, responsible for promoting educational technology across the institute. On taking on this role, I must admit to feeling somewhat of an imposter, believing that I needed to be seen as an expert in all things related to technology enhanced learning when I was far from it. Despite using technology in my practice, I would not describe myself as a lover of technology for its own sake. Rather, I am essentially only interested in aspects that are useful in the context of learning and teaching, in general, and which may benefit students. Initially, the role was daunting and involved a steep learning curve as I moved beyond my familiarity with Moodle to teaching others about how it might be integrated in their practice, mainly through workshops and one-to-one support. A key aspect was also teaching the educational technology module on MALT. I saw my role primarily as one of building capacity and confidence, removing some of the mystique that can surround technology so that colleagues could learn to use tools to benefit their practice, and ultimately their students.

On reflection, I believe it was important that, prior to taking my role, I had been teaching in the institute for almost 19 years and was known to most staff. I had spent seven years on Academic Council and was an active member of its Learning and Teaching subcommittee. On the MA, I continue to teach not only the technology module but others which are not specifically technology-related. This is particularly important to me as it makes visible my strong belief in the primacy of good teaching practices, which can then be supported by technology as appropriate. Our work on the MA programme was recognised nationally when the team was awarded a National Forum Teaching Expert award in 2015 for facilitating systemic cultural change in the institute.

While working in this role has been an overwhelming positive experience, it is not without its challenges and frustrations. A key aspect of the change endeavour has been the building of considerable digital capacity among academic colleagues, many of whom point to time pressures and workload as a major issue. The challenge, then, is to convince them of the benefits of making small changes using key educational technology tools, particularly Moodle, despite the many demands on their time.

At an institutional level, references to technology enhanced, digital, online, blended, and flexible learning have been included in strategic plans. However, discussions with those in formal leadership positions in relation to specific goals and implementation have been limited, dependent mainly on the interest of individual managers. Despite the clear commitment of some to embracing technology in blended and online learning and the corresponding institutional policies, the limited engagement by many in institutional management suggests that educational technology is not a priority or that it is not sufficiently high on the priority list in the face of competing issues.

A further indicator of the lack of priority at institute level is the budget allocated to our Centre for use with educational technology. No part of the Centre's already limited budget is assigned specifically for educational technology, meaning that we are reluctant and generally unable to buy equipment or licenses for experimenting, relying primarily instead on free software tools to complement the centrally financed Moodle. In addition, failure to find support and institutional funding for initiatives such as piloting technology tools, even those which are widely adopted both nationally and internationally, is frustrating to say the least.

The range of activities in my role also presents a challenge in finding time to remain current by scanning the digital learning landscape, experimenting, and reading journal papers or threads on social media. This has been particularly challenging as the only person in the Centre with responsibility for educational technology until almost a year into the COVID-19 pandemic. It was only at this time that the institute appointed an educational technologist to assist with the significantly increased workload.

In terms of leadership, if someone were to ask me prior to this study if I considered myself a leader in my current role, I would probably have said that I didn't. My image of a leader and leadership was a more traditional one, very much shaped by my many years in educational institutions, envisaging leadership as related to being in a formal position at the forefront, perhaps of major initiatives, with others following or doing as asked. Rather, I would have seen my role as part of a change endeavour, seeking to bring about change, primarily in the practices of academics but also in the thinking of those in formal positions. Instead of considering this as

leadership, I would have said I was simply doing my job as well as I could and trying to make a difference. I would have felt that considering or calling myself a leader was perhaps a bridge too far.

However, my reading, research, and reflection during this study has caused me to shift my position significantly and develop a broader view of leadership, which, as Ramsden (1998) says, is the responsibility of everyone in an organisation. More particularly, I have come to see that promoting and effecting change as I do in my role is exercising leadership. This has been an important shift in mindset for me, not because I want to be heralded in some way as a leader, but more importantly, that I see myself in that light with the responsibility that it brings. To be honest, it is more about quietly knowing that I am exercising this leadership rather than being lauded for it. While I hope that this leadership in learning, teaching, and educational technology has been evident in many ways, perhaps it was more visible than previously across the institute during the early months of the COVID-19 crisis. In the sudden shift to emergency remote teaching, I, in conjunction with the other members of our small team, took the initiative in supporting our academic colleagues in the challenging circumstances that they faced. We were also involved in advising those in formal leadership positions.

A question in this study's online survey asked participants the extent to which they agreed that their colleagues looked at them as a leader in educational technology. My own response would have been that I believe they do. However, I might also have added that I do not think of my role in these terms. Further, my sense also is that my role is not seen institutionally as a leadership role, particularly by most in senior positions, who appear to see me as a go-to or support person in relation to educational technology, and learning and teaching in general, rather than a leader as such. This may be due to many in institutional leadership positions holding a more traditional view of leadership, as I would have done previously.

In summary, my role is most certainly in the middle, working mainly with academic colleagues, less so with institutional management, communicating with the Academic Heads group, senior management, and Academic Council primarily through the Centre's head. While the role may be considered central in the sense of being available to all staff, when it comes to impacting institute priorities, there is sense of being on the periphery. Although our Centre moved to centre-stage early in the COVID-19 pandemic, there is a sense or risk that, once the immediate emergency has passed, we may return to the periphery, working under the radar, to be called on by institutional management only if something related to teaching and learning or digital learning arises within the institute or nationally, but not high on the agenda of many at senior level.

3.15 Chapter Summary

This study, guided by the philosophy of phenomenology and adopting an interpretivist paradigm, has used Narrative Inquiry as its overarching methodology. The study, which is primarily qualitative in design, consisted of two phases of data collection to explore the experiences, or stories, of those who lead educational technology change in the middle of their institutions – an initial online survey followed by semi-structured interviews, the latter providing an opportunity to explore the survey findings more deeply. Thematic analysis has been used to analyse data from the open-ended survey responses to identify the key themes in this initial overview of the experiences of educational technology leaders. Semi-structured interviews with 10 such leaders from the IoT/TU sector were analysed using Interpretative Phenomenological Analysis (IPA), focusing first on the individual experiences of participants by fully analysing each interview before identifying areas of commonality and difference across the group of participants.

As is clear from the brief outline of my own story, this story continues to be shaped and re-shaped, affected by many different factors, including the stories of the study's participants. In the next chapter, we consider in detail their perspectives as articulated, interpreted, and represented in the current study.

4 Results

This chapter presents the results of the data analysis from the two phases of the study. The first phase consisted of an online survey of middle educational technology leaders in Irish higher education. The purpose of this phase was to obtain an overview of the experiences of these leaders. It explored their perspectives on leadership, influences on their understanding of leadership, the approaches they find effective in integrating educational technology, the challenges they encounter, and the enablers that may allow them to promote wider implementation.

The second phase consisted of semi-structured interviews with 10 educational technology leaders in the Institute of Technology (IoT)/Technological University (TU) sector. Although their actual titles varied, the interviewees for this phase consisted of three head of Learning and Teaching units, three heads of educational technology units, and four learning technologists who work in central units.

4.1 Online Survey

The online survey (Appendix H) in the first phase of the study yielded 64 completed or substantially completed responses representing a response rate of approximately 47%. These responses were then analysed using Microsoft Excel as outlined in section 3.10.1.

4.1.1 The participants

There were 63 responses to the questions relating to institution type, gender, and age. The distribution of responses for each of these is shown below.

Institution Type	Number	%
University	33	53.2%
Institute of Technology (IoT)	20	32.3%
College of Education (CoE)	2	3.2%
Private College	8	12.9%

Table 4.1 Institution type (n = 63)

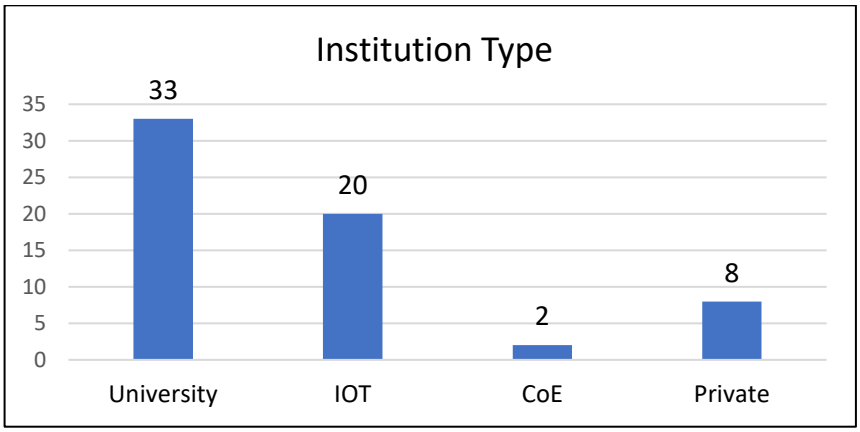

Figure 4.1 Institution type (n = 63)

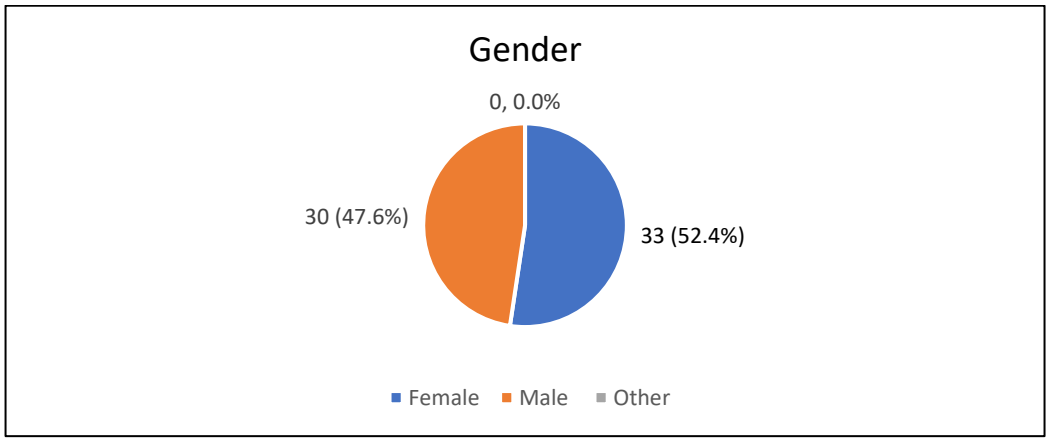

Figure 4.2 Gender (n = 63)

Age	Number	%
Under 30	0	0%
30 - 45	26	41.3%
46 - 60	34	54.0%
Over 60	3	4.8%

Table 4.2 Age (n = 63)

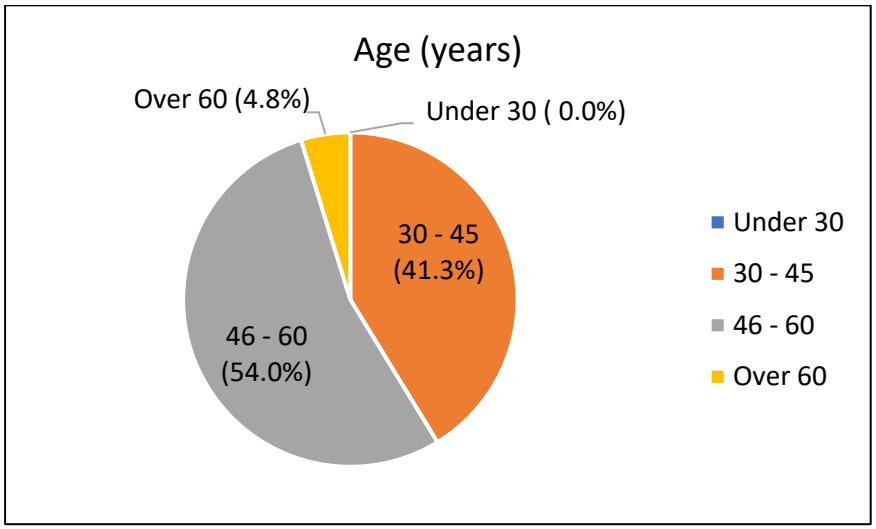

Figure 4.3 Age (n = 63)

4.1.2 Participant Roles

Participants were asked (Question 5) to indicate which of eight role descriptions (Table 4.3) best described their own role in relation to educational technology in their institution. If none applied, participants could specify brief details of their own role.

Role	Description
Head of Educational Technology team	I am the head of a team which has responsibility for integrating educational technology in my institution
Team member - Learning designer/technologist	I am a learning designer/technologist and a member of a team which is responsible for providing pedagogic and technical support in technology-related activities in my institution.
Head of Learning and Teaching	I am head of a central learning and teaching team and have an interest in the use of educational technology.
Educational Technology co-ordinator – member central team	I am responsible for co-ordinating the use of educational technology in my institution and am a member of a central learning and teaching team.
Educational Technology co-ordinator - individual learning designer/technologist	I am a learning designer/technologist and am responsible for co-ordinating the use of educational technology in my institution.
Learning developer – interest in educational technology	I am a Learning Developer advising colleagues in relation to teaching and learning but I have a particular interest in educational technology
Faculty member and champion	I am a faculty member and, in addition to my teaching duties, have been assigned a role as an educational technology champion in my department or school.
Faculty member	I am a faculty member with a particular interest in integrating educational technology in my practice.

Table 4.3 Role descriptions

Table 4.4 shows the breakdown of responses (n = 64) to this question.

Role	Number	%
Head of Educational Technology team	7	10.9%
Team member - Learning designer/technologist	13	20.3%
Head of Learning and Teaching	5	7.8%
Educational Technology co-ordinator - member central team	2	3.1%
Educational Technology co-ordinator - individual learning designer/technologist	5	7.8%
Learning developer - interest in educational technology	3	4.7%
Faculty member and champion	2	3.1%
Faculty member	11	17.2%
Other	16	25.0%

Table 4.4 Participant roles (n = 64)

The original set of roles did not fully capture the range of participant roles, as indicated by 16 respondents (25%) selecting Other and providing brief descriptions of their roles. A review of these descriptions suggested that a number aligned closely with some of the role descriptions while others did not match any of them. For example, three participants had formal leadership positions as heads with a particular focus on online learning or strategic development in educational technology. Two further respondents indicated that their primary roles were as programme directors in programmes which had significant or fully online components. Thus, two extra roles were added to the original list. These were Head of Online/Strategic Development, and Programme Director. Of the remaining four participant role descriptions, three were most closely aligned with those in the learning technologist category and one with management roles.

The revised classification is shown on Table 4.5.

Role	Category (M, L, F)	Number	%
Head of Educational Technology team	M	10	15.6%
Team member - Learning designer/technologist	L	13	20.3%
Head of Learning and Teaching	M	5	7.8%
Educational Technology co-ordinator - member central team	L	2	3.1%
Educational Technology co-ordinator - individual learning designer/technologist	L	6	9.4%
Learning developer - interest in educational technology	L	4	6.3%
Faculty member and champion	F	3	4.7%
Faculty member	F	12	18.8%
Head online/strategic development	M	3	4.7%
Programme Director	L	2	3.1%

Table 4.5 Revised classification of roles (n = 64)
(M = Management; L = Learning technologist; F = Faculty)

Of particular interest in this analysis was the positioning of respondents within the organisational structure of their institutions occupying management, learning technologist, or solely faculty roles. In this categorisation, heads of functional areas such as Educational Technology or Learning and Teaching have been included under the heading of management. Learning technologist roles include Learning designers or technologists, co-ordinators of educational technology, including those who are members of central teams or who have individual responsibility, and learning developers who have an interest in educational technology, and some of those in a further category (Other) who have not designated themselves as management or faculty. Those classified as faculty include educational technology champions and those academics who take a lead in embedding educational technology and sharing their experiences with peers. The results of this refinement are shown in Table 4.6.

	Institution type					
Role	**IoT**	**Uni**	**CoE**	**PC**	**Total**	**%**
Management	3	10	1	5	**19**	**29.7%**
Learning Technologist *	8	18	1	2	**29**	**46.9%**
Faculty	9	5	0	1	**15**	**23.4%**
Total	**20**	**33**	**2**	**8**	**63**	
%	**31.7%**	**52.3%**	**3.2%**	**12.7%**		

Table 4.6 Breakdown of roles by institution type (n = 64)
IoT = Institute of Technology, Uni = University, CoE = College of Education, PC = Private College

Note: * One respondent who chose this role did not indicate the type of institution.

4.1.3 Approaches to Leadership

In Question 9, participants were asked to indicate which of five descriptions of leadership approaches (Table 4.7) best described their own approach to their role in relation to educational technology. These descriptions were developed from the literature on educational technology roles (Beetham et al. 2001; Oliver 2002), leadership aspects in academic development (Taylor 2005; Timmermans 2014), and shared leadership approaches (Fletcher and Kaufer 2002). Although these descriptions did not mention leadership as such, each sought to depict a particular generic leadership orientation. The emphasis in the question was on identifying the approach which most closely matched that of each participant, recognising that any individual's approach may consist of elements of other and possibly all approaches. Participants could also choose to specify and describe an approach other than those listed. In a follow-up question, participants could comment further on the option they had chosen.

Approach	Description
L1	I see it very much as my responsibility to ensure that I am an expert in the area of educational technology. I share my knowledge with colleagues and students through provision of training, advice and resources. It is essential that my colleagues have confidence in my expertise if they are to become competent in the use of educational technology and in this way increase the integration of educational technology tools in my institution.
L2	I see it as essential that teachers and students engage with educational technology to improve learning, as mandated by national and institutional policies and strategies. Given the range of tools available, it is my responsibility to identify the most appropriate tools and then organise professional development activities to facilitate their integration. In addition to this, I monitor the use of technology tools in my institution, celebrating colleagues who adopt them and targeting those who are resistant to their use.
L3	I see the integration of educational technology in my institution as a collaborative effort that I participate in or perhaps coordinate. I see this integration as a shared responsibility that can best be achieved by tapping into the many different areas of expertise of my colleagues. I actively encourage my colleagues to take on this responsibility and support them in doing so.

Approach	Description
L4	I believe in the importance of educational technology and see myself primarily as an influencer. Through building relationships with colleagues (and students) I hope to motivate and encourage them to use educational technology. I try to persuade others of the value of educational technology, modelling its use and sharing my practice and, in this way, bring about changes in practice. In doing this, I am conscious that it is important that my colleagues choose the technology tools that will work for them and their students.
L5	My role in primarily as a teacher who uses educational technology in my practice because I believe it helps my students learn. I am enthusiastic about educational technology. I am happy to talk to my colleagues about it, share my experiences and give advice and help if needed.

Table 4.7 Descriptions of leadership approaches used in Question 9.

Table 4.8 presents the responses to this question organised according to participant roles.

	Approach					
Role	**L1**	**L2**	**L3**	**L4**	**L5**	**Other**
Head of Educational Technology team	0	0	6	3	0	1
Team member - Learning designer/technologist	5	3	3	1	0	1
Head of Learning and Teaching	1	1	3	0	0	0
Educational Technology co-ordinator - member central team	1	0	1	0	0	0
Educational Technology co-ordinator - individual learning designer/technologist	2	0	1	3	0	0
Learning developer - interest in educational technology	0	1	1	2	0	0
Faculty member and champion	1	0	1	1	0	0
Faculty member	0	0	1	5	6	0
Head online/strategic development	2	0	1	0	0	0
Programme Director	0	0	0	1	0	1
Other	0	0	3	1	0	0
Total	**12**	**5**	**21**	**17**	**6**	**3**
%	**18.8%**	**7.8%**	**32.8%**	**26.6%**	**9.4%**	**4.7%**

Table 4.8 Leadership approaches by role (n = 64)

Table 4.9 shows the leadership roles organised according to the broader categories of management (M), learning technologist (L) and faculty (F) as outlined in Table 4.5.

	Approach							
Role	**L1**	**L2**	**L3**	**L4**	**L5**	**Other**	**Total**	**%**
Management (M)	3	1	11	3	0	1	**19**	**29.7%**
Learning Technologist (L)	8	4	8	8	0	2	**30**	**46.9%**
Faculty (F)	1	0	2	6	6	0	**15**	**23.4%**
Total	**12**	**5**	**21**	**17**	**6**	**3**	**64**	

Table 4.9 Leadership approaches by role category (n = 64)

Of the 19 participants categorised as Management, 11 (57.9%) favour a distributed, collaborative approach, encouraging and supporting colleagues in taking a shared responsibility for the integration of educational technology. In the words of a Head of an Educational Technology team, "much of my work is behind the scenes ensuring that collaboration can happen smoothly between others" (40-M)[1]. Unsurprisingly, the majority of faculty (80%) see themselves see themselves either as influencers and modellers (40%) or enthusiastic adopters (40%) who implement technology in their practice and are happy to share their experiences with colleagues. There is also a collaborative aspect in these roles as indicated by a champion who added that she works "collaboratively with staff to identify ways in which technology might enhance the student experience and learn as much from my colleagues as they do from me" (07-F) . For another champion, "it's a mix of push and pull. At times collaborative, at other times I need to push a little" (28-F).

The approaches favoured by those in learning technologist roles show a more even spread with the majority adopting one of three main approaches. For 26.7%, the emphasis is on the importance of being an expert in educational technology and their colleagues having confidence in this expertise. One university Learning Technologist explained, "I was hired to provide educational technology expertise for my unit, so feel that the first choice best describes my role" (38-L). A further 26.7% see their role as one of collaborating and sharing responsibility with colleagues. For 26.7%, they primarily seek to influence and persuade colleagues building relationships and modelling practice. This spread of preferences may indicate that choosing a single approach was difficult for some as reflected in a follow-on comment from an IoT Educational Technology co-ordinator who pointed out that "the above are not mutually exclusive

[1] Quotes are ascribed to participants indicating the participant's number (1 – 64) and role category, Management, Learning Technologist or Faculty (M, L or F).
For example, 40-M refers to Participant 40, who is in the Management category.

and I could have ticked most of the others also – I provide professional development and support, and work in collaboration with colleagues" (18-L).

4.1.4 Institutional approaches to educational technology

To get a sense of the institutional context within which these leaders work, a further question (Question 21) asked participants to indicate their level of agreement with nine statements relating to how their institutions approach educational technology and their own involvement at this level. A summary of the results is shown in Table 4.10.

Approach	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
The use of educational technology is mandated in my institution.	24.1%	32.8%	17.2%	15.5%	10.3%
Institute management frequently seek my advice in relation to educational technology.	8.6%	27.6%	24.1%	29.3%	10.3%
Educational technology features in our institutional strategy but is not a priority	13.8%	24.1%	20.7%	34.5%	6.9%
The integration of educational technology has been agreed as a priority in my institution.	1.8%	19.3%	19.3%	40.4%	19.3%
The integration of educational technology is actively supported by senior and middle management in my institution.	3.4%	19.0%	41.4%	27.6%	8.6%
My institution actively supports innovation in the area of educational technology.	1.7%	22.4%	32.8%	37.9%	5.2%
In my institution, educational technology is primarily adopted and promoted through pockets of innovation.	0.0%	7.0%	15.8%	54.4%	22.8%
My colleagues in my institution look to me as a leader in this area.	1.7%	6.9%	31.0%	39.7%	20.7%
I have regular interactions in relation to educational technology with those in formal leadership positions in my institution.	10.3%	22.4%	19.0%	41.4%	6.9%

Table 4.10 Institutional approaches to educational technology (n = 58)

4.1.4.1 Prioritisation and support at institutional level

Almost 57% (56.9%) of respondents disagreed or strongly disagreed with the statement that the use of educational technology was mandated in their institutions, contrasting with 25.8% who agreed or strongly agreed that this was the case. Although not mandated in many institutions, 59.7% of respondents agreed or strongly agreed that the integration of educational technology is identified as a priority in their institutions, with only 21.1% suggesting that this is not the case. 41.4% agreed that educational technology features in institutional strategy but is not a priority, whereas 37.9% of respondents disagreed with this statement. While 36.2% agreed that senior and middle management actively supported the integration of educational technology, a sizeable proportion, 41.4%, were undecided, suggesting perhaps that this support is not visible. A further 22.4% suggest a lack of support by management.

It appears that educational technology is primarily adopted and promoted through pockets of innovation with 77.2% agreeing that this is the case. However, while these pockets of innovation may be the primary means of adoption and promotion, only 43.1% of respondents agree that such innovation is actively supported by their institutions, with almost one third (32.8%) remaining neutral, and 24% suggesting that it is not.

4.1.4.2 Interacting with institutional leadership

A sizeable proportion of respondents, 60.3%, agree that their colleagues see them as a leader in educational technology. A further 31% were undecided, perhaps indicating a natural level of uncertainty as to how they are perceived by their colleagues. While generally perceived as leaders in this area, less than half (48.3%) agreed that they have regular interactions with those in formal leadership positions in relation to educational technology with almost one third indicating that they do not have such interactions on a regular basis. When asked about institutional management frequently seeking their advice, slightly less than 40% (39.7%) agreed that this is the case with over 36% (36.2%) indicating that management do not frequently seek their advice in relation to educational technology.

4.1.5 Challenges in integrating educational technology

Participants were asked to indicate the most challenging aspects of their own role in relation to educational technology (Question 14). In a subsequent question (Question 19), they were provided with a list of 17 factors which might affect the integration of educational technologies in their institutions and asked to indicate the extent of the challenge each presents. In a follow-up question, participants could indicate any other challenges they encountered.

In response to the open-text question (Question 14), participants (n = 53) identified four main areas of challenge.

1. Balancing multi-faceted roles with staying up-to-date with developments in technology and research.
2. Engaging academics in integrating technology into practice.
3. Insufficient resources, particularly in terms of funding, personnel, and infrastructure.
4. Changing the institutional culture and influencing the views of management in relation to educational technology.

Time was mentioned as one the most challenging areas by 16 respondents (30.2%). This challenge has two distinct, but related, aspects, the issue of finding time to carry out the day-to-day work involved in the role while also staying up-to-date and upskill on educational technology tools. In relation to the former, respondents described the workload as sometimes being

excessive and making it difficult to find time "among all other activities" (48-M) and to "do all the things you want to do" (21-L). In the words of a learning technologist in the IoT sector, the most challenging aspect of the role is "Time – too much to do, too little time" (18-L). Given the fast-changing nature of technology, remaining current or staying "on top of all opportunities" (20-L) in terms of development and research is challenging for many. Participants speak of coping with software updates (08-F) and dealing with the "steep learning curve and the speed of new tools arriving at one's [my] door" (37-L).

Of particular concern to the 15 participants (28.3%) who mentioned the issue of engaging academics were those who are resistant to change, not inclined to adopt new approaches, lack confidence in this area, or who simply are too busy. Participants speak of the challenges in communicating with, reaching, encouraging, and convincing (57-M, 33-M, 04-L, 10-L, 16-M) academic colleagues to help them "understand the role of technology" (53-M), engage in workshops and training (04-L, 29-L, 49-L), and ultimately get "buy-in" (58-M).

Resource issues featured in the responses of 16 participants (30.2%). One aspect is the need to invest in funding for pilot projects and experimentation with technology tools. This, in turn, needs to be supplemented by investment in institutional infrastructure such as Wi-Fi to support the use of these tools. Although only mentioned by three respondents to this question, this point arose again in the later question on challenges (Question 19) in which 19 (32.2%) respondents identified inadequate IT infrastructure, such as Wi-Fi, as very or most challenging.

The lack of sufficient educational technology staff was mentioned by three respondents, one of whom expressed concern about the temporary nature of the contracts of some e-learning staff (42-M). This is further supported by the responses (n = 59) to a later question (Question 19) in which 30 respondents (50.8%) identified the issue of insufficient support staff such as educational technologists and champions as very or most challenging, with a further 16 (27.2%) also seeing it as challenging. Of the 17 factors listed in this question, the issue of support staff was second only to the issue of the high workload of academics. The issue of resources was summed by one university sector learning developer who pointed out that "academic development/educational technology are the Cinderella services of higher education when we should be integral to institutional development for the future" (30-L).

The broader challenge of changing the institutional culture and the views of those in management positions was raised by 14 (26.4%) of respondents. Issues relating to institutional culture include "institutional inertia and a lack of joined-up thinking" (01-M) due, perhaps, to factors ranging from "entrenchment in traditional ways" (06-M) and "archaic world views on education and learning" (55-M), to an "institutional lack of awareness" (52-L) in which the use of

educational technology is not embedded in teaching and learning policy (05-L). The challenge of garnering institutional support and recognition, described by one respondent as "lack of leadership" (50-F) will require, in the view of another, that senior management "dial back on the hyperbole around educational technology" and realise "the importance of technology and the need for investment" (14-M). This "managing upwards", suggests one leader from the IoT sector (41-M), is the most challenging aspect of their role.

The clarification of the roles of those working in educational technology is another challenge which features for a smaller number of respondents (11.3% (6)). The main issue for these respondents is the lack of boundaries or definition of the role, which can result in those responsible for educational technology in institutions, sometimes a single individual (21-L), being unable to specialise due to being "pulled in lots of different directions" (22-L) and, on occasion, doing routine tasks as opposed to dealing with the broader change agenda (60-M). As the latter respondent put it in an earlier question (Question 5) when asked which of eight role descriptions most closely described their role,

> *"I am ALL of the above - head of team of three (who do 'real' IT support). I am the TEL person, providing instructional design, TEL, and a learning technologist. Also run our VLE, e-portfolios, website, and social media channels....oh and I make tea!" (60-M).*

As mentioned earlier, Question 19 listed 17 factors which might affect the integration of educational technologies. Participants were asked to indicate the extent of the challenge provided by each, on a scale ranging from "Not Challenging" to "Most Challenging". A summary of their responses (n = 59) sorted by the aggregate totals of "Very Challenging" and "Most Challenging" is shown in Table 4.11.

Factor	Not	Somewhat	Challenging	Very	Most	Very/Most combined
High workload of academics	0.0%	3.4%	20.3%	44.1%	32.2%	76.3%
Insufficient support staff e.g. educational technologists or champions	5.1%	16.9%	27.1%	28.8%	22.0%	50.8%
Rigidity of timetabling structures and work allocation models	6.8%	23.7%	23.7%	27.1%	18.6%	45.7%
Lack of recognition for innovative teaching	11.9%	13.6%	32.2%	30.5%	11.9%	42.4%
Greater emphasis on discipline-specific research activities over teaching	11.9%	18.6%	30.5%	27.1%	11.9%	39.0%
Lack of support from institutional leadership	16.9%	23.7%	22.0%	18.6%	18.6%	37.3%
Lack of visibility in institutional policy and/or strategy	15.5%	22.4%	27.6%	19.0%	15.5%	34.5%
Teacher resistance to change	3.4%	30.5%	33.9%	16.9%	15.3%	32.2%
Inadequate IT infrastructure e.g. WiFi	32.2%	20.3%	15.3%	20.3%	11.9%	32.2%
Lack of technical competence on the part of academics	10.2%	20.3%	39.0%	25.4%	5.1%	30.5%
Institutional culture does not support or encourage teaching innovation	20.3%	23.7%	25.4%	23.7%	6.8%	30.5%
Cost of technology tools	11.9%	23.7%	39.0%	16.9%	8.5%	25.4%
Lack of opportunities for teacher professional development in TEL	23.7%	20.3%	30.5%	13.6%	11.9%	25.4%
Lack of trust by academics in the technology	10.2%	40.7%	28.8%	11.9%	8.5%	20.4%
Lack of evidence of benefits of educational technology	27.1%	28.8%	27.1%	13.6%	3.4%	17.0%
Academics' concerns on intellectual property issues	16.9%	40.7%	30.5%	11.9%	0.0%	11.9%
Lack of technical competence on the part of students	25.4%	33.9%	35.6%	5.1%	0.0%	5.1%

Table 4.11 Extent of potential challenges (n = 59)
(sorted by the combined totals of "Very Challenging" and "Most Challenging")

The high workload of academics was the only factor that was considered by all respondents to present some level of challenge. This factor was seen as challenging by 96.6% of respondents, with 76.3% indicating that it was "Very" or "Most" challenging. Interestingly, this factor, although mentioned by a small number of participants who are university faculty (02-F, 24-F, 34-

F), did not feature to any great extent in the earlier open question on the most challenging aspects of participants' roles.

Over half of the respondents (50.8%) indicated that the issue of insufficient support staff, such as educational technologists and champions, was either "Very" or "Most" challenging. This echoes earlier comments in which the lack of sufficient time to carry out educational technology roles and the related issue of insufficient support staff featured.

Apart from the challenge of insufficient support staff, other notable factors are related to institutional culture and structures that impinge on engaging academics, such as the rigidity of timetabling and work allocation, emphasis on research rather than teaching, and lack of recognition for innovative approaches to teaching. In addition, the lack of support from institutional leadership was identified by 37.3% as "Very" or "Most" challenging. Including a further 22% who also view this as "Challenging" means that almost 60% of respondents see this as a challenging factor in integrating educational technology. Similarly, 34.5% of respondents classified the lack of visibility of educational technology in institutional strategy or policy as "Very" or "Most" challenging, rising to a total of 62.1% if one includes those who see this as "Challenging".

When the "Not challenging" and "Somewhat challenging" categories are combined to indicate factors with a low level of challenge, the technical competence of students appears to be least challenging for respondents (59.3%) followed by academics' concerns on intellectual property issues (57.6%) and lack of evidence of the benefits of educational technology (55.9%).

Although the issue of inadequate IT infrastructure was not viewed as presenting a challenge for 32.2% of respondents, an equal number saw it as either "Very" or "Most" challenging in their efforts to integrate educational technology. The fact that almost one third of respondents shared this view suggests that the lack of appropriate infrastructure may still be a barrier to this process in at least some of our institutions.

Similar issues arose in the 20 responses to a follow-up question on other challenges encountered. Comments relating to institutional culture included "poor understanding and misconceptions of how people learn" (55-M), a lack of recognition for innovative teaching (26-L) and educational research (43-F), a mismatch between institutional policy on TEL and its implementation (39-F), and a "lack of desire for change from senior management"(25-F). Lack of time and the diversity of roles educational technology again featured in these responses as did the need for better resourcing. A learning developer's prophetic words on the lack of resources capture some of the concerns:

"The big challenge is that if we provoke demand in some way (or someone else does), we have no hope of meeting it in terms of support, training etc. because we are so under-resourced. In a way, we can only do what we do because a minority of staff engages with us. It shouldn't be like this" (30-L).

4.1.6 Identifying effective approaches

In Questions 15 to 18, participants were asked to consider the effectiveness of approaches to the integration of educational technology, identify approaches to professional development that they have found to be most effective, and suggest reasons for this.

Firstly, participants were asked to rate the effectiveness of 14 commonly used approaches (Beetham et al. 2001; Shurville et al. 2009; Browne and Beetham 2010; Slade et al. 2018) with options ranging from Not at all to Most effective. A "Don't Know" option was also included. In total, 59 participants responded to this question though not all provided a rating for each approach. The results, sorted in order of the combined totals for "Very Effective" and "Most Effective", are presented in Table 4.12.

Approaches	n	Not at all	Somewhat	Effective	Very	Most	Very/Most combined
Accredited CPD modules or programmes in educational technology	57	0.0%	1.8%	28.1%	45.6%	24.6%	70.2%
Remission of time for teachers to work on innovative teaching projects	53	0.0%	9.4%	20.8%	50.9%	18.9%	69.8%
Working with programme development teams	54	1.9%	3.7%	25.9%	38.9%	29.6%	68.5%
Working with individual academics on specific interventions in their modules	57	0.0%	10.5%	22.8%	38.6%	28.1%	66.7%
Working with small teams of academics	55	0.0%	3.6%	30.9%	49.1%	16.4%	65.5%
Practical workshop sessions	59	0.0%	11.9%	28.8%	35.6%	23.7%	59.3%
Sharing practice or showcase events	58	0.0%	10.3%	31.0%	29.3%	29.3%	58.6%
Small group trials of educational technology tools	59	0.0%	13.6%	33.9%	37.3%	15.3%	52.5%
Participation in external showcase events e.g. conferences, seminars	58	0.0%	10.3%	41.4%	34.5%	13.8%	48.3%
Working in partnership with groups of students	42	4.8%	14.3%	35.7%	28.6%	16.7%	45.2%
Funding targeted at small-scale interventions	54	1.9%	16.7%	38.9%	27.8%	14.8%	42.6%
Instructional video resources	59	0.0%	13.6%	45.8%	30.5%	10.2%	40.7%
Recognition of achievements e.g. awards, digital badges	56	12.5%	39.3%	21.4%	23.2%	3.6%	26.8%
Instructional notes	56	0.0%	33.9%	48.2%	14.3%	3.6%	17.9%

Table 4.12 Effectiveness of approaches
(sorted in order of the combined totals for "Very Effective" and "Most Effective")

Activities involving accredited and unaccredited professional development are identified as being the most effective. While Accredited CPD modules and programmes in educational technology are rated most highly, working with academics individually on specific interventions or with small groups or programme development teams also feature prominently in the responses. This informal professional development also includes practical workshops and sharing practice events. An important element associated with these activities is the provision of time to academics to apply innovative teaching methods which potentially arise from the activities. This is one way of addressing the high workload challenge identified previously.

Two approaches considered to be least effective are the recognition of achievements by means of awards or digital badges and the use of instructional notes. Combining the ratings of "Not at all effective" and "Somewhat effective", we see that 51.8% of respondents appear unconvinced as to the effectiveness of the recognition of achievements, with 12.5% indicating that these are not at all effective. The use of instructional notes was identified as being "Somewhat effective" by 33.9% of respondents. Instructional notes are identified in Question 17 as a useful approach to professional development but in the context of using them as a follow-up support to one-to-one, team, or workshop sessions rather than as an approach in its own right.

Focusing on professional development activities, Question 17 asked participants to indicate the three approaches to professional development which they found to be most effective. In a follow-up question they were asked to outline why these approaches have been effective. The 52 responses to the first of these questions, each listing up to three different approaches, yielded a total of 153 responses. The breakdown of these is shown in Table 4.13.

Approach	Frequency	%
Sharing practice	21	13.7%
Individual	19	12.4%
Team	17	11.1%
Accredited	17	11.1%
Workshops	16	10.5%
Resources - video, notes, online	12	7.8%
Small-scale pilots	9	5.9%
Support - time, recognition	8	5.2%
Conferences	6	3.9%
Just-in-time	3	2.0%
Funded	2	1.3%
Champion	1	0.7%
Miscellaneous	22	14.4%

Table 4.13 Effective professional development approaches

These approaches may be classified into four categories of activity:

- Sharing practice
- Practical sessions – individual, team, and general
- Accredited professional development
- Small-scale pilot projects

In answer to the question on why these approaches were effective, some respondents offered different reasons for each approach they had suggested while others offered an overall reason for the effectiveness. It should be noted, however, that a common thread to the reasoning

behind the effectiveness of many of the approaches is the need to make optimal use of the limited time that academics have available to engage with them.

4.1.6.1 Sharing Practice

The most effective approaches identified were events such as show and tell, short informal sessions and conferences in which academics share their experiences of using educational technology. A total of 27 respondents identified these events (sharing practice = 21; conferences = 6), which range from informal and formal intra-institutional events to more formal national and international summer schools and conferences. These provide opportunities to share ideas and experiences, stimulate interest, highlight possibilities, and examine issues related to practice. An essential aspect of such events is that they involve "academics showing other academics" (13-M) with technologies being modelled and championed by peers, thus enhancing the credibility of the initiatives and allowing academics see their impact in practice. Such sharing of practice is characterised by collaboration and is again noted by a number of respondents as an effective use of academics' time.

4.1.6.2 Practical sessions – individual, team, and general

As one might expect, practical sessions with academics, which answer specific questions or focus on the use of specific tools, is an approach that many view as an effective. Three distinct aspects were identified within this approach – working with academics on a one-to-one basis to focus on a particular question or tool, working with teams of academics, and the delivery of practical workshops to faculty in general.

Individual, one-to-one sessions with academic colleagues was mentioned on 19 occasions. Such sessions with individual academics provide insights "into the problems they are trying to solve" (10-L), applying technology to their individual context in "real situations" (28-L) and focussing on their specific needs (21-L). This targeted or tailored support is personalised and offered primarily (at the time of the survey) in face-to-face sessions in a non-intimidating environment, thus providing individual attention, support, and encouragement. One respondent identified this as particularly important in encouraging those most averse to technology (20-L). Another suggested that it was, in fact, a crucial aspect of the role of the non-academic educational technology leader in getting buy-in from academic staff. Conscious of the time commitments of academics, respondents saw individual sessions focusing on specific issues as an efficient use of academics' time.

Practical sessions with small teams of academics, such as programme teams, which again focus on specific needs, were mentioned on 17 occasions. These sessions address issues that academics are trying to solve within the context of their programmes or departments giving

them, as one respondent puts it, “what they want rather than what I want, or the institution thinks they need” (23-L). Addressing such needs and interacting with academics in this way can build relationships and trust (46-L). Some respondents suggested that such sessions are particularly effective if “modelled and championed by fellow staff members operating within the same educational context” (22-L) and may have a greater chance of “long-term and more widespread impact” (42-M).

Practical workshops delivered to the broader academic community are also identified in 16 instances as an effective approach. As with the individual and team sessions, these provide an opportunity for academics to get hands-on experience with educational technology tools in an environment where these experiences can be shared with peers. Again, these workshops were identified as particularly effective if modelled and led by academic colleagues. And, as with other approaches, respondents indicated the importance of these sessions being responsive to needs (02-F), practical, and to the point (04-L) to make the most of the limited time available to academics (04-L, 14-M)

These three approaches around hands-on practical training or engagement with particular tools can be further supported by the use of instructional resources and the availability of follow-up one-to-one support. Instructional resources, particularly video resources but also instructional notes, provide a reference point for academics to “fall back on” (38-L), allowing them to “help themselves” (18-L).

Once again for reasons of time, these professional development approaches must be short, sharp, focussed and, ideally, tailored to specific contexts and issues, allowing academics to make best use of their limited time. As one respondent put it “Giving faculty time out is key. Give them a chance to get 'stuck into' the task and they will do their best work.” (63-L).

4.1.6.3 Accredited professional development

Accredited professional development in the form of modules or programmes was highlighted by 17 respondents as being one of the most effective approaches to professional development. These modules and programmes facilitate the “sharing of teaching and learning practice within and across disciplines” (01-M), require “sustained engagement and engaging with current research” (09-M) allowing participants to “explore effective pedagogical approaches, supported by technology” (18-L). They provide opportunities to “discuss the challenges that the individual academic faces” (18-L) and can facilitate changes in practice. Recognition in terms of accreditation can act as an important motivator, rewarding participants for their work. In addition, micro-accreditation opportunities, often available in blended or online formats, were mentioned as an approach which may be convenient for busy or time-poor academics.

4.1.6.4 Small-scale pilot projects

Small-scale pilot projects or trials were noted as an effective approach but not as frequently as other approaches (n = 9). These small-scale initiatives were identified as having "more chance of long term and more widespread impact" (40-M). This may be particularly so in cases where associated funding allows the purchase of equipment or alleviates academic workload by buying out time. Importantly, a feature of such initiatives is to allow project participants to evaluate educational technology within their own teaching context.

4.1.7 Institutional support for educational technology leaders

Participants were asked (Question 23) to identify one thing that their institution could do to better support them in their roles.

In total, 47 participants responded to this question. While one respondent indicated that they were well supported and did not offer any suggestions, the remaining respondents provided one or more suggestions. The main areas in which participants say they could be better supported are institutional policy and vision, recognition and support from management, increased resources (including personnel and funding), clarification of their roles, and appreciation of the time required to carry out these roles (Table 4.14).

Supports required	Frequency
Institutional - vision and policy	18
Institutional - support from leadership	5
Resources - personnel	15
Resources - funding/infrastructure	6
Role - clarification	10
Role - time constraints	10

Table 4.14 Areas requiring support.

4.1.7.1 Institutional policy, vision, and actions

Supports relating to vision and policy were identified by respondents in all three categories of role, with the majority of comments coming from those in management and informal leadership positions. Respondents called for leadership in the form of "more overt strategies and policies at a higher level" (24-M), evidenced by "a clear and meaningful mission and vision for the organisation" (45-M) supported by a "top-down declaration and policy" (05-L). Institutions need to "articulate what [they] want from technology"(30-L) and "what is best practice and how to support it" (30-L). In this way, they can "follow through on the policy rhetoric" (03-M) and demonstrate by "vision and actions" (01-M) the value that is placed on teaching and the use of technology to support it (62-M). The implementation of this vision should be "backed up with initiatives to promote and reward adoption" (05-L). More specifically, one participant suggested

a “centralised strategy on blended and online learning” (04-M), while another proposed that serious consideration should be given to a “more blended approach for EVERY module” (34-F). In relation to management and leadership, even where there is support from “top management”, the process of “embedding into existing practices is still slow” remarked one learning technologist, who goes on to assert, “Policies need to change and access to those with decision-making ability is needed” (11-L) . One university head of educational technology noted the absence of a “senior leader responsible for learning technology” (14-M) in his institution. An IoT faculty member suggested that the institution simply needed to “listen” (25-F). Another advised that those in formal leadership positions take risks (41-F), with a Head of Learning and Teaching recommending that they lead the way by participating in TEL professional development (01-M).

4.1.7.2 Provision of resources for personnel, funding, and infrastructure

The requirement for increased resources features prominently in the responses to this question. Respondents appear to work individually or in small teams and 15 responses articulated the need to expand the team to more adequately support their endeavours. This is the main issue for approximately one third of those in formal middle leadership positions, particularly those who lead educational technology teams. The issue of supporting the integration process with sufficient funding and appropriate infrastructure also features in these comments. Resources, particularly in relation to sufficient personnel and to a lesser extent funding and infrastructure, was the issue raised by the majority of participants in informal middle leadership category.

Responses such as “more staff” and “more colleagues” appear in a number of responses with one person suggesting that a possible solution might be to “clone me several times over” (20-L). Such responses indicate that the task of integrating educational technology in a meaningful way, as outlined in many institutional strategies, is a significant task and cannot be adequately addressed by the current small teams or even less so by the individual educational technology leaders who work in many of our institutions.

This, in turn, is related to the limited time available to these individuals or small teams to carry out the work required. Time was mentioned by 9 respondents who asked for more time to be allocated or at least a recognition of the time required. This is a particular issue for faculty who may act as informal educational technology leaders or champions while, at the same time, continuing to manage a full academic workload. Having more staff available to promote the use of educational technology would, in the words of one respondent, “allow me to devote full attention to key strategic priorities” (22-L). The time pressures experienced by respondents is clear from the comment of one who pointed out “I am ONE person” (60-M). As another put it,

there is “so much to get done in such a short space of time” (20-L). The issue of time is also raised by some faculty who seek “recognition of the time required-academic workload” (02-F).

4.1.7.3 Clarification of roles

Issues of time may be related to the breadth of the various roles as highlighted by some respondents, who suggested the need to clarify, define, and formalise their roles and responsibilities. This clarification would recognise their role and position in the organisation, perhaps even to the extent of creating formal senior leadership positions in educational technology. This recognition and acknowledgement of what is involved in the roles was mentioned by 10 respondents. While the work on the ground may be with academics and in many ways “not often visible … it would be nice for this to be recognised by senior management. The academic staff recognise the value of what I do, not so much senior management” (07-F).

4.1.8 Most satisfying aspects of the role

Participants were then asked to indicate which aspects of their roles in relation to educational technology that they find most satisfying.

It is clear from the responses (n = 52) that, for the majority of participants, most satisfaction in their role is derived from seeing the effects of their work as it filters into the practice of academic colleagues and the learning experiences of students. This is common across all three categories of participants. Unsurprisingly, the effect on teachers comes to the fore in the responses of the management and learning technologist groups, who tend to be responsible for engaging with academic staff, while, as one might expect, the responses of faculty members focus more on the impact on students.

Participants in the management group speak of helping or enabling colleagues (58-M, 57-M), particularly those who are enthusiastic and committed to developing their teaching (01-M) or those who “have never used any forms of technology” (48-M). Satisfaction is derived from seeing them engage, innovate, integrate, and effectively use educational technology (33-M) to enhance the learning experience of their students (58-M, 57-M, 09-M). The ultimate impact on student learning is a source of satisfaction for many of this group as they get positive feedback from students (06-M) or when “student learning surpasses expectations” (62-M). This is also evidenced in the longer-term impact and progress across the institution as their efforts come to fruition (42-M, 14-M). Participants also speak of deriving satisfaction from changing practice through sharing practice events (13-M) or engaging in research in TEL (60-M).

For those in the learning technologist category, the most satisfying aspects also were working with and supporting colleagues in their use of technology and seeing these efforts ultimately

affect student learning. They speak of their work as involving colleagues who want to use technology (21-L), as well as those who are new to it or who fear it, encouraging them to experiment with it (22-L, 59-L). Their satisfaction appears to come from seeing these colleagues develop "competence and confidence" (26-L), becoming "engaged" (30-L, 20-L) and "energised" (20-L), and ultimately integrating technology into their daily practice (47-L). In this way, these colleagues develop "self-efficacy in the use of technology" (38-L), achieving "outcomes that are personally and professionally rewarding for them" (30-L). Positive feedback from students or from academic staff (10-L) which suggests that the students are engaged (20-L, 37-L) and, importantly, have an improved learning experience (18-L, 26-L, 37-L) is a further source of satisfaction for some members of this group. Other sources of satisfaction include researching TEL (52-L, 04-L) and collaborating with colleagues in other institutions (29-L). The variety in the role provided most satisfaction for one participant, who concluded that the role is

> *"great in that I get to work with staff from all disciplines and … on a wide variety of tasks from creating resources for staff and students, lecturing on staff CPD modules in blended and online learning and then on other tasks like being involved in working groups for policy developing in blended and online learning" (21-L).*

Improved student experience appears to provide most satisfaction for faculty who take on a leading role in educational technology. While some derive satisfaction from integrating new technologies (50-F) or applying "pedagogical principles to technology" (39-F), it is their contribution to improving learning, teaching, and the student experience (07-F, 51-F) through increasing student engagement (32-F, 34-F) by meeting student "expectations and surprising them" (34-F) that features most prominently in the comments of this group. Also, given the fact that members of this group have presented at national conferences, it is no surprise that some mention that they also draw satisfaction from collaborating with colleagues in their own institutions and across the sector (39-F, 02-F).

4.1.9 "Being an educational technology leader in my institution is like . . ."

While earlier questions explored different facets of the experiences of these educational technology leaders, one of the final questions sought provide a deeper insight into their overall experiences by asking them to articulate in a sentence what it is like to be an educational technology leader working in the "middle" of an institution. There were 41 responses to this question, 14 from the Management group, 18 from the learning technologist group and 9 from the faculty group. The key themes identified in this question are shown in Table 4.15. These were evident to differing extents among the participants from the three groupings, Management, Learning technologists, and Faculty.

Theme	Description of theme
Stepping forward	Standing out from the crowd, standing apart or being set apart, possibly going in the opposite direction; breaking new ground.
Sharing a message	There is a particular message to be shared. Persuading, influencing, advocating There are also religious connotations - prophet, converted, keys to the kingdom - and an element of advocating for the message.
Slow progress	Challenge, effort, struggle, and frustration. Challenge and extreme effort are evident here, resulting only in slow progress. The slowness of progress is frustrating. It may be more a case of standing still, invisible, ignored and at times going backwards.
Wide-ranging role	Roles combining many different aspects.

Table 4.15 Themes - "Being an educational technology leader in my institution is like . . ."

4.1.9.1 Management perspectives

There were three main themes to the comments in this group: the challenge of leading in the middle, an inherent frustration at the slow pace of change, and the task of navigating the middle ground.

While working in the middle may bring success and satisfaction, many participants also encounter obstacles. Some speak of "fighting a constant uphill battle" (40-M), "walking backwards up a hill" (53-M), "swimming in custard" (14-M), frustrated in the words of the latter by an often "complete lack of understanding or interest from senior management in learning technology" (14-M). For others, the ups and downs of their experiences are like "riding the waves, then encountering wipeouts" (33-M) or "skiing down a steep slope with hidden speedbumps along the way" (13-M).

Encouraging change through advocacy was mentioned by two participants (01-M, 55-M) with one speaking of this advocacy being "slow but persistent" (55-M) with laboured progress reflected by "two steps forward, one step backward" (55-M). Stepping forward in this role can be akin to "being a colourful joker in mainly black deck of cards" (06-M). One speaks of "leading a horse to water and hoping they are thirsty" (01-M). Yet, the slow pace of change can put one in mind of "Groundhog Day - same conversations, same battles, same arguments" (62-M) or simply being "a ticked box on a compliance form" (45-M).

In navigating the middle, some see themselves as laying foundations (57-M) or trying to be like the college bus with limited resources and limited access to certain routes but operating in bus lanes to "get to the destination with least obstruction" (42-M). One head of teaching and learning, referring to being positioned between senior management and faculty, described herself as "a bridge - trying to convince senior management that investment in technology is worth it, both in terms of time and money, but also trying to get some staff on board using a new technology. You sometimes get caught in the middle..." (48-M). Referring to the tension between making change happen and having the resources to do so, she says, "senior management wants it to be a priority but sometimes 'forget' that you need resources for these things to happen..." (48-M).

4.1.9.2 Perspectives of learning technologists

For those in the middle, the analogies can again be classified into three broad themes – challenge accompanied by frustration, persuading colleagues to go in a different direction, and dealing with a variety of roles. The most common analogies for this group related to the challenges and accompanying slow progress in the integration of educational technology tools. Participants spoke of leading in terms of educational technology as being akin to "pushing a big boulder up a hill ; it keeps slipping back down" (26-L), "swimming against a tide" (04-L), "trying to drive a car with the handbrake on"(30-L), or playing a game of snakes and ladders where "steps forward are often followed by steps back or stagnation or delay" (11-L). The resulting slow pace of progress is similar "treading water" (47-L) or "running to keep up" (37-L). Making inroads is like "preaching to the already converted but not having a pulpit to reach beyond" (05-L). Continuing in a religious vein, one participant refers to "sharing the keys to the edtech kingdom with others"(38-L). However, being a lone voice is comparable to "playing my own (exotic) instrument in a huge orchestra at times" (46-L) or even "being invisible" (52-L).

Some participants refer to the wide variety within their roles, being a "jack of all trades, but master of none" (59-L), "so many things all wrapped into one" (20-L), such as a "salesperson trying to convince people of the benefits . . . reassure their fears" (21-L), a detective (22-L), or a problem-solver (49-L), focusing on "getting the job done" (63-L). One participant describes the experience as "four seasons in one day - every day!"(29-L). In relation to leading, another was prompted to surmise, "Not sure if I really am a leader" (23-L).

4.1.9.3 Faculty perspectives

For the academics who promote the use of technology, their experience was one of being somehow set apart from the crowd, a pioneer (43-F). Other analogies described it as being a "bull on a sheep farm" (08-F) or, consistent with the religious undertones in the experiences of

the middle group, a “prophet in a foreign land” (02-F) or “part of a small but enthusiastic cult” (39-F).

A sense of frustration also featured, although to a lesser extent than in the middle group. Two members of faculty speak of “banging your head against a wall” (25-F, 34-F), “without painkillers” (25-F) in the case of one. For another, who has the role of educational technology champion in addition to teaching duties, the experience is less acute, as he likens himself to the “wise uncle that at times is listened to when it doesn't present too much trouble but ignored when it means accepting that real change needs to be made” (28-F). Another compares the experience to a “business launching new products and services” (50-F), echoing the salesperson experience analogy of the middle group. Finally, one champion compares herself to a painter who must choose the right brushes or appropriate technology tools to create their work on the canvas (or audience). “The mix of brush with paint”, she says “ is akin to the mix of the technology with the skills of the academic” (07-F).

4.1.10 Some final comments

Some respondents (n = 21) offered final comments on their experiences with a number expressing their thanks for the opportunity to reflect on their roles and share their views. Other comments echoed earlier themes. In particular, recognition for innovation in teaching, learning, and educational technology and for those who are charged with leading it was again mentioned. For one learning technologist, this “genuine recognition of T&L (Teaching and Learning) and TEL innovation/work . . . is key to developing staff TEL capacity in T&L and TEL within our institutions.” (26-L). Echoing this, one learning developer says,“ Give T&L/e-learning functions some real recognition - in too many cases, T&L centres are set up and it's like management buy a dog and then bark themselves. I'd love to see that change” (30-L).

Finally, a faculty member sums up the role of the Educational Technology Leader as

> *“multivariate and constantly evolving, but not yet valued in my opinion. An assumption exists that staff and students are engaging with educational technology regularly and that this is part of their educational toolkit. However, there is still a way to go before this becomes common practice in Irish HE and edtech leaders are particularly important in ensuring that it's not a techno-centric approach that is adopted but one that is grounded in pedagogy and evidence-based” (07-F).*

4.1.11 Summary

The results of this phase provide an initial overview of the experiences of a range of educational technology leaders in Irish higher education. In particular, they outline the challenges encountered by these leaders, the approaches they find effective in addressing these, and the

supports that they say would assist them in their work. The results indicate approaches to practising leadership that are favoured by these leaders, with some variations depending on the categorisation as Management, Learning Technologist, or Faculty. The analogies they use to describe their experiences of being an educational technology leader in their institutions provide further insights into those experiences. These and other elements of the overview provided by the survey results will be explored in more detail in the findings from the semi-structured interviews in the second phase of the study.

4.2 Phase 2 – Semi-structured interviews

The second phase of the study comprised of semi-structured interviews with 10 educational technology leaders in the Institute of Technology(IoT)/Technological University(TU) sector. At the outset of this study in 2019, the IoT sector consisted of 11 institutes. These were at various stages in discussions to amalgamate with partner institutes to form Technological Universities. At the time of writing, all of these TUs have been established. However, while these amalgamations may eventually result in a re-alignment of structures relating to teaching and learning, at this early stage, many of the original organisational structures remain in place in each institute.

The results for this phase will be presented as three composite narratives (as outlined in Section 3.10.3), one for each of the categories of interviewee. Paula's narrative is a composite of the three heads of Learning and Teaching units while Mike's story is that of the heads of Educational Technology. The final narrative represents two different learning technologist perspectives, that of Fiona who works specifically as a learning technologist and that of Dave, an academic who is partially seconded to a learning technologist/academic developer role while also continuing to teach.

4.2.1 The Head of Learning and Teaching – Paula's story

Paula[2] is head of a Learning and Teaching unit, with her composite narrative drawn from the experiences of three heads, each with different titles and all of whom have been seconded to their positions from academic posts. Their units are generally small in size, consisting of up to five whole-time equivalent staff.

[2] Image generated by https://thispersondoesnotexist.com/ (Share et al. 2021)

Paula and her unit report to the Vice President for Academic Affairs, formerly the position of Registrar. Educational technology is only one aspect of her unit's wider remit of learning and teaching. Roles with responsibility for educational technology in the unit are filled by an academic, partially seconded to the position, and a small number of learning technologists. The number of technologists can vary depending on institutional priorities and the availability of external funding which is sometimes used to finance learning technologist posts for specific, often short-term, projects.

4.2.1.1 The student experience

The primary focus for Paula and her team is cultural change through improving learning and teaching practice in their institute. Paula describes her unit as a "first port of call" or "one-stop shop" in matters relating to teaching, learning, and assessment. The unit, she says, "would lead out on that service within the institute", with support as a key aspect in providing this service, "That's one thing I think is key, just to support and to encourage".

The integration of educational technology is a key element in this change agenda. Adopting a pedagogy-first approach, she believes that supporting and encouraging academic staff to integrate educational technology offers opportunities to enhance student engagement and, ultimately, the student experience. "It's all about the student experience for us", she says, "For us, that's it . . . where it helps the staff, where it helps the student". She continues, "It's the engagement of the students, the student learning experience at the end of the day, that's what we're trying to impact".

4.2.1.2 Leading

"It's not a title that sits well with me"

When asked about being considered a leader, Paula explains her unease with the term, "It's not a title that sits well with me, I'll be honest with you", immediately following with, "I kind of see us as a team". While she hopes that she exemplifies leadership characteristics in her role, she continues,

> *"I would never use the term 'leader'. For me, I wouldn't see myself as a leader, I don't like the word necessarily . . . I'd like to think that some of the characteristics that would I suppose define a leader, that I'd like to think that I would embrace them".*

She is, however, more comfortable with a broader, more nuanced view of leadership in which all colleagues can lead in many different aspects of their roles, for example, as a teacher, a module leader, a programme coordinator, or collaborator with industry. She explains,

"We're all in leadership roles … I think people have to realise that it's not just the top-down (emphasis on down). So, you can lead across and below and everywhere you know…".

"Be realistic; allow things to bed in"

Facilitating change is a core element of Paula's role. Suggesting she may appear to be a "bit radical" and tenacious at times, she describes herself as a persuader in dealing with both academics and management. Change management strategies such as "the notion of putting an idea out there and letting it permeate and even let others think they came up with it" are important, she says, as change does not happen or gain traction quickly. She explains, "You have to kind of allow things to bed in maybe . . .[as] people don't like change". However, it can be challenging to implement change in a strategic manner when on many occasions she is "firefighting" and in "reactive" mode. "It's very, very hard I find in my role", she says, "to actually strategically plan for something".

As for changing the practices of academic colleagues, she says, "I like to think I influence them to think differently and . . . maybe to recognise their own sense of agency". However, she acknowledges the need to be realistic about what one can achieve and to recognise that, in the case of technology, there are colleagues who do not want to change. She remarks,

"At some point, you have to acknowledge and respect that they don't want to use it and that's fine. So, I think in that sense, be realistic about things you can change".

Recalling that she had a different view when she began her role, she explains,

"I learnt that probably the hard way as well, that you come into a position, you think 'I can change all this or I can get everyone to use such and such technology or this is really good, once everybody knows about it, they'll all embrace it'. . . And sometimes people don't want to because they just don't want to do something".

Over time, she has come to approach this with patience, by listening "to all sides", and "working with people who have the same mindset". "Work with the people who are going to work with you", she says, while accepting that some people will not want to change their practice. However, by working with the willing, she believes,

"It permeates out even to others who, at the start mightn't have, and for their own reasons and they may have very good reasons for not wanting to do a particular thing or change something".

"Suddenly you're in different position"

Paula describes herself as being in an in-between space, "totally in the middle", positioned between management, academics and students. She explains,

> *"You're facing in different ways . . . So, for me, we're kind of in the middle of all of that . . . discussions with people who are institute facing . . . high level discussions . . . conversations with staff and in cases working with students".*

Remarking that some academic colleagues perceive her as an academic in a management position, she points out that she does not see herself as management, nor does she have a management contract. Yet, she finds some academic colleagues commenting "You were one of us and now you're with the other side, the dark side". This perception, she feels, might be different had she been appointed from outside the organisation rather than from within. She explains,

> *"Leading in a role or being in a role such as mine is, it can sometimes be difficult if you've been in an academic. You are still an academic, you have your peers and now suddenly you're in different position. Some people will say, 'Now you're management' and I think, 'No I'm not management, I'm still an academic'".*

She stresses that she does not see her unit as "doing management's bidding" but rather, acting with the conviction that the policies and practices they promote are to the benefit of both teachers and students, asserting,

> *"We're implementing things but we're not saying we're doing it because management want it, we're doing it because it's going to be good for staff and students".*

This is the compass that appears to guide her team in navigating the space between management and academics.

"You've been in the situation"

For the most part, however, Paula finds that her previous academic background and experience as a teacher lends credibility to her actions and guidance, commanding respect from academic colleagues who see her as able to identify with their experiences. She continues,

> *"In the middle you very much get respect from staff because you're an academic and you're going through it yourself as well. So, if I give advice on teaching online it's because I do teaching online myself. So, there's a respect there for you've been in the situation".*

This credibility gives her a degree of influence with her colleagues, putting her in a position where they will listen to her. She explains,

> *"I think staff, your fellow academics, listen to you, which is great because you're one of them. You are representing I suppose staff across a particular level".*

Relating an example in which she felt her unit "really led from the middle", she recalls,

> *"I found they responded well because they thought, 'Okay she is one of us' . . . So, in that sense it is nice, people respond to you".*

Referring to her academic position, Paula asserts, “I’m pretty happy how I am I you know. For me it's really important that I have my academic standing and my academic contract”. She goes on to explain,

> *“I'm an academic, right? So, I would I teach as well because I want to teach and . . . I don't think you can be manager of a Teaching and Learning function if you don't teach”.*

To do otherwise, she feels, would in some way distance her from her profession with a risk of losing “sight of what your actual profession is and what your practice is”. Clearly enthusiastic about the experience and privilege of teaching colleagues, she continues,

> *“You know teaching, teaching colleagues is unbelievable. It's a great privilege, . . . I just think it's an amazing privilege to teach your colleagues to guide them and to facilitate their learning”.*

Working with novice teachers as they change their practice, possibly embracing technology in doing so, is especially rewarding. She declares,

> *“That to me is teaching… That’s the kind of thing that really motivates me. That’s another thing that just makes the difference to me”.*

For Paula, supporting and being available for staff is a positive aspect of working in the middle, where she may appear to be outside academia and yet is fully within it. She continues,

> *“What I like about the middle piece is that I do think it’s that respect from staff and that support that you can offer to staff and that you can listen to staff. Academic staff would readily come to not just me but the centre for support . . . especially new staff”.*

4.2.1.3 Sitting at the management table

“Who do I need to talk to?”

Influencing institute management, on the other hand, requires unit directors, such as Paula, to navigate institutional politics. While generally positive about her role, Paula admits, “the frustrating bits are just dealing with the politics”. However, she takes a pragmatic approach, concluding, “just understanding the politics and you will come across difficult people and there’s people that we work with and collaborate . . . you just have to recognise the different personalities”. She suggests that this can be easier to deal with if one is “well-supported in the role and has some autonomy to make decisions”.

She adopts an approach of strategic collaboration, beginning with the system procedures, “how you get things done”, and then building relationships with key players within the institute administration. For her, collaboration with appropriate partners or sponsors is essential in

navigating in this space, knowing "who you need to talk to or who will make that happen". She clarifies,

> *"Instead of worrying about I can't get something done, it's about, well, who do I need to partner with? Who do I need to collaborate with, just to make sure?".*

Communication, particularly with those at executive level, is essential if they are to be aware of the work of her unit. She sums this up, "the communication piece is probably critical for me. I sometimes feel that you nearly have to overdo it". She invests time in meeting regularly with the VP for Academic Affairs to clarify major issues so that they can represent Teaching and Learning at Executive Board level. She explains,

> *"I'm one of many things on the agenda right. So, . . . what I've learned over the years is I cannot assume that [the VP] knows what is going on".*

"I don't think I would have the authority"

Paula also speaks about how she may be perceived by her management colleagues. Her academic colleagues may see her as being at the "management table, making all these decisions", but she believes that her management colleagues may see things differently, concluding, "I'm not sure management sees someone in my position as a leader".

She emphasises, and presumably would like her academic colleagues to know, that she is not making those decisions but, rather, is "as much in the dark potentially as they are".

At the management table, she sees her role as offering guidance and advice to inform decision-making. Equally, when dealing with academic colleagues, she relies very much on influencing and persuading rather than directing. While she may command their respect, she's unsure of the impact of her advice and guidance, contrasting this with directives from the Registrar or senior management which are likely carry more weight. She explains,

> *"I don't know if you're taken seriously because you're not senior management. So, if I come out with here's what we could do in this area, I think it might be a case of, that's just [Paula] advising us, it's not really the Registrar. I don't carry in any weight in that sense. So, it might be harder for us in the middle to roll out things and be taken seriously by your peers because they would just think, 'Oh she's just giving advice on something or she's suggesting, as opposed she's telling us to do something'. . . I don't think I would have the authority to suddenly say to staff, . . . 'We're doing this, we're doing that'. That's not my role. . . I would always have to ask my line manager to issue something or to lead off on something because otherwise I don't think I would be taken that seriously".*

Thus, even though she may have input into decisions on initiatives, she is reliant on senior management, particularly the VP for Academic Affairs, leading out on these initiatives to attach a certain authority to improve their chances of being implemented. Giving an example of her unit contributing to the development of guiding principles during the COVID-19 crisis, she points out,

> *"It was the Registrar who had the power to say, 'These are the ones we're going to implement'. I would never be in a position to be able to say that. That's not my job. My job is much more of a supporting one rather than a 'This is what we shall be doing' one".*

She is clear that in her role she is "seen as giving advice as opposed to anything else". In noting that her role does not "carry that sense of power or authority", she emphasises, "Not that I want to".

4.2.1.4 Leading the team

"I always say we're a team"

Paula places a strong emphasis on her team, using the word "we" when referring to the work of the unit. Asserting "it's a team so we work as a team", she explains,

"I would treat everyone as in the team, I would refer to the teaching and learning centre, I would say 'we' the whole time".

She is particularly conscious of supporting new members making the transition to the team, pointing out,

"If someone is coming in to work with me, they work in a team . . . they're supported and that's very important . . . so you're looking after people . . . I think that's really important if someone is managing or leading a unit that that's the kind of culture you create for the new people".

Elaborating on this supportive and collaborative culture, she continues,

"It's all about creating partnerships you know and not seeing yourself as 'I'm the boss'. I'd never see myself as that way, ever, so I always say 'We're a team. So, this is the team and this is what we do and we will solve the problem'".

She speaks of consciously choosing the team so that members complement each other as she explains,

"The team that we have, they're different personalities, but they blend really well together and they've different specialties . . . They can help each other very well . . . that's what I was trying to do as well . . . You don't end up with all people that are the same, but you end up with people with different expertise and different capabilities but somewhere they meet in the middle".

"It's recognition . . . more than status"

Paula argues that the unit's status should be formalised as a department. This status with a level of budgetary autonomy would, in her view, be an indicator of the value placed on the unit by the institute. Its absence is a source of some frustration for her. She remarks,

"I'm not looking for power but it's frustrating that you really have to go through senior management for everything. I suppose you want to be taken seriously as a unit, you want to be able to say, 'Here's something that we're going to roll out'. There's always a delay if it has to go through senior management and then there's are you trusted in your role or everything that you come up with you have to get clearance on."

Again, stressing that this is unrelated to any desire for personal recognition or authority, she continues,

"It's recognition I think really, more than status. I don't want the power, but I want the recognition piece that a department, we should be a department, not just an afterthought. When something is needed, it's like, 'We'll just contact somebody from teaching and learning' . . . It would offer a lot more to be a department . . .".

This recognition of the importance of the work of the unit, she says, would also be reflected in ensuring the availability of sufficient personnel in the unit, either by ensuring the stability of

secondment arrangements or employing extra personnel. She hopes that the unit's structure may be formalised in the new Technological University, of which her institute will be a part.

Paula acknowledges the value that the institute attaches to formal professional development in learning and teaching, and, by extension, the work of the unit as demonstrated by the support that her institute gives in facilitating staff in taking accredited CPD modules provided by her unit. She notes,

> *"The institute is very good at supporting staff in that they fully fund, there is no question about being funded to do our modules . . . It's never questioned. . . I think that sends a message out to staff as well about how things are valued".*

"Have a network outside your institute"

Paula believes that one must use evidence-based practice from research as a basis for building a learning culture and developing change initiatives. She also speaks about the importance of establishing relationships, partnerships, and collaborations beyond her institute. She argues that being able to refer to how initiatives are implemented in partner institutions and benchmark one's own processes against them can "really can have an impact getting something over the line and getting it embedded".

Importantly, though, such relationships can also act as a touchstone, a source of support, and a safe space among those with similar roles. Paula recalls that, on taking her role, she was advised to not always have her focus within the institute but to" get out and work with people outside as much as possible because that's what keeps you sane". She strongly recommends this, pointing out,

> *"Having a network outside of your institute is really, really important and you can bounce ideas off them or give out or whatever . . . You do need a safe space, you definitely do".*

4.2.1.5 Dealing with COVID-19

"It actually brought us to the fore"

The shift to emergency remote teaching at the outset of the COVID-19 pandemic, impacted the visibility of Paula's unit and significantly increased its workload. The unit initially became the main source of staff and, by extension, student support as institute authorities and staff turned to them for guidance in how to respond to the sudden move to Emergency Remote Teaching (ERT). They became the first point of contact, the "front-line workers", as Paula puts it, in the role of first responders, as it were. "We had to mobilise and do a lot, you know, within 24 hours, seven days", she says.

This increased profile moved the unit from the periphery to the centre, "becoming a very centralised unit … through the whole crisis". "COVID gave us some presence", she notes, going on to remark,

> *"What happened was it actually brought us to the fore in the sense that it allowed, I think the institute right up to the president see what we do".*

Paula describes the contrasting situation,

> *"Our units by their very nature do a lot of work in the background with staff, supporting them and often it's not formally tracked or cannot be measured in things like KPIs and metrics".*

However, her unit became a key element in the response to the shift to ERT. While their work may have previously gone unnoticed by some colleagues, they were suddenly very much in demand. She recalls,

> *"Yes, go off campus and suddenly you become important. Nobody notices you when you're on campus. But go off campus and suddenly yes, everybody would be contacting you".*

The learning and teaching unit became the focal point for support in the initial weeks of remote teaching. Paula recalls that, as colleagues struggled with the sudden change, there was "that sense of 'Who do we contact?' or 'Just field it to the Teaching and Learning Centre and they will deal with it'".

"One of the only ones communicating with staff"

A key aspect of this support was to simply provide reassurance by staying connected to staff and students. Paula recalls,

> *"One of the things that was very obvious is we were one of the only ones communicating with staff after the crisis happened".*

By maintaining a connection with staff through supporting them, they were able to get a sense of key concerns and feed them back to management. In this way, she says,

> *"We were kind of like a conduit between teaching staff and management and we raised those kind of concerns".*

"I never thought we'd get so many people engaged with digital"

Although Paula's unit had begun to plan for the possibility of remote teaching in the preceding weeks, the abrupt closure meant that all staff, including many who had not engaged with educational technology previously, now had to quickly develop a level of competence in online delivery. The team organised training workshops, support structures, and platforms for resources. The response was coordinated through the teaching and learning unit, leading to a dramatic increase in workload and highlighting capacity issues within the unit. Paula reflects,

"It was a challenging time, really, really tough. It's probably been one of hardest years, most challenging years but really exciting as well".

However, a major positive was the increased engagement with educational technology. She continues,

"There's another side to it because I never thought we'd get so many people engaged with digital. I thought it was going to take us years".

4.2.2 The Head of Educational Technology – Mike's story

Mike[3] is the head of a unit with specific responsibility for educational technology. He is a composite of three such heads, each with a different title. By virtue of these departments being established with this specific responsibility, one might assume that their institutes place a strategic value on digital and online learning. While the teams vary in size, they generally consist of instructional designers or learning technologists. Each unit has a central role providing support to staff and students across their institutions.

4.2.2.1 Leading

"We are very much in the middle"

Heads like Mike, working with their teams, seek to change both staff perspectives on integrating technology into practice and senior management perspectives in relation to investing in and promoting this integration. Thus, they focus on three main directions: leading their own teams, encouraging staff to use technology, and influencing senior management colleagues.

Mike appears comfortable with being described as a leader, seeing himself as leading in a deliberate but informal way. His is "leadership with a small 'L'", which involves "encouraging and trying to bring people down the road", just as he "would like to be treated in this particular situation or . . . be brought along".

He describes himself as leading "very much in the middle" because "there's a level above, the decision-makers primarily and the executive". Being sandwiched between staff and management is sometimes frustrating, working "kind of both above and below in terms of structure". Being in the middle means,

"You're not in a position to really kind of bang the table and say, 'Oh, this is what's going to happen'".

[3] Image generated by https://thispersondoesnotexist.com/

Rather, he seeks to convince senior managers to support initiatives and then persuade staff to integrate technology into practice. He says,

> *"So, it has to be very much a kind of negotiated, you've got to convince, you know, I suppose on the one level, convincing staff to sort of engage with Edtech, . . . that it can help, that it can benefit the learning of the students, and then convince the senior managers above to actually invest in everything that you're proposing".*

Mike employs an "adaptive style" of leadership, influencing, encouraging, persuading, and managing change, depending on the situation, recognising that one "can't always take the same kind of approach". Guided by a belief in "involving and aligning others towards a vision for the future, for benefits of change", and noting that issuing directives does not generally work in higher education, he asserts, "You've got to bring people with you".

"There isn't any aspect of teaching and learning that EdTech can't contribute to"

Mike advises, "You've got to be passionate about the role. You've got to believe in it". He remarks that, in the education sector, those who undertake such roles do so primarily because they believe in what they are doing rather than for the purposes of progression in terms of promotion.

He strongly believes in the potential of educational technology to bring about positive change. By allowing people to "have education delivered in a way that suits them", educational technology is "an egalitarian force for good", making the student experience "better and more relevant". Such is its potential that he asserts,

> *"There isn't any aspect, really, of teaching and learning that EdTech can't, you know, contribute to, in a sense, can provide additional affordances".*

It is this potential to "change things for the better" that motivates and excites him.

Recalling the convenience and flexibility that studying remotely offered during the COVID-19 pandemic, he sees online learning as ,

> *"offering a pathway to qualification for people who can't commit to coming to the physical campus. . . . We are breaking down learning barriers, be they geographical or cultural. . . I hear such positive stories from people, people who are changing shift patterns, big families, caring responsibilities, just couldn't come to the physical campus, but we've given them a chance to upskill, change career".*

Ultimately, he hopes to see "a recognition of the operational and strategic value of EdTech", a scenario where it,

> *"would be strategically valued, but also that it would be used purposefully. . . where we really figure out what the experience is like and what the problem*

we're trying to solve is, rather than just plucking something off the shelf or using something that's already in-house".

4.2.2.2 Leading the team

"Bring in the right people"

Mike appears most comfortable using the term 'leader' as he speaks about building and leading his team. Bringing people in, "knowing that they're going to fit within the team" is crucial. He advises, "Bring in the right people if you're going to . . . be a leader".

He has built the team thoughtfully, with complementary backgrounds, encouraging them to become passionate and enthusiastic in discovering their own interests as they develop expertise in instructional design.

Seeing himself very much as part of this team, he notes the challenge of maintaining the balance between being a member and being the team leader,

"bringing people with you, like you're part of the team, but you're the leader as well. And that's a fine balance that you have to get right".

Being approachable and supportive of his team is "the leadership role" as members tell him, "We know I can come to you. I know you support me and we feel part of this team".

Mike's leadership is guided by some key principles. Firstly, he leads by example in terms of both working hard and setting the tone in how the team members relate to each other and those that they deal with. He believes in "having people's backs", taking responsibility if someone "messes up" and equally, highlighting member's achievements. In addition, he emphasises giving people a level of flexibility rather than, for example monitoring their work closely, with the result that "you'll be paid back, many times over". He sums this up as building trust,

"Trust relationship is so important, you know, that they trust each other, that they have each other's backs".

He hopes that he is manifesting these principles in his role. However, he remarks that these behaviours are sometimes absent in those in formal leadership and stresses the importance of leaders modelling such behaviours so that they "might percolate down through the organisation".

4.2.2.3 Changing practice

"Change is much slower than you want it to be"

In considering how to change academics' practices, Mike recalls the naïve outlook he initially brought to his role,

"When I started in the role, probably felt this, we'll implement, here's a technology, we'll implement this, and, you know, staff will just engage with it."

When his unit was established, his institute set strategic targets. He remarks however, “it’s easy in a strategic plan to say something like, ‘In the next . . . all lecturers will be . . .’. You can write that in there, but . . . it doesn't take any kind of cognisance of resistance from staff”. In reality, he finds, “change is much slower than you want it to be” and concludes, “buy-in is a slow process with staff . . . a kind of slow burn”. It requires patience and working initially with “the willing”,

> *“working with the champions, working with those who are keen to do something differently, and then letting the others just gradually realise that it's not an enemy”.*

He identifies three distinct groups of academics, a small group of “super-users”, a larger group that make contact when they encounter a problem and a further small group “who don’t use technology because they don’t want to, don’t have to or there is no added value for them”. He suggests that, for his teaching colleagues, the motivation to change is “sometimes it's about solving problems, sometimes it's about saving time, sometimes it's about the what's in it for me”.

On effective strategies, he points out,

> *“The kind of blanket ‘This will make you a better teacher’ or ‘This will make you a better lecturer’, that gets you nowhere”.*

Thus, “blanket workshops” tend to be ineffective,

> *“You can run all the training sessions you want and people will sign up for training, and then they won't go to it”.*

Rather, targeted and timely workshops to anticipate and solve issues as they arise, such as a grading and feedback workshops around grading time, are much more effective. Comparing this “just in time training, when somebody needs something” to buying a car, he continues,

> *“You'll never notice an ad for a car until you're looking to buy a car. So, people won't look for solutions to problems that they don't have”.*

One-to one support for colleagues who come with a specific problem, although time intensive, can result in one’s team developing a wealth of tacit knowledge and concrete examples that can then be applied in similar situations.

He speaks of changing people’s hearts and suggests, “If we can change things attitudinally . . . I think everything else will follow”. However, in doing so, one must be cognisant of the “politics of things”. He tells of ensuring transparency and buy-in for the evaluation process of a software application by involving a range of staff in agreeing what was required for the process. This, he believes, is critical and,

> *"It keeps you honest as well. You can have false ideas about what you think people want. They can have false ideas, by the way, about what they think they want as well".*

While advising patience in allowing "change to come", he stresses that the pace of this change can be increased through strategy, policy, and targets. "You shouldn't have to wait", he suggests, "you should have a policy there".

"It's a bit like buying a Fiat and expecting a Ferrari"

Reflecting on challenges encountered in this change process, Mike takes issue with the deficit language that is sometimes applied to online learning, particularly since the switch to ERT during the pandemic. Based on their experience of ERT, some colleagues see it as "inferior, that it's not as good as, that it's a poor substitute for the real thing. And . . . won't it be great when we all get back on campus again". Acknowledging that elements of the campus experience are "very difficult, almost impossible to replicate online", he emphasises, "We're not comparing like with like". Further, while technology facilitated ERT, the crisis highlighted a lack of investment in technology and technical infrastructure across the sector. Describing spending on digital infrastructure as "miniscule" compared to spending on physical infrastructure, he argues that directly comparing the two is unreasonable. It is similar, he says, to "buying a Fiat and expecting a Ferrari".

This under-investment, he suggests, may indicate a deficit approach to on-campus digital provision. Rather than an investment, it is seen as an expense in which "everything was always kind of done down to a price rather than up to a spec". He advises the sector, "Don't see the cost in terms of the pure amount you have to spend now". Although the situation did change during the pandemic, it was a reactive response rather than a longer-term strategic initiative. That said, he acknowledges, the difficulty of anticipating the future trajectory of technology development, explaining,

> *"It's easy for it all to make sense looking back on it . . . trying to see into the future is a lot more challenging . . . trying to ask people what they want isn't always the best example either because was it Henry Ford famously said , 'If you if you'd have asked people what they wanted they would have said faster horses'".*

"Having responsibility for change, but not authority to make that change"

A significant challenge for Mike involves being charged with implementing change but not having the necessary authority to make that change or direct that it should be made. He asserts,

> *"That, to me is a big challenge. You know, it's kind of having in terms of my role as a middle manager, it's having responsibility for change, but not having the ultimate authority to make that change".*

He describes a case he made to senior management, for expanding an already successful initiative, highlighting its benefits in terms of "equality and equity". Yet, he says, with a distinct note of frustration,

> *"You can put in all those arguments, and then it seems to go out the window, because the Financial Controller is saying, 'Well, we can't afford to do that anymore, right now'".*

He tells of a further initiative which, although identified explicitly in the institute's strategic plan and already emerging on the ground, met with resistance from the institute executive. He expresses frustration at what he describes as "almost lip service" rather than the executive saying, "It's in our strategic plan. We said we're going to do this, so let's put the money there". He is concerned by what he calls a "silo mentality" at senior level, with people making decisions "ultimately for their own areas . . . being kind of selfish about it". He believes that more "agnostic leadership" approach from the executive might judge such initiatives on their merits and ultimately conclude "You know what, we have to do that, because we bought into this idea".

4.2.2.4 Navigating the terrain

"Knowing the things that you need to get invested about"

In addressing resistance from senior management, Mike emphasises he is clearly located in middle management. Therefore, rather than adopting an adversarial stance, he takes a more strategic course of, "picking your battles, and knowing the things that you need to get invested about".

He recognises that he may be able to influence executive decision-making "sometimes". "But", he says, "I can't presume to do it all the time". With this in mind, he adopts the approach of firstly understanding the governance and decision-making structures and then "using your influence, judiciously and proportionately". For him, "being canny" in this way is a key element of his leadership. In summary,

> *"occasionally . . . you get a chip that you can play at the top table. You better play it fairly carefully because you don't know when you'll get another chip".*

Additionally, one should,

> *"speak your truth calmly and quietly look for an opportunity maybe to influence things for the future, knowing, of course, that the organisation, as it were, has a limited attention span. And, you know, it mightn't be wise to put anything else in there".*

"The space where teaching or learning meets technology"

Although not specifically asked in the interview questions, the relationship between these Educational Technology units with parallel Learning and Teaching units surfaced to varying degrees during our conversation.

While clearly enthusiastic about the potential of educational technology, Mike strongly underlines the primacy of the pedagogy in what he describes as "the space where teaching . . . or learning meets technology". His is a "a teaching led focus that we have, how does the technology support that?". He represents his institute as an Associate of the National Forum, reinforcing the link between their roles and the broader learning and teaching remit. In addition, he has been an advocate for learning and teaching in his institute and has been involved in learning and teaching committees within the institute, promoted learning and teaching initiatives locally and nationally. Again, he stresses that his priority is "the teaching and learning and the EdTech's coming in to support that".

"We try to keep our separate lanes"

For Mike, it is crucial that his team is not perceived as concerned with technology only. "As far as we're concerned", he says, "EdTech and e-learning is about the merging of technology and pedagogy". This is distinct from a purely pedagogical approach focused on traditional face-to-face learning and teaching which, he believes, "while in the abstract is the same, is very, very different when it comes down to, call it the operational level". He argues that specialist knowledge is essential in the application of pedagogical theories to the technology, stating,

> *"That's where the merging needs to take place between pedagogy and technology, where you understand, for example, what the affordances, what the benefits, what the value add, can be of the various different components of our e-learning infrastructure".*

Consequently, he feels that his unit and the learning and teaching unit at times need to delineate their spheres of influence. "We try to keep our separate lanes", he says. Acknowledging that there is "inevitable crossover . . . in some areas", which "can be healthy and . . . complementary", he attempts to ensure that the demarcation lines are clear, pointing out, "I try to ensure that they keep to their separate lane".

He recalls a tension emerging between the roles of the units in the early days of ERT. This revolved around guidance for staff in moving to online delivery. He was concerned that the Learning and Teaching Unit were offering "an alternative view of the world". He was adamant that online delivery was his team's area of expertise and, therefore, they, rather than the Learning and Teaching Unit, should take the lead. He continues, "We felt that it's a crisis, and as in other areas, you need to listen to the experts. And we're the experts".

Concerned with ensuring that the parallel guidance provided by the two units was not contradictory, Mike recalls,

> *"It wasn't that we wouldn't countenance them putting out stuff . . . we wouldn't countenance them putting out something now that in any way, bigger or smaller, contradicted the options we had very carefully laid out".*

While such units may have somewhat different priorities, the common elements are more considerable. Prior to the interview, Mike reflected on his role and was struck by its breadth and the challenge that his multi-faceted activities present for him. Having "all of these tentacles out in all these different areas", means that, at times, he is "reaching out over everything" and is "stretched too, too much", with the result that he is, "a jack of all trades and master of none . . . you've got to know something about everything".

4.2.2.5 Dealing with COVID-19

"Our moment in the sun"

The shift to ERT immediately turned the spotlight on educational technology units. Mike describes it as being "thrust into the limelight", his team's "moment in the sun". The increased visibility experienced by his team occurred on a range of fronts. He notes,

> *"we've been very central indeed, not just in terms of the technology stuff and the pedagogy stuff, but I would say in terms of inputting into practice and, and policy as well".*

However, he cautions that "it wasn't always thus, and it probably won't be always like this either".

He recalls,

> *"The greatest challenge was the whole scale of the thing . . . to very quickly and effectively respond to what was an unprecedented emergency situation".*

His unit provided training and support, resulting in a much-increased workload. However, he describes the experience as "overwhelmingly positive". Staff were primarily seeking reassurance that such support was available. He recalls, "for the most part . . . people just wanted to feel that that someone was there to support them".

Therefore, his team's first priority was simply communicating with staff. In relation to appreciation of these efforts, he remarks, "the gratitude and praise that's been heaped upon us is, frankly, it's embarrassing at times".

In terms of working with senior management, he was invited onto a number of committees set up to deal with the emergency situation. He surmises, "I think a seat was prepared for me at the top table". Prior to the pandemic, he was "already then kind of well-placed to influence and

input into that they weren't really new policies, really, there were new procedures". An important aspect of his being able to influence in this way was his "good relationships with a lot of the top people". Management were most supportive in that, "Any door we've knocked on has been open to us . . . anything we've asked for we've been given".

His unit identified key priorities and, in particular, "a strategic selection of tools for people to use". They then provided training, resources, and support. Importantly, he and the team, were conscious of referring to this situation as Emergency Remote Teaching to avoid staff conflating it with the online learning approaches that the team had promoted previously. They also reassured concerned staff that this approach was a temporary measure, and in time, delivery would revert to face-to-face.

Once staff had settled into the online delivery mode, the unit's priorities switched first to supporting assessment and then to planning online induction for incoming students in the following academic year.

"I wonder if that genie is ever going to go back in the bottle"

Looking ahead, Mike believes that the pandemic may have shifted perceptions of technology to the extent that he wonders if "that genie is ever going to go back in the bottle". Technology facilitated online delivery and academics were exposed to the possibilities that technology offers. Thus, he suggests, "the idea that we go back to the way things were, I just don't find that credible". Believing that many staff and students may be reluctant to revert to pre-Covid practices, he says,

> *"It's highly unlikely that they won't want to continue to reap the benefits of that technology, and maybe avail themselves of the labour-saving aspect, maybe above some of the things that they've been doing".*

In particular, he anticipates that this will impact lifelong and continuing part-time education. However, the impact may be less visible for undergraduate education. He wonders if perhaps a hybrid approach may be one that will take root in this area. He also hopes to see reflection on assessment processes, given the experience that academics had in using alternative means of assessment other than traditional examinations. In tandem with this, the area of feedback is one that he believes technology can enhance. In his view, "assessment and feedback are our big challenges".

4.2.3 The Learning Technologists – Fiona and Dave

Here we meet Fiona[4] and Dave who represent composites of the four learning technologists interviewed. Each is a member of a unit and has a responsibility for educational technology in their institutions. Even among four, there are considerable differences in their positions, titles, and roles. Two have academic positions; two are on administrative contracts. The latter two have specific but different titles; one of the academics uses the term academic developer to describe the role, while the other believes that this does not fully capture the role. For the purposes of this narrative, both Fiona and Dave will be referred to as Learning Technologists. Both are included here as they work in similar spaces but come to their roles from different perspectives. Fiona speaks from the perspective of the two learning technologists on administrative contracts with Dave representing perspectives particular to the two on academic contracts.

4.2.3.1 What do I call myself and what's my role?

For both Fiona and Dave, the title attached to the role is significant as it relates to how their roles are defined and how they are perceived. Fiona does have a title but points out, based on her previous experiences in similar roles, "A lot of the time it's the same kind of work but the job title has changed a bit over the years. Within each organisation the role has been slightly different and the job title has been slightly different".

Dave, who has been partially seconded to the role from an academic position, is concerned about the lack of a formal title. Although he might be considered an academic developer, one could also argue that he is a learning technologist. The challenge is for the title to capture his actual role. He is not looking for a title for its own sake but rather for its significance in helping define and recognise his role. He explains, "It's really around defining the role, but the role is so hard to define . . . It's just what's the role?". A specific title, he says, would signal that his institute recognises the role by declaring that the role is "really important, therefore, we're going to give it that title. And then . . . it becomes embedded in the culture of the institute". He continues, "Give me a title. Give me something that I can identify with". A title would formalise the role and make a statement to the institute community about the role and its importance.

However, he is concerned that a title may also be restrictive. Depending on the title, it could be a "kind of label because that sticks then and it becomes, it's reductionist in a way", possibly viewed as a technical role. On the other hand, he appreciates the flexibility of his current position

[4] Images generated by https://thispersondoesnotexist.com/ (Share et al. 2021)

and the fact that he is trusted to carry out the role. His current position, he says, "does give me that freedom in a way whereas if I was a manager with an actual title, I mightn't have the same freedom".

Perhaps even more challenging for Fiona and Dave is the lack of clarity in role definitions. Fiona believes this is a sector-wide issue, possibly due to there being relatively few such roles in the sector. She explains,

> *"Obviously, the role in itself, and because there isn't a huge amount of Ed Techs around the country, the role it makes it harder to define what an Ed Tech should be doing . . . Depending on where you are, what you're being asked to do is very different . . . The biggest challenge for me is just recognising what it is an Ed Tech should be doing or shouldn't be doing".*

This, she suggests, may be particularly the case in the IoT sector where teams are likely to be smaller, sometimes with one or two members, resulting in less opportunity to specialise. She continues,

> *"I think one of the strange things about these roles, Ed Techs, is that it's a real hybrid role I find . . . So, it's really mixed, the stuff that you're doing as an Ed Tech, I think, in an IoT".*

The title and role may also be unclear for the general body of staff. Fiona refers to the challenge for "people understanding what it is you should be doing, what it is the potential that you could be doing". Noting that this may not be obvious from one's title, she recalls that in the early days, at least, "you kept having to explain what you are". Frequently, the role is perceived as supporting and solving issues with the VLE exemplified by "Go to Fiona if you want to find out how to do stuff". However, this narrow view of the role is "only a tiny bit of what an EdTech should be doing".

For Dave, the lack of a formal title can affect the level of engagement by colleagues. Describing it as "hit and miss", he says, "some people will talk to me and seek my counsel, others won't". Fiona, however, believes that the perception of her role is changing from the narrower technology focus, resulting in greater engagement. "We're getting more people", she says, "because they can see we can do other things besides just your VLE . . . it's a slow thing to make people realise there's more to us, I suppose, than the piece of technology". Despite this, Fiona remarks that many academic staff are often unaware of the pedagogical aspect of her role. Describing the role as filling the "grey gap of how you might use" technology rather than simply how it works, she remarks that academics may come to the unit if they don't know how to do something, but

"don't necessarily think of us from a first port of call to go for a pedagogical point of view. It's something we're always trying to push that we have that, because most of us . . . have a teaching background before we ever came into the job".

4.2.3.2 Where do I fit and where to from here?

Fiona raises the issue of whether the role is an academic or administrative one, pointing out that, in her own experience, it has always been an administrative role but notes that some colleagues believe it should be academic. This, she says, has been part of an ongoing conversation across the sector, particularly when those in similar roles meet at conferences. She explains, "You're having this conversation about . . . is it an academic role? Is it an admin role or what is it?" It appears, she concludes, that this depends on "where you work".

On the other hand, Dave sees the academic aspect of his role as lending a level of credibility to the educational technology aspect. He values the academic contract and would be reluctant to accept a formal educational technology role unless his academic contract and his current flexibility were retained.

Fiona points out that her role has evolved into educational development, extending beyond working primarily with educational technology. This raises the issue of limited progression opportunities for those in administrative EdTech roles. She says,

"If . . . you look at the progression of EdTechs, there isn't really anything there. It's like it's an EdTech and then what is it? . . . Probably some kind of project coordinator, TEL manager kind of role, but even that doesn't . . . I suppose it's just not as obvious and it's not matched to anything".

4.2.3.3 Journeying with academics

A central part of the educational technology role is working with academics in integrating technology into practice. Key to this is building relationships and establishing credibility with academic staff to achieve buy-in and build confidence.

"They're experts in their own discipline"

Dave points out that dealing with people is central to the role. One needs to recognise that this frequently involves dealing with academics who have been teaching for many years and are "experts in their own field". Therefore, he advises that one show "care and consideration" and remember that the role is "not about how clever you are … but how realisable this [using technology] is". Fiona also stresses the importance of respecting their expertise. She continues,

> *"These people are clever, they're experts in their own discipline and . . . the fact that they're coming to you, you're just trying to be respectful and mindful of that. They've made the decision that they want to work with you so that's why I always see it as a collaboration".*

Dave speaks of bringing his teaching approach to bear when working with academic colleagues. It involves,

> *"acknowledging where they're coming from and then trying to see where they're going to get to and then how do I bridge the gap. There's a lot of that kind of teaching philosophy really embedded in what I do. I can't see how else I would do it. . . It's never just about the technology, we always can start with the pedagogy, 'What are you trying to do?' . . . It's definitely the teaching approach to the technology".*

"I have stood in your shoes"

He also believes that his role as an academic and experiences with his students "gives a certain amount of credibility as well when you're working with staff". He asserts,

> *"This really does help and some staff have said it to me that the only reason that they would actually take on board what I say is because I'm teaching".*

His colleagues see him as an academic, "doing the same kind of things that they're doing and I'm in the same boat as them". Colleagues can appreciate that he uses technology in his own practice and can see it from their perspective. In workshops, he can show his own module and say, "This isn't something I created for today, this is a real thing that I am doing". He believes this helps his colleagues to see that "there's an authenticity about it". He recognises that his situation may be different from others working in educational technology as he emphasises, "I'm not saying everybody has to be doing it, but it works for me".

Although not working as an academic, Fiona echoes the importance of teaching experience making a "huge difference" in terms of credibility and identifying with academics. She continues,

> *"I personally think that's my most important experience that I have coming into the role when I did and I think that's what helps me the most".*

Emphasising that she and her colleagues always focus on "the pedagogy part of what technology we're going to use first", having teaching experience allows them to understand the teacher

perspective. She speaks of "always looking from the teacher's point of view" and knowing "what it's like in their shoes". She advises that one is best prepared for the role "when you have that teaching experience at the top of the classroom under your belt . . . understanding what it's like to be at the top of the class".

She credits the unit leader with recognising that for academics,

> *"there would be greater buy-in if they could see, if they understood that we had the teaching experience behind us as well. For what we do . . . it's really important that we're seen as the person with the teaching experience".*

4.2.3.4 Support from management

Unsurprisingly, management support affects the efforts and experiences of learning technologists in their attempts to effect change in their institutions. This support can range from their individual roles to wider institutional support through vision, policy, and actions.

"They trust me to do stuff"

Fiona and Dave describe institutional support for their roles in terms of the trust and responsibility. They appreciate the trust that is placed in them, reflected, for example, in their representing the institution on national bodies and their advice being sought at management level. Dave speaks of being "trusted to act in that way . . . They trust me to do stuff". Similarly, Fiona sees this manifested in seeking her advice, involvement in working groups, policy development and funded projects. She appreciates that her guidance is sought by management, "when they can think that much of you to bring you into that room". In addition, she mentions a number of projects in which she has been asked to take the lead. This level of recognition would be further enhanced, says Dave, if his title and role were formalised by the institute.

Fiona and Dave also stress that their institutes have supported them in undertaking their doctoral studies.

"You need top management to actually drive it"

As Dave reflects on management support for the digital capacity endeavour, he expresses concern at the disjoint that often occurs between rhetoric and actions in this area. Referring to "big mission statements" such as "We will endeavour to be flexible", he cautions that ultimately "the devil is in the detail". Institutions, he says, need to devise and implement policies which will be more concrete than mission statements. He contrasts the national focus on digital learning with his own institute's vision and the lack of priority given to developing a digital policy. Such a vision and policy would he says be an "explicit nailing your colours to the mast and saying 'Yes, this is what we're doing, this is important, this is where we need to go, here's our vision'".

Fiona reflects, "You're kind of limited operating in the middle". She speaks of the reliance on management support and gives the example of a recent policy being adopted and implemented institute-wide. Ultimately, institutional management support changed the dynamic, moving the initiative from being "just a nice thing to do . . . to the next level . . . [and] made it be used". When management give such support to an initiative, she says, it becomes "very, very different" and "people just get on with it". If an initiative is to be adopted or embedded, she stresses,

> *"You need top management to actually drive it, to decide, 'Okay, well we will go ahead with it'. If you have someone from top management driving it and saying, 'This is the way forward and we're implementing this and this is the way it's done,' it makes things a lot faster."*

In addition, the institutional decision-making process can move at a slow pace. Fiona speaks of "getting dragged into meetings", finding that they involve "a lot of red tape behind the scenes . . . and tend to slow down progress". This process of having "an endless round of meetings to get it done" can frustrate because, she continues, "It can be very slow to move forward".

In these circumstances, navigating the role mainly involves giving advice and guidance, representing the "EdTech voice" and the pedagogical perspective, rather than being able to direct change. She explains,

> *"By being in the middle I find it's more a position of guidance and advice that you're giving, as opposed to being the one that says, 'I think it should definitely be this and it should be this from September'".*

For Dave, this contrasts with his relative autonomy on the academic aspect of his role. In his teaching, he is "used to making decisions", has "quite a bit of autonomy" and can model good practice. However, in his learning technologist role which is focused on institute-wide change, he finds,

> *"All of a sudden, I'm stuck in my tracks . . . I can't because I don't have that formal leadership role, I find that a bit of a struggle. I want to make decisions and I want to change certain practices, but I can't because I don't have that leadership, that formal leadership role".*

He recalls occasions early in the pandemic when he advocated for certain approaches but then came to the sudden realisation that the decisions were not his to make. He recalls, "I would go, 'Hang on, I can't make those decisions. I have to change my language'". This language would shift to making recommendations and suggestions for others to ultimately decide on.

Fiona adds that this guidance and advice to management this must be balanced with understanding one's position and knowing "where your boundaries are". She is happy to give advice and guidance, or even take on the responsibility of making decisions, "as long as it's the

okay thing to do . . . as long as I'm not doing something I shouldn't be doing". The challenge in the middle is in knowing "where you're overstepping and when you need to step up". She continues,

> *"I won't say it's a bad place to be, it's a tricky place to be because you just don't know, again, where your boundaries are, when your opinion isn't welcomed, I suppose, and when you should, maybe sometimes just shut up because it's somebody else's decision to make and not yours."*

On the flip side, there is a certain safety in this position of not having the responsibility of making final decisions. She explains, "In one way it's safe, you don't have the burden of all the responsibility because you can look at somebody else to make the final decision on it".

4.2.3.5 Leading

"I never actually thought of myself as a leader"

Neither Fiona or Dave would initially have seen themselves as leaders. Fiona, for example, says, "I never actually thought of myself as a leader within my institution until I did a course myself a couple of years ago". She simply saw herself as being engaged in her role. However, when she analysed her work, she appreciated that "from the middle . . . or from the bottom up sometimes you can have leadership". On reflection, she says, "It's kind of funny to realise without you knowing it, you are acting in a type of leadership role . . . as long as it's the okay thing to do". She explains that considering oneself as a leader "sounds like you're giving yourself a title there by saying you're a leader in it, so it seems a bit strange". Still not entirely comfortable with the term, she remarks, "I still wouldn't fully say, 'Yeah, I'm a leader' as such".

Reflecting on his uneasiness with being considered a leader, Dave suggests this may stem from a degree of "that imposter syndrome" that he believes he and many of his counterparts experience. However, as the go-to person for educational technology in his institute, he has come to realise that he does have an "informal leadership role". In addition, more recently he has realised that he is "regarded certainly as a leader" in his own institution and more widely. Through this recognition and affirmation by colleagues, he says, "I think I started to really believe things after that . . . I suppose I am comfortable with it now".

Recognition by colleagues has also helped Fiona become more comfortable with the notion of leading. Being a go-to person for academics in relation to educational technology and other aspects of learning and teaching, combined with management seeking her advice and giving her responsibility for different projects affirms that she is perceived as a leader. The level of responsibility and recognition has increased over time, indicating that her senior managers see her capable of leading initiatives, even if she herself has not viewed it as taking on a leadership

role. She enjoys "being asked to be part of it" and remarks that "there's nobody else here that will answer these questions or there's nobody else in the college actually looking at this".

"Leading softly"

When asked how they lead from their positions in the middle, Fiona and Dave speak of guiding, advising, establishing relationships, building confidence and, in essence, bringing people along. Fiona speaks of being approachable, helpful, listening and always there when needed. She sums this up as "leading softly" or "leading as gently as possible", recognising boundaries, and stepping in or back as necessary.

Dave's approach centres around establishing relationships, bringing people along by getting to know them, "chatting to people in the corridor", being "open to having a conversation with people", "being available", being patient, and "giving [people] the confidence". In doing so, he believes people are "more than likely going to want to engage with you for things like educational technology". Fiona also speaks of taking a collaborative approach with colleagues, "not telling people what to do but collaborating . . . always trying to work with people". She continues, "I always find it's more guidance and advice and I find that's how I work best with staff". She encourages academics to choose what is appropriate in their context, recommending rather than giving directives or asserting "It has to be this way". She concludes,

> *"When you're actually trying to build a relationship with somebody and you're trying to build capacity within an institute, I think you can only do it if you're working together".*

In addition, Dave believes in trying to model good practice and lead by example, asking nothing that he wouldn't ask of himself, asking people to "try to do as I do as well as do what I say". Describing himself as knowledgeable rather than an expert, he believes he conveys passion and enthusiasm in what he does. He sums it up, "That's the key thing . . . enthusiasm".

4.2.3.6 Dealing with COVID-19

The sudden onset of the COVID-19 pandemic and the resulting shift to Emergency Remote Teaching meant that learning technologists like Fiona and Dave were called on to exercise their leadership skills even more extensively to address the situation.

"Catapulted into the limelight"

From the outset, with the shift to online delivery, Fiona and Dave saw a dramatic increase in prominence of their units. Dave recalls that, prior to this, "We were ticking away nicely. . . they [institute management] were happy enough to let this run in the background". However, the COVID-19 crisis "catapulted these kind of roles really into kind of the foreground". He says of his unit,

> *"We were literally catapulted into the limelight because the only people who were going to be able to actually help with this were the people in the kind of the Educational Technology roles or in the Learning and Teaching roles".*

Speaking of this increased visibility, Fiona says that the situation brough her unit's role "to the fore for the whole college" and "highlighted the role throughout the college and the importance of the role".

"What can we do to help?"

Recalling the lead up to and the early days of remote teaching, Dave says that his unit was, "chomping at the bit going, 'We really do need to get the word out to staff that we can help'". Their priority was to reassure staff as "a lot of the lecturers got back to us, they were incredibly nervous . . . they'd never done stuff like this before". The key message, therefore, was, "What is it you need from us? What can we do to help? We're here, we have this expertise".

Similarly, Fiona and her colleagues focused on building staff confidence in using technology and listening to their concerns, "something we're quite proud of because we have been able to help people who had been avoiding going online".

Their units had a "multi-faceted" role, providing "on the ground support", creating resources and providing training. Dave speaks of contributing to conversations at management level, "being "pulled into meetings", working on contingency planning groups, feeding into the decision-making process, "not making the decisions but informing the decisions". Fiona recalls that management, too, needed reassurance. She explains,

> *"You look around the room and it's all the Heads of Department and Heads of School and they're all looking at you saying, 'This is gonna be alright, isn't it?' It's a little bit scary".*

"It was intense"

The shift to online delivery dramatically increased the workload for those in educational technology roles. Dave and his colleagues worked like "any other educational technologist around the country, day and night and at weekends getting people up and running" and to ensure that colleagues could be confident in what they needed to do. Describing it as a team effort with "all hands on deck" he asserts, "it's amazing what you can do when you're down to the wire like that". After the initial focus on training, support, and creation of resources, the attention shifted to developing a process for end-of-semester assessments. In hindsight, Dave concludes, "it was well worth it but a hell of a lot of work". Although referring to the workload during this period as "intense", Fiona remarks that the crisis allowed her unit "reach an amazing number of people", many of whom had not previously engaged with the unit, "people that had never knocked on the door or come to the sessions, which was a big shift". Such was the sudden demand and increased

engagement with technology that she concludes, “Without Covid you could be saying the same things for 10 years”.

“It brought all that stuff to the front”

However, the increased activity highlighted issues a lack of personnel. Fiona notes, “there’s only so much one person can do”. In addition, the crisis underlined the need for policy and the need for resources such as hardware and software. Although these issues had been raised previously, the crisis “really brought all that stuff to the front”. Fiona also saw a noticeable shift in management’s position in relation to technology, moving from “that’s a nice thing to have” to seeing it as “essential to have [as] people are looking for it and people need it”. Management were more proactive than previously, particularly in response to the demand for policies around online delivery. “Management are actually coming to our office”, says Fiona.

4.2.4 Summary

The findings in this section have extended the findings of the first phase of the study to provide a more in-depth examination of the experiences of a sample of ten educational technology leaders in the IoT/TU sector. These leaders fall into three broad categories: heads of Learning and Teaching, heads of Educational Technology, and Learning Technologists. The stories of their experiences have been presented as third person narratives, each based on a composite character whose story consists of the key themes identified in the analysis of the interviews for each group. These narratives seek to represent the multi-faceted experiences of the members of each group, some of which are common while others pertain to individuals.

4.3 Chapter Summary

This chapter has presented different aspects of the experiences of those who work primarily in the middle of their institution to promote the integration of educational technology The online survey in the first phase has provided an overview of the experiences these leaders across the sector, including those who have management roles in relation to educational technology, either as heads of Learning and Teaching units or Educational Technology units; those who work in what may be categorised as learning technologist roles, and academics who champion the use of educational technology in their practice. The semi-structured interviews in the second phase then examine more closely the stories of a sample of these leaders from the IoT/TU sector.

In the next chapter, these findings from both phases are considered together to determine what we can learn about leadership from the experiences of these leaders as articulated in their stories.

5 Discussion

This study responds to Jameson's (2013) call for research into leadership in the context of educational technology. This area, located at the intersection of educational technology and educational leadership, remains underdeveloped (Arnold and Sangrà 2018). In particular, the current study examines the experiences of leaders who seek to lead educational technology change from the middle of their organisations, a group that appears to have received little attention in the literature.

This chapter draws together the findings from the two phases of the study, the online survey and the semi-structured interviews, to answer the overarching research question for the study:

> **What can be learned about educational technology leadership from the voices of those who work in "the middle" of implementing institutional change in Irish Higher Education?**

In relation to the interview findings, we draw on the stories of our composite characters. Paula, a head of a Learning and Teaching unit; Mike, a head of an Educational Technology unit; and learning technologists, Fiona and Dave. The experiences of these characters, as articulated in the interviews, will elaborate on the experiences of the 64 survey respondents.

The central research question will be examined using the following sub-research questions:

(a) What barriers and challenges do educational technology leaders report in efforts to promote the wider implementation of educational technology?

(b) What strategies or approaches do educational technology leaders report as effective in the pedagogical implementation of educational technology?

(c) What supports and enablers do educational technology leaders identify in efforts to promote the wider implementation of educational technology?

(d) How do educational technology leaders perceive leadership in the context of their own roles?

(e) What has influenced educational technology leaders' understanding of leadership and their leadership roles?

The study spans a period of significant disruption in education due to the COVID-19 pandemic. The first phase was carried out in 2019, prior to the pandemic, with the interview phase taking place in 2020-21, in the midst of pandemic and the many changes that it brought. While some of these changes will be discussed when considering the impact of the pandemic, the research

question and sub-research questions focus primarily on the experiences of the participants prior to COVID-19.

The findings in relation to the sub-research questions will be discussed before drawing these together to address the central research question.

5.1 Barriers and Challenges

Sub-research question (a)

What barriers or challenges do educational technology leaders report in efforts to promote wider implementation of educational technology?

Notably, analogies used by survey participants to capture their experiences of leading educational technology in their institutions were dominated by images of effort or struggle to make progress. Metaphors included an uphill battle, walking backwards up a hill, swimming in custard, pushing a boulder uphill, swimming against the tide, or driving with the handbrake on – all suggesting slow progress despite the efforts expended. Some went further, alluding to obstacles or even a sense of regression or standstill, speaking of two steps backward one step forward, similar to playing a game of Snakes and Ladders. For one participant, such was the slow pace of change that she referred to her experience as being like "Groundhog Day - same conversations, same battles, same arguments" (62-M)[5]. Others, refer to obstacles akin to riding the waves and encountering wipe-outs or steep slopes with speed bumps. What is evident from these analogies is that the path to educational technology integration is strewn with many challenges. In this section, we consider some of these challenges or barriers that may have led to participants experiencing them in this way.

5.1.1 Academics' limited time

The task of engaging academic staff in changing practice is central to the work of educational technology leaders and, therefore, features prominently in the challenges they identify. In addition to those that one might expect such as resistance, reluctance, or a lack of confidence on the part of some academics, the heavy workload of academics appears to be a major challenge.

For participants in this study, when asked to indicate the level of challenge presented by each of 17 possible factors which might affect the integration of educational technology, the workload of academics was the single factor considered by all to present some level of challenge. Crucially,

[5] Quotes are ascribed to participants indicating the participant's number (1 – 64) and role category, Management, Learning Technologist or Faculty (M, L or F). For example, 40-M refers to Participant 40, who is a member of the Management category.

96.6% of respondents saw it as challenging, with 76.3% suggesting that it was “Very” or “Most” challenging (Figure 4.11). Echoing recent findings by Polly et al. (2021), which reflect the views of academics (NFETLHE 2015a) and learning technologists (NFETLHE 2016), this high workload results in reduced time for engaging with continuing professional development and exploring or implementing technology. It is also likely to be linked to other factors identified as very or most challenging such as the rigidity of timetabling structures and work allocation models (45.7%), lack of recognition for innovative teaching (42.4%), and greater emphasis on discipline-specific research over teaching (39.0%). Recognised also by senior leaders, academics’ time is impacted by system rigidities such as the prescriptive nature of academic contracts, particularly in the IoT/TU sector (Devine 2015; NFETLHE 2018). A combination of such factors is likely to negatively impact the priority that academics can attach to integrating technology in the face of many competing demands.

Although this issue did not feature in the top barriers identified by a study involving institutional higher education leaders from 48 European countries (Gaebel et al. 2021), participants in that study did note the increased workload involved for academics when embedding digital technologies. Similarly, the “significant time and effort on the part of the academics delivering the courses” (European Commission 2014, p.36) involving technology was previously noted by the High Level Group on the Modernisation of Higher Education. Further, Zhang (2022), in relation to learning and teaching in general, notes that in recent years academics’ workloads have increased to incorporate a range of tasks. In addition, as in the current study, pressure in relation to carrying out research for career progression was highlighted as a challenge by Gaebel et al. (2021), again potentially affecting the attention academics can give to integrating technology or improving their teaching (Zhang 2022). Thus, time for academics to engage with technology, identified as a critical issue (NFETLHE 2015b), continues to be a key challenge.

Although it did not figure explicitly among the challenges in the current study, lack of staff motivation was one of the main barriers in the study by Gaebel et al. (2021). However, other challenges, such as teacher resistance to change (32.2%), lack of technical competence of academics (30.5%), or lack of trust by academics in technology (20.4%), which did feature in the current study, may be considered factors that could contribute to what some may view as a lack of motivation.

5.1.2 Time limitations in own role

The issue of time constraints in their own roles is also cited by educational technology leaders as one of the most challenging aspects. Echoing the concerns of learning technologists in previous studies, this appears to be related to the numbers of personnel and the multi-dimensional

aspects of their roles, which seem in many cases to be ill-defined or poorly articulated, shifting and expanding to keep pace with the changing nature of educational technology and in response to more immediate institutional demands (Beetham et al. 2001; Browne and Beetham 2010; NFETLHE 2016). Here, too, survey respondents express difficulty in balancing the many activities involved in the role, reducing the time to attend to all that is required (Oliver 2002), summed up by a learning technologist as "too much to do, too little time" (18-L). The varying ranges of activities of participants suggests that little has changed since the hybrid and, frequently ill-defined, nature of such roles was noted by Beetham et al. (2001), Browne and Beetham (2010) and, in the Irish context, by the National Forum (NFETLHE 2016). Learning technologist Fiona describes it as "really mixed", a characteristic that is "one of the strange things about these roles". Nor is this issue confined to learning technologists as evidenced by Paula, a Head of Learning and Teaching, who speaks of spending much of her time firefighting and being in reactive mode, unable to strategically plan. Similarly, Head of Educational Technology Mike, describes himself as a "jack of all trades", with "tentacles out in all these different areas" and stretched too much. Survey participants, too, describe themselves being pulled in lots of directions (22-L), doing routine tasks rather than strategically planning to focus on a broader change agenda (60-M). Such is the multi-faceted nature of her role that this participant, when asked to choose the description that best represented her role, commented that she is "ALL of the above" and, in response to a later question, pointed out "I am ONE person" (60-M). While many of these roles may have grown organically in institutions, the ever-expanding range of technologies and their increasing use in so many aspects of learning and teaching suggests a need to clearly define them not alone for the educational technology specialists but also for the academics and management with whom they engage (NFETLHE 2016).

5.1.3 Resource constraints

With funding issues a continuing challenge in Irish higher education (Department of Further and Higher Education, Research, Innovation and Science (DFHERIS) 2022; Parliamentary Budget Office 2019), it is no surprise that resource limitations in relation to personnel, funding, and infrastructure feature among the most challenging aspects of the educational technology role. Also highlighted by European higher education leaders (Gaebel et al. 2021) as one of the main barriers to embedding technology, resourcing issues led one learning developer in the study to describe academic development and educational technology as the "Cinderella services of higher education" (30-L) rather than being an integral part of institutional development.

The lack of educational technology support staff was identified as a "real challenge" by senior leaders (Devine 2015), concerned that current numbers of such support staff would not facilitate the scaling up of initiatives. Also an issue in the current study, this was identified as very or most

challenging by 50.8% of survey respondents, second only to the high workload of academics, mirroring issues highlighted in the area of instructional design, where the roles coincide with many aspects of learning technologists and academic developers (Saçak et al. 2022; Drysdale 2021). As a consequence of insufficient personnel, the ability to meet the demands for support and develop institution-wide initiatives is limited (Drysdale 2021). In addition, the varied roles and sometimes precarious nature of contracts of learning technologists in particular (Devine 2015; NFETLHE 2018), may make it difficult to attract personnel, further exacerbating this issue (Browne and Beetham 2010). The lack of personnel may be also related to lack of funding for recruitment, the latter also negatively affecting pilot projects and experimentation, despite these being key elements in encouraging academics to engage with educational technology.

In addition, the planning and funding for IT infrastructure, highlighted previously (NFETLHE 2018), remains an issue, with 32.2% of survey respondents identifying inadequate infrastructure as very or most challenging. While Gaebel et al. (2021) classify investment in equipment and infrastructure as a key enabler, the converse is also likely to be the case. Mike, our Head of Educational Technology, explains that this may be due to a deficit approach being adopted in relation to on-campus digital infrastructure across the sector. He believes that the focus tends to be on price rather than on putting in place a robust infrastructure which looks to the future. In his view, the COVID-19 crisis accentuated the effects of this lack of investment in technical infrastructure, the spending on which he describes as having previously been "miniscule" in comparison with physical infrastructure. Although addressed to an extent in response to COVID, he compares the approach to buying a Fiat car and expecting the functionality of a luxury car such as a Ferrari. Similarly, learning technologist Fiona recalls that the shift to remote teaching highlighted deficits in relation to personnel, resources, IT infrastructure, and policy and "really brought all that stuff to the front". Echoing this, a senior leader in a recent study by Watermeyer et al. (2022, p.18) recalled that "cracks and strengths that pre-existed have been thrown into sharper relief. It's not been caused by the pandemic but it's really exposed what's there". In hindsight, the words of one survey participant, who expressed concern about the resource issues, were somewhat prophetic, as she suggested that if demand were to be provoked, as happened with COVID-19, "we have no hope of meeting it in terms of support, training, etc. because we are so under resourced. . . It shouldn't be like this." (30-L). Notably, in response to the crisis, Fiona saw the position of management shift from technology as "nice to have" to technology as essential. It may be the case, however, that management were able to make it a priority primarily due to increased funding that was made available to address the crisis.

Importantly, Gaebel et al. (2021, p.49) emphasise that "digitalisation requires investment in infrastructure, equipment, software and licenses, as well as in organisational structures and

planning, not to mention people". To this end, a majority of respondents (62%) in their study indicated that they have a dedicated budget for digital transformation. However, they also note that initiatives promoting new delivery modes are likely to further increase pressure on institutional resources and they caution that these are resource issues that cannot be tackled by institutions alone.

5.1.4 Support from positional leaders

Given the central role that those in formal senior institutional positions play in leading change, even in shared leadership contexts (Bolden et al. 2015; Bolden, Petrov and Gosling 2009; Collinson and Collinson 2009; Gronn 2009), the vision of institutional leadership in relation to educational technology will inevitably impact its integration. However, in his review of leadership perspectives in Irish higher education, Devine (2015) points to the lack of a shared understanding or a cohesive vision in this regard within the sector. Such a gap is likely to present challenges to integration at institutional level which, in turn, may be at the root of other challenges experienced by those with responsibility for this integration. Similarly, European higher education leaders recognise difficulties in developing concerted institution-wide approaches as a key barrier (Gaebel et al. 2021). It is likely that some sectoral challenges, such as workload or emphasis on discipline-specific research, are related to prevailing culture and practice in higher education (NFETLHE 2018) and, therefore, impact institutional approaches. As with funding, these may be beyond the control of individual institutions. However, others, such as identification of strategic priorities and direction, policies, and management support and buy-in are within the remit of those in formal leadership positions within institutions.

While institutional leaders indicate that they recognise the need to extend small-scale initiatives institution-wide, they report concerns about challenges of scalability and changing organisational culture (Devine 2015; NFETLHE 2018). However, survey respondents appear to take a different perspective with some referring to institutional inertia and lack of joined-up thinking when asked about the most challenging aspects of their role (01-M). They also speak of lack of leadership reflected in the hyperbole around educational technology, which is then not matched by actions on the ground, as demonstrated through investment and support, a challenge they describe as "managing upwards" (41-M). Although not featuring as prominently as the more immediate issues related to engaging academics, these broader institutional issues appear to present considerable challenges, which in turn may affect academics' engagement. Learning technologists and academics themselves have suggested that strategic direction and support from management, which indicate what is expected and valued, can increase motivation and impact engagement (NFETLHE 2015a; NFETLHE 2016). For 37.3% of educational technology leaders in this study, lack of support from institutional leadership was identified as very or most

challenging. If one includes a further 22% who viewed this as a challenge, it should be a cause of concern that a considerable proportion, almost 60%, see this as a challenging factor. Notably, only 16.9% see this as not representing a challenge which may suggest that the support is already in place or that they feel it is not needed. Similarly, lack of visibility of educational technology in institutional strategy and policy was seen as very or most challenging by 34.5%, with a further 27.6% seeing is as challenging, making a total of 62.1%, again a worrying statistic from those charged with promoting the use of educational technology. In contrast, the study by Gaebel et al. (2021) reports that European higher education leaders recognise the crucial importance of such an institutional strategy as a key enabler with 88% indicating they have a strategy for digitally enhanced learning and teaching (DELT), which is generally integrated into a wider institutional strategy.

The *Digital Education Action Plan (DEAP) 2021-2027* (European Commission 2020) recognises that even excellent initiatives may be limited in scale and have only marginal systemic impact. Similarly, senior Irish academic leaders noted that reliance on small-scale initiatives produces only incremental progress rather than institution-wide change (Devine 2015; NFETLHE 2018). The interviews with educational technology leaders shed further light on the slow pace of such change. Head of Learning and Teaching, Paula, speaks the patience needed to allow change bed in. Recalling her initial assumption that she could promote widespread change that would be embraced, she now takes a more realistic view of what can be achieved. Over time, she has come to realise that, while change can permeate, it may need to do so more slowly than she might have hoped for. Mike, too, in his role as head of Educational Technology, had assumed that staff would readily engage with whatever technology was available. However, in hindsight, he reflects that such change is "slower than you want it to be" and that buy-in from staff is a "slow burn".

Reflecting Oliver's (2002, p.249) assertion that the learning technologist role is shaped by a "distinctive combination of autonomy, a lack of authority and responsibility for initiatives", the leaders interviewed in the current study highlight their own lack of decision-making authority and its consequences for the pace of change. Asserting that she is not necessarily seeking such authority, Paula notes that, without it, she and her team are reliant on senior management, and in particular her line manager, the VP for Academic Affairs, to issue directives and lead out on initiatives to increase their chances of being implemented. Rather than making decisions, Paula's role is to provide guidance and advice to inform in the decision-making process (Oliver 2002; Browne and Beetham 2010). For Mike, this is also a "big challenge". He speaks of having responsibility for change, but not having the ultimate authority to make that change. Again, this authority rests with senior management who determine whether or not to move forward with

initiatives. He expresses frustration that while educational technology may feature in strategic plans, or in institutional vision, it is sometimes not given the support it requires to materialise, resulting in the reality not aligning with the rhetoric.

From the point of view of learning technologists Fiona and Dave, this lack of decision-making authority means that they too can only guide and advise rather than direct. Dave contrasts his situation with the relative autonomy that he has in his teaching role. Although he may want to make decisions affecting integration in his educational technology role, he is not in a position to do so. Instead, he must remind himself to shift his language to one of recommending and suggesting rather that directing. With directives, policies, and support emanating also from senior management, the nature of an initiative can change considerably. By explicitly nailing their "colours to the mast", institutions could alter the nature of initiatives from just "a nice thing to do" to the "next level", where "people just get on with it". Fiona sees such "top management" support as key to driving this change at institutional level as envisaged by Gaebel et al. (2021). In contrast to factors identified by formal leaders, however, survey participants attribute a perceived lack of prioritisation and support from management to a range of factors, including lack of understanding, awareness or interest in educational technology, entrenchment, reluctance to change, inertia, more traditional views of learning and teaching, or a lack of leadership. There may also be a need to have, as one participant suggests, senior leaders with specific responsibility for educational technology.

5.1.5 Summary

Thus, the barriers and challenges identified by participants suggest that to successfully integrate educational technology, the limited time available to academics due to workload pressures may need to be addressed at national level. So, too, with the provision of infrastructure and personnel resources to properly support integration of educational technology, funding for which may need to be prioritised both at institutional and national level, thus indicating the value attached to the endeavour. In a recent study of curriculum and learning design in UK higher education, which inevitably involves a digital dimension, MacNeill and Beetham (2022) also point to staff workload allocation, reward and recognition structures, and investment in academic staff development as significant challenges to progress in this area. While emphasising the importance of adequately resourcing the integration of technology, the High Level Group on the Modernisation of Higher Education stress the key role played by the people involved, reminding us,

> *To put it into a simple equation: the use of technology, open and online learning is scalable; human resources and their knowledge, skills and competences are not.*

(European Commission 2014, p.36)

Further, at institutional level, a deficit in visible support through strategic direction, policies, and initiatives from those in positional leadership roles may add to the challenge of integrating technology, possibly even acting as a barrier.

5.2 Effective approaches

Sub-research question (b)

What strategies or approaches do educational technology leaders report as effective in the pedagogical implementation of educational technology?

While the pace of progress in relation to educational technology may be slower than educational technology leaders might wish, evidence suggests that progress continues to be made (NFETLHE 2018) although perhaps not to the extent envisaged by national and international literature (European Commission 2014; NFETLHE 2015a). In many cases, such progress tends to be incremental, taking place in small pockets rather than on an institution-wide or sectoral basis (European Commission 2020; NFETLHE 2018). In contrast, the rapid change to remote delivery in 2020 due to COVID-19 brought a major, if not seismic, shift in the use of educational technology as, in the circumstances, there was no other option (Quinsee 2022). That said, the focus in this section is on the approaches that educational technology leaders have found to be effective prior to this exceptional situation. As one might expect, these approaches address some of the challenges outlined earlier.

To deal with the key issue of engaging academic colleagues, educational technology leaders report using a variety of approaches that extend beyond and complement the one-to-one sessions, workshops, and accredited professional development generally associated with the roles of educational technology leaders and academic developers (NFETLHE 2015b; Beetham et al. 2001; Dawson, Mighty, et al. 2010).

5.2.1 Work with the willing

As Paula, head of Learning and Teaching, and Mike, head of Educational Technology, allude to, despite their initial assumptions that technology would be embraced, the reality on the ground is that, prior to COVID-19, engagement on an institution-wide basis presented challenges. While some resistance may be expected for a variety of reasons, they also accept that some colleagues may simply not want to use it. Therefore, the approach they advocate is to begin by working with the willing, those who adopt educational technology and those who champion its use.

The survey findings suggest that events where such colleagues share their experiences of using educational technology can be particularly effective. This peer exchange within institutions, in

which colleagues learn from each other, has also been identified by higher education leaders as being the most useful measure for enhancing the use of educational technology (Gaebel et al. 2021). Similarly, workshops, especially those facilitated by academic colleagues, who are using the tools, can encourage peers to adopt and can allay fears and reservations. These academics who share their experiences are akin to the early adopters or the early majority identified by Rogers (2003), who play a central role in diffusing innovation. Just as in the contexts studied by Rogers (2003), these academics might be described as respected members of the academic community, to whom others look for direction and guidance. This idea of "academics showing other academics" (13-M), demonstrating and modelling the use of educational technology in their own practice, can add credibility to an initiative and provide reassurance to others. Educational technology leaders, such as Paula and Mike, hope that, by working with the willing in this way, these innovative practices will permeate to other colleagues. Although not alluded to by interviewees, this aspect of colleagues looking to their peers appears to have been a particularly important support during the COVID-19 pandemic (Metzler et al. 2022).

However, in relation to common staff development activities (NFETLHE 2016; Beetham et al. 2001), Mike cautions that "blanket workshops", offered with the implication that using a particular tool in specific ways will improve one's teaching, do not appear to work to the extent one might anticipate. Rather, he advises, these workshops need to be focused, timely, and targeted at solving specific issues, which may be of immediate relevance to academics. In a similar vein, one-to-one sessions with academic colleagues can be effective when aimed at addressing specific problems. Just as one might only notice an advertisement for a car when one is actually looking for one, this "just-in-time training" and support, personalised and given when it is needed, may introduce an incremental change in practice as it solves an immediate issue in the academic's own practice. Echoed in the survey findings, such non-accredited or informal professional development addresses specific needs in "real situations" (28-F) and may be particularly important in building confidence in those averse to using technology (20-L). Importantly, such tailored sessions, which may also be used for small groups or programme teams, are an efficient use of the limited time available to academics.

Professional development and training has been highlighted by European higher education leaders as a key enabler for digitally enhanced learning and teaching (DELT) (Gaebel et al. 2021). Its importance is further signified, suggest the authors, by the identification of lack of support for such activities among the main barriers. Reflected in the current study, certified professional development, as recommended also by the High Level Group on the Modernisation of Higher Education (European Commission 2014), appears to be viewed as particularly effective. Such accredited CPD, consisting of modules or programmes involving the integration of educational

technology, offered by most institutions, is identified as effective by 98.2% of survey respondents, with a considerable proportion (70.2%) identifying it as very or most effective. The success of these accredited activities is likely to be related to the time that academics engaging in them have set aside for "sustained engagement" (09-M), allowing them to explore "effective pedagogical approaches supported by technology"(18-L). These activities also provide opportunities to collaborate, share experiences, and develop a community of practice consisting of colleagues from different disciplines within a collegial environment where all are learning and reflecting on practice.

5.2.2 Foster relationships

As they work in the middle of their institutions, generally with little or no formal authority, the educational technology leaders in this study rely on their skills of persuasion and influence to engage colleagues (Oliver 2002). Therefore, the relationships that they build with academic colleagues is a fundamental aspect of their activities, accredited and unaccredited. For learning technologist Dave, this rapport extends beyond organised sessions to informal chats in the corridor and impromptu conversations, in this way sowing the seeds for greater engagement. This people-centred approach, also identified by Whitchurch (2015), is described by Fiona as leading softly or gently, bringing people along. It involves being available, listening, encouraging, guiding and advising, and being patient, activities of relational leadership that may appear routine but are, in effect, "acts of enabling, supporting and facilitating" (Fletcher and Kaufer 2002, p.22). Fundamentally, it involves dealing with people and building trust (46-L). At its heart is what Dave describes as care, consideration, and respect for the expertise of academic colleagues, recognising that they are experts in their own discipline. This echoes Ramsden's (1998) contention that leadership is fundamentally about how people relate to each other and that approaches and interpersonal strategies for leading change have much in common with those used by effective educators. In this context, then, the educational technology specialists can bring their own teaching approaches into these interactions, just as they might do in a classroom setting. Also, it is likely that, just as Grupp (2014) suggests for academic developers, fostering such relationships may raise the profiles of these specialists, add to their credibility and, importantly, lay the groundwork for broader institutional engagement.

5.2.3 Build on credibility

Academic colleagues look to the credibility of those in educational technology roles (Oliver 2002), just as they do with their peers who share their practice (Rogers 2003). Paula, in her role as head of a learning and teaching unit, speaks of her academic background and teaching experience as lending credibility to her actions, as her academic colleagues see her as "one of them", respecting

the fact that she can identify with their experiences and represent them. Dave, too, as an academic partially seconded to a learning technologist role, speaks of the importance of the academic aspect of his own role in this respect. As academic colleagues witness him modelling the use of technology in his own practice, "in the same boat as them", this adds to the authenticity of his work. Similarly for learning technologist Fiona, who, although not an academic, suggests that her own teaching experience allows her to appreciate these tools from the teacher's perspective and assure colleagues that she knows what it is like "in their shoes". Thus, the credibility and authenticity of these leaders' experiences engenders trust and confidence in the academics with whom they engage (Parkin 2022).

5.2.4 Recognise academics' efforts

MacNeill and Beetham (2022), reporting that recognition for UK higher education staff in participating in learning design activities appears to be limited, note that, when given, such recognition generally involves digital badges or credits towards professional development programmes. While the current study has identified participation in accredited programmes as effective, these programmes, facilitated by institutions, are viewed more as enhancing practice rather than a form of recognition. In relation to digital badges, participants in this study appear unconvinced as to their effectiveness as recognition with almost 52% seeing them as somewhat effective at best, possibly reflecting MacNeill and Beetham's (2022) suggestion that they may be more relevant to early career rather than longer-established teachers.

However, recognition in the form of remission of time for those who engage with innovative teaching projects may be more valued as it provides an effective means of addressing the issue of workload for academics, which remains a challenge (Zhang 2022; MacNeill and Beetham 2022; Polly et al. 2021). This was identified as very or most effective by 69.8% of survey respondents in the current study, second only to accredited CPD. Such remission would recognise the time commitment made by academics to engage with technology, which is above and beyond their normal workload and competing with many other demands in their practice (Martin and Xie 2022). In championing the use of educational technology, or making incremental changes by integrating technology tools individually or as part of pilot projects, these academics are essentially undertaking small-scale innovations, which have been identified as effective (NFETLHE 2018). If the incremental changes that can result from such activities are to be extended institution-wide, then those involved need sufficient time to engage fully with them. This aspect is of such importance that the National Forum asserts that it is critical that teaching staff be given resources, space, and time to develop digital literacy, a key step in integrating technology (NFETLHE 2015b), notwithstanding the related systemic issues that have been identified by senior leaders (NFETLHE 2018).

5.2.5 Enlist management support

Leaders in the current study see institutional management as ultimately having the decision-making authority to provide impetus to the educational technology endeavour. They see support from management as key if the strong leadership and coherent approach urged by the National Forum (NFETLHE 2015b) is to materialise. While the concrete measures that educational technology leaders take in engaging academics feature in the literature (Beetham et al. 2001; Oliver 2002), less evident are the approaches that they employ to garner support from institutional leadership.

Notably, despite over 60% of survey participants reporting that their colleagues look to them as leaders in educational technology, less than half (48.3%) say they have regular interactions in relation to education technology with those in formal leadership positions. In addition, only 39.6% agree or strongly agree that institutional management frequently seek their advice. This may suggest a gap in the priority given to this area by institutional management before COVID-19 and contrasts sharply with the experiences of those leaders interviewed during the COVID-19 crisis. Although possibly superseded by some of the many demands requiring more immediate attention from institutional management prior to COVID-19, with the onset of ERT, the use of educational technology immediately moved centre-stage (Skallerup Bessette et al. 2020), requiring more attention from management.

Participant interviews provide further insights into their interactions with institutional management prior to and during COVID. Without the authority to direct technology initiatives on an institute-wide basis themselves, these leaders understand that they depend on senior management support, as illustrated by Paula, head of a Learning and Teaching unit, who refers to the VP of Academic Affairs leading out on certain initiatives to improve their chances of implementation. Further, they describe themselves as primarily relying on influence and persuasion when dealing with institutional management, just as with academic colleagues (Oliver 2002; Dawson, Mighty, et al. 2010), and perhaps even more so. In this context, they employ their skills of brokerage, negotiation, and advocacy (Browne and Beetham 2010; Green and Little 2013), exercising the leverage (Whitchurch 2015) required to garner support and commitment. In doing so, Paula, unsure if her management colleagues even see her as a leader, wonders if her role is simply to provide guidance and advice to inform decision-making. In seeking to influence senior management decisions, Mike, head of an Educational Technology unit, recognises the "limited attention span" of the organisation. Therefore, in the knowledge that he can only influence executive decision-making "sometimes", he speaks of carefully playing the "occasional chip" that he gets to use "at the top table".

Mike's approach of being "canny" and judiciously using his influence is paralleled by Paula's approach of strategic collaboration. She builds relationships with key players in the institute administration, understanding the structures and knowing who she needs to talk to. She invests time in communicating upwards with senior leaders, such as the VP for Academic Affairs, to ensure that they are kept informed, as issues relating to teaching, learning, and educational technology are only some of the many items on their agendas. On the other hand, Fiona, as a learning technologist who does not have a management position, appreciates the opportunity to advise or input into decision-making yet remains conscious of knowing her boundaries. Thus, it is important for these educational technology leaders to appreciate the extent of their influence, using it thoughtfully and proportionately, knowing what "to get invested about".

Their interactions with institutional management require that they cross the boundary into management terrain, establishing relationships, utilising institutional structures, negotiating political issues and developing partnerships, in many ways mirroring the approaches of third space professionals (Whitchurch 2015). In doing so, they are cognisant of their boundaries, using persuasion or leverage to advocate while balancing this with remaining impartial. As with academic developers, their unique position between management and academics, being able to appreciate the perspectives of each group while also remaining objective and unobtrusive, may be particularly advantageous (Grupp and Little 2019; Grupp 2014; Little and Green 2012).

However, in contrast with their prior experiences, the COVID-19 crisis suddenly "catapulted" educational technology leaders "into the limelight". Where previously institutions may have been content to let them operate "below the radar" (Browne and Beetham 2010, p.14), now they were to the fore, with increased visibility in terms of technology, pedagogy and policies, central in the response to the crisis and informing decision-making (O'Toole et al. 2022). However, in acknowledging this emergency situation as their "moment in the sun", Mike warns, "it wasn't always thus, and it probably won't be always like this either".

5.2.6 Summary

While the approaches identified as effective in this study echo the findings of Gaebel et al. (2021) in relation to the importance of professional development and academics sharing experiences, they tend to be more specific in their focus. This is to be expected as the leaders in this study are primarily concerned with what works "on the ground", whereas the leaders surveyed by Gaebel et al. (2021) may be considering measures from an institutional or sectoral perspective.

A key point to be made from the perspective of middle leaders is that much can be achieved even with only limited authority as is evident from the progress that has been made to date. Yet, for institution-wide change, the endeavour also requires added impetus from senior positional

leaders and a coherent strategic approach (NFETLHE 2015b) to reinforce bottom-up and middle-out efforts. Otherwise, institutions rely on academics being persuaded, or concluding themselves, that educational technology is an essential aspect of practice. However, in addition to embedding technology, academics are also being encouraged to improve practice in areas such as assessment, feedback, accessibility, and academic integrity. Therefore, the risk in this is that, given the limited time that they have, without sufficient impetus from management or recognition through remission of time, educational technology may be relegated down their priority list in the face of other demands. Unquestionably, during the COVID-19 crisis academics made significant strides in terms of their use of educational technology. However, it is possible that this momentum may dissipate if it is not capitalised upon. Now may be the ideal time for institutional leadership to prioritise and enable educational technology change if the pendulum that has been set in motion is not to return to its previous position.

5.3 Supports and enablers

Sub-research question (c)

What supports and enablers do educational technology leaders identify in efforts to promote the wider implementation of educational technology?

When asked about the most satisfying aspects of their roles, a majority of survey respondents referred to deriving most satisfaction from seeing the impact of their efforts on academics' teaching practice and the consequent effects on students' learning experiences. Perhaps unsurprisingly, this appears to be their primary motivation. They see the integration of educational technology into practice as a catalyst to support their ultimate goal of enhancing pedagogy and the student learning experience. They continue to work towards this goal despite the challenges outlined earlier, employing a variety of approaches to make progress, albeit to a lesser extent than they might wish.

In noting the positive effect of the COVID-19 crisis in "getting so many people engaged with digital" in such a short time, something which Paula and Fiona surmise could have taken years otherwise, they also reflect that the crisis highlighted the issues that had been present. While, as Mike suggests, we may never go back to the way things were, the efforts employed during the crisis could not be sustained and were only possible for a limited time in the face of an emergency. Therefore, in this section, we consider the supports and enablers that these leaders identify as needed to continue the process of integrating technology in the longer term.

The National Forum's Digital Roadmap (NFETLHE 2015b) identifies the need for a coherent strategic approach to the integration of technology. This, it suggests, will require identification

of leadership responsibilities and structures, clear policies, and implementation plans. However, the survey findings in the current study highlight deficits in terms of institutional prioritisation and support for educational technology, indicating shortfalls across the sector in this regard. Notably, although almost 60% of educational technology leaders agree or strongly agree that the integration of technology is a priority in their institutions, over 40% either disagree or are uncertain. Also, a sizeable proportion, 41.4%, indicate that while educational technology features explicitly in their institutional strategy, it is not a priority, with a further 20.7% being undecided about this. This reflects findings from Devine's (2015) analysis of mission-based performance compacts in Irish HEIs, which pointed to gaps between aspirations and explicit targets in relation to building digital capacity. In interviews with senior leaders, while they expressed support for professional development activities in relation to the technology, Devine (2015) found less evidence of strategic, top-down initiatives at institutional level to demonstrate this. More recently, European higher education leaders in a study by Gaebel et al. (2021) have identified the implementation of strategic approaches across an institution as one of the top three enablers for digitally enhanced learning and teaching. Conversely, these leaders also point to the lack of a "concerted approach for the entire institution" (Gaebel et al. 2021, p.48) as one of the key barriers. Importantly, Gaebel et al. (2021) point out that, while many enablers or barriers may be beyond the control of institutions and their leaders, this issue of a coherent strategic approach is not. Yet, in relation to support from institutional leaders, the current study found only 36.2% of educational technology leaders in agreement that the integration of technology is actively supported by senior and middle management. While only 22.4% disagree or strongly disagree that it is actively supported, it is concerning that a sizeable proportion of 41.4% appear undecided. This suggests that, for most educational technology leaders, support by management is either absent or, at least, not visibly manifest. In addition, almost 60% of these leaders have identified this as a challenging aspect of their role, with 37.3% seeing it as very or most challenging. As with institutional strategy, such commitment and support are very much within the remit of institutional leaders.

Survey responses also suggest that, in many institutions, innovation in educational technology continues to occur primarily in pockets or through small-scale activities (European Commission 2020). Reflecting findings in previous reports (NFETLHE 2015b; Devine 2015), over 77% of responses agree or strongly agree that this is the case. Yet, only 43.1% of respondents agree that their institution actively supports innovation in educational technology with 24.1% disagreeing and almost one third undecided. This suggests a gap also, or at least a lack of visibility, in support even for small-scale innovation, despite its recognised success.

Thus, there appears to be a disparity between general recognition of the importance of educational technology, its inclusion in strategies, and the evidence on the ground in terms of it being prioritised and supported. Experienced by one survey participant as a "complete lack of understanding or interest from senior management in learning technology" (14-M), it is manifested, suggests another, as "institutional inertia and a lack of joined-up thinking" (01-M), reflecting how the findings above by Gaebel et al. (2021) may be perceived on the ground.

Faced with these inconsistencies and gaps, some educational technology leaders see themselves as lone voices, pioneers set apart from the crowd (43-F). This is captured by other analogies such as a "bull on a sheep farm" (08-F), a "prophet in a foreign land" (02-F), a "colourful Joker in a mainly black deck of cards"(06-M), "a member of a small but enthusiastic cult" (39-F), "preaching to the already converted but not having a pulpit to reach beyond" (05-L), their sound possibly lost as they play their own "exotic instrument in a huge orchestra" (46-L). Some leaders even feel invisible (52-L) or, at least peripheral, as in the case of "the wise uncle that at times is listened to when it doesn't present too much trouble but ignored when it means accepting that real change needs to be made" (28-F).

Within this context, study participants identify the supports or enablers needed to move beyond this position, most of which centre on the value that is attached to educational technology integration, which, in turn, is reflected in the actions employed to support it.

5.3.1 Institutional leadership support

Already identified as effective, support from formal institutional leadership is central to enabling institute-wide embedding of educational technology. Despite being charged with responsibility to promote change, the leaders in this study clearly understand the limitations of their position "in the middle" (Little and Green 2012; Timmermans 2014) and their reliance on senior management support. Although willing and eager to play their part, sometimes going above and beyond as during the COVID-19 crisis (Skallerup Bessette et al. 2020), they recognise that their efforts are only sustainable the context of strategic direction and visible support from management. The value placed on teaching and the use of technology to support it (62-M) would be evident, some suggest, from "overt strategies and policies" (24-M),"clear and meaningful mission and vision" (45-M) supported by "top-down declaration and policy" (05-L) and "follow through on the policy rhetoric" (01-M), articulating in different ways how concerted approaches referred to by Gaebel et al. (2021) might be demonstrated. Such direction and support from senior leaders can move the integration of technology from "a nice thing to do" to the "next level", as learning technologist Fiona puts it. Without this added impetus, institutions will continue to rely small-scale initiatives, maintaining the "slow burn" of incremental progress.

Prioritisation, supported by concrete actions, is regarded as essential, not only by educational technology personnel, but by senior leaders themselves (NFETLHE 2018).

5.3.2 Valuing the endeavour

The value placed on teaching, learning, and technology by her institution is reflected for head of Learning and Teaching, Paula, in its facilitating staff to undertake accredited CPD with her unit. Nevertheless, she states that a further indicator of value would be to recognise her unit as a department in its own right. She stresses that this is about recognising the importance of the unit's work rather than seeking any kind of status for herself or her team. The provision of sufficient resources in terms of personnel to properly support or promote educational technology in such units would also explicitly demonstrate this value (NFETLHE 2016). Without such resources, the wide-ranging nature of educational technology roles means that individuals and small teams are frequently overstretched and limited in what they can achieve. Described by one learning technologist as "so much to get done in such a short space of time" (20-L), his solution is to "clone me several times over". The provision of more personnel would, therefore, be seen by these leaders as not only underlining the value of their work but also allowing them to extend their reach. This issue is highlighted by Gaebel et al. (2021), who report that 75% of institutions in their study cite a lack of staff resources as the biggest challenge they face in enabling the integration of technology. Noting that resource issues cannot be addressed by institutions alone, they point to the lack of external funding opportunities as a further barrier identified by European higher education leaders.

Also related to resource issues is investment in equipment and infrastructure, which was identified as one of the top enablers by leaders in the study by Gaebel et al. (2021). This echoes the views of leaders in the current study, who regard the provision of appropriate infrastructure to support technology implementation as essential. Mike, head of an Educational Technology unit, acknowledges the difficulty in anticipating future infrastructure needs but also points out that there appears to have been under-investment in digital infrastructure across the sector. To address this, he suggests a more strategic longer-term view in making the required investment. Referring to the availability of resources in response to the COVID-19 pandemic, during which he says management were most supportive, he cautions that this was a reactive response rather than one with an eye on future progress. This sectoral issue has also been acknowledged by senior leaders, who identify ongoing challenges in relation to planning and funding (NFETLHE 2018).

5.3.3 Clarification of roles and status

Addressing the breadth of educational technology roles has been identified a key enabler by the study's participants. The breadth and considerable variation in these roles highlighted in various studies (Oliver 2002; Beetham et al. 2001) continues to be an issue not only in the Irish context (NFETLHE 2016; Mitchell et al. 2017). This diversity is reflected in participants describing their experiences as a "jack of all trades, but master of none" (59-L), "so many things all wrapped into one" (20-L), "experiencing four seasons in one day, every day" (29-L). Further analogies also allude to different facets of the role, including "salesperson" (21-L), "detective" (22-L), or "problem-solver" (49-L). Having grown organically, grafted onto existing institutional structures, these roles have remained inconsistently or poorly defined, yet expanding due to the widening range of technologies and their increasing application to most aspects of learning and teaching. This situation may be due to uncertainty as to where these relatively new roles fit in, particularly in contrast to academic development, which is somewhat more established (Gibbs 2013).

Learning technologist Dave explains the importance of properly defining and recognising the role, capturing it with an appropriate title with which he can identify, and which signifies its responsibilities. Fiona, also a learning technologist, points out that the lack of clarity in the role appears to be a sector-wide issue with the duties assigned depending very much on one's institution. Mike, who heads an Educational Technology unit, describes himself as a" jack of all trades and master of none", with "tentacles out" in many different areas, needing to know something about everything and resulting in him being "stretched too much". The hybrid nature of the role, involving multiple aspects, is also related to the relatively small number of educational technology specialists in the sector, many of whom work individually or in small teams, limiting their ability to specialise. This issue may be addressed in part by increasing the number of personnel in educational technology roles but may also require the development of a framework or structure to better define the role, as suggested by the National Forum (NFETLHE 2016). In addition, greater institutional and sectoral recognition of the role, acknowledging the central part it plays in integrating technology, would also address the paradoxical situation in which educational technology is seen as mission critical yet "poorly translated into commensurate recognition" (Browne and Beetham 2010, p.17) for those charged with the main responsibility for its promotion.

While clarification of roles and titles recognises their value (Slade et al. 2019), educational technology leaders also see this as making this value visible to both academic and management colleagues. Importantly, such recognition would assist in making it clearly understood that their roles are pedagogy-led rather than solely technology-focused (Oliver 2002), an issue also identified by instructional designers (Drysdale 2021). This, suggests Dave, may increase the level

of engagement by colleagues, allowing them to see, as Fiona says, that "we can do other things besides just your VLE . . . make people realise there's more to us, I suppose, than the piece of technology".

A related issue, pertaining particularly to learning technologists and mirrored in academic development (Green and Little 2017; Taylor 2005), is that of delineating learning technologist roles as academic or administrative. Learning technologists Fiona and Dave, reflect the two sides of this issue. Fiona has an administrative contract whereas Dave is seconded from an academic role while continuing to teach. In his educational technology role, Dave draws on his experiences of using technology in his teaching. This, he believes, adds to his credibility when working with fellow academics. Fiona, too, draws on her prior teaching experience which she too believes plays an important role in establishing credibility and identifying with colleagues. While teaching experience strengthens credibility when working with academic colleagues, as in academic development, this may not be recognised or valued by institutions in terms of assigning academic status to the learning technologist role (Green and Little 2017). Fiona notes that this "academic or admin" conversation is ongoing across the sector and, as with other aspects of the role, appears to depend on the institution.

As Whitchurch (2015) notes in relation to third space professionals, however, academic experience supplemented by doctoral qualifications, although not necessary for the role, is an indication of the increasingly academic orientation of such roles and may lend further credibility. While not referring to doctoral studies in terms of credibility, six of the ten interviewees indicated they were undertaking, or had recently undertaken, doctorates. This may be an issue for learning technologists, particularly those on administrative rather than academic terms and conditions, as in Fiona's case. It may also be related to the assertion by participants in Browne and Beetham's (2010, p.20) study that, although it is rarely recognised in their roles, educational technology work is "incontestably academic". Similarly, Taylor (2005) found that the academic developers in her study believed that their roles should be recognised as academic positions as they were academic endeavours in which they adopt academic dispositions and demonstrate academic expertise. Further, Drysdale (2021) recommends positional parity between instructional designers and faculty to foster respect and recognise the value of their work as one element of sustaining their leadership efforts.

In addition to status, career progression for those on administrative contracts has also featured in the literature with the precarious nature of such roles and lack of a clear career structure being highlighted as a particular issue (Shurville et al. 2009). Although contractual status and progression did not arise in the survey responses, it was raised as a concern by learning

technologist, Fiona. This is an issue that needs to be addressed if institutions are to increase the numbers of those working in educational technology roles. While it appears that both approaches to the role can be effective, depending on the context, difficulties may arise if colleagues in such roles are working side-by-side in their institutions, some on administrative contracts and others on academic contracts, with differing and contrasting progression opportunities.

5.3.4 Recognition for academics

A persistent thread in the study's findings has been the challenge related to academics' workload and, conversely, the potential effectiveness of remission of time to allow them embed educational technology. Although they play a key role in the diffusion of innovative approaches (Rogers 2003), the efforts of academics in this regard may often go unnoticed by senior management. A further indication of the value attached to educational technology would be the acknowledgement of the time required to engage with such technology. As noted by one academic in the survey, although her academic colleagues recognise the value of what she does, "it would be nice for this to be recognised by senior management" (07-F). Her role, she asserts, is "multivariate and constantly evolving, but not yet valued". This is echoed by Zhang (2022) who, in identifying obstacles to improving learning and teaching in European higher education institutions, pointed to the increasing workload of academics and the fact that time spent innovating pedagogy or enhancing teaching is not always valued. Therefore, while rigid structures around work allocation and timetabling may present challenges in this regard, recognition, particularly in the form of remission of time, may be particularly valued by academics and, in the view of educational technology leaders, would be effective in widening implementation.

5.3.5 Summary

In summary, the enablers identified focus primarily on explicit manifestations of the value or priority placed by institutional leaders on the integration of technology, mirroring to some extent the challenges outlined earlier. This priority would be demonstrated by clarity of strategic direction, supported by actions such as policies and provision of sufficient resources in terms of personnel or infrastructure. It would also be evident in the clarification and recognition of educational technology roles and titles, and the position of units to which they are attached. Finally, for academics who champion educational technology and for those who integrate it into practice, there should be recognition or support, possibly through remission of time, given the many demands being made on their time. Such supports are likely to quicken the pace of progress in implementing educational technology, alleviating some of the concerns of these

education technology leaders who, while positively viewing incremental change or progress, remain somewhat frustrated at the slow pace of change. The importance of recognition of the value of their endeavours is captured by a learning technologist who observes that "genuine recognition of T&L (Teaching and Learning) and TEL innovation/work . . . is key to developing staff TEL capacity in T&L and TEL within our institutions." (26-L). A university learning developer agrees, "Give T&L/e-learning functions some real recognition . . . I'd love to see that change" (30-L).

5.4 Perceptions of Leadership

Sub-research question (d)

How do educational technology leaders perceive leadership in the context of their own roles?

A considerable proportion of the survey respondents (60.3%) agree or strongly agree that their colleagues see them as a leader in educational technology with a further 31% undecided as to how they are perceived in this regard. It is likely that, in view of their response to the COVID-19 situation, this figure may have increased further. However, although the extent to which the participants see themselves as leaders is unclear from the survey, interviewees appear to see themselves primarily as agents of change or enhancement rather than in terms of leadership.

In fact, some express unease with being termed a leader. Paula, head of a Learning and Teaching unit, is reluctant to use the term as it doesn't "sit well" with her. Possibly viewing the role of leader as one who is singled out or set apart, she prefers to focus attention on the team dimension of her role. In that respect, she hopes that she demonstrates some of the positive characteristics of leadership. Instead of associating leadership specifically with her role, she views leadership as something that all colleagues can share, as suggested by Ramsden (1998) and Childs et al. (2013). Similarly, learning technologist Fiona speaks about not being entirely at ease with what might appear to some as assigning herself a title. In recent years, however, she has come to broaden her understanding of leadership to also include those who lead from the bottom-up or middle-out, as she does. Dave, too, despite initial uneasiness, has come to appreciate that he has an "informal leadership role". This realisation for Fiona and Dave has come through affirmation from colleagues and being given increased responsibility by formal institutional leaders. They appear to appreciate this validation from institutional management and its implicit recognition of the leadership they practise. Dave speaks of being "trusted to act in that way", while Fiona refers to management thinking so much of her that they "bring you into that room" for guidance and advice. Mike, on the other hand as head of a unit, is more comfortable in being seen as a leader. Yet, he sees himself as leading in a deliberate but informal

way, “with a small ‘L’”, encouraging and bringing people along, rather than a leader who is to the forefront or in the spotlight (Parkin 2022).

It is perhaps unsurprising that these leaders do not think of themselves as such, given the relatively sparse references in literature to leadership in relation to their roles and activities (Jameson 2013). Rather, leadership, when referred to in the literature on educational technology, tends to focus primarily on formal leadership positions. It is notable that in National Forum reports on digital capacity and educational technology, with the exception of references to learning and teaching leaders who were consulted for one of the studies (NFETLHE 2018), this author can find no references to educational technology personnel as leaders or as demonstrating leadership in the area. That said, the Digital Roadmap speaks of some learning technology staff as being highly qualified and experienced in education, thus allowing them to act as “translators/facilitators/change agents, being able to bridge the gap between specialist academics and technologies/pedagogies” (NFETLHE 2015b, p.21). This lack of focus on the leadership dimension of their roles in favour of their activities as intermediaries (Little and Green 2012) and agents of change (Dawson, Mighty, et al. 2010; Grupp 2014) may explain their unease with the term “leader”. However, as we have seen in the area of academic development, these aspects of their roles can clearly be characterised as demonstrating leadership (Grupp 2014; Taylor 2005).

5.4.1 Leadership orientations

To ascertain their perspectives on leadership, survey participants were asked to choose which of five descriptions most closely matched their approach to their role. Although not specifically referring to leadership, each of these descriptions depicted a generic leadership orientation. While it was likely that participants might draw on elements of some, or all, of these approaches in their roles, they were asked to identify the approach that best described their own. Almost one third of respondents, 32.8%, indicated that they favoured a collaborative approach in their role, seeing the integration of educational technology as a shared responsibility, recognising and tapping into the diverse areas of expertise of colleagues. These leaders see themselves as enabling colleagues to take on this responsibility, and importantly, support them in doing so (Parkin 2022; Fletcher and Kaufer 2002). This approach, in particular, was favoured by a majority of those leaders who have formal management positions, most often as heads of units, clearly indicating their perception of their leadership role as having a distributed dimension. Key to this, however, is not simply sharing or devolving the responsibility, but also supporting those who accept this responsibility.

A further 26.6% of respondents describe themselves primarily as influencers, relying on building relationships as they seek to change practice by persuading others, modelling and sharing good practice (Parkin 2022; Newton 2020). They recognise that the integration of education technology is not a one-size-fits all approach. But, by informing colleagues and sharing their experiences, these colleagues are then able to choose the most appropriate tools for their own students.

Interestingly, within the Learning Technologist group, the approaches chosen were more evenly spread with the same numbers choosing the collaborative approach, the influencer-modeller approach, and a third approach that describes the leader as an expert in the area, one who shares knowledge and expertise and in whom colleagues have confidence (Grupp and Little 2019; Whitchurch 2015). It is perhaps not surprising that their leadership perspective involves aspects of these three orientations as pointed out by one member, who "could have ticked most of the others as well" (20-L). Just as working closely with academic colleagues, encouraging, collaborating, and sharing responsibility are key aspects, so, too, is the confidence engendered in their colleagues by the credibility associated with their own knowledge and expertise (Little and Green 2022; Whitchurch 2013).

For the third group, consisting of academics who take a leading role in education technology in their own practice, two options were more pronounced, the influencer-modeller who models and shares practice with colleagues, and another which focuses on their use of education technology, based on the benefits it offers student learning. These faculty members who are enthusiastic about educational technology and happy to share their experiences with colleagues, are likely to fall into the categories of early adopters or early majority as identified by Rogers (2003).

While the survey indicates the overall approaches that guide these leaders, the interviews provide insights into how they enact them in their roles.

Firstly, these leaders are conscious of their positions in the middle of their institutions, working primarily with academics but also with institutional management and, for heads of units, leading their own teams. When reflecting on their efforts to lead in their own contexts, the issue of being in the middle featured prominently in their stories. Mike, head of an Educational Technology unit, speaks of being "very much in the middle". Paula describes herself as being "totally in the middle" and "facing in different ways". A particular implication of this position, as learning technologist Fiona points out is that these leaders are "kind of limited operating in the middle". Their roles bring responsibility for promoting change, but they are acutely aware that of their limitations in terms of making institution-wide decisions or directives. However, as Mike

cautions, issuing such directives generally does not work in higher education. Implementation requires more than the directives. It also requires that people are persuaded or convinced by evidence.

Those in management roles, despite leading their own teams, also appear have little in terms of budgetary power other than resources for day-to-day running of their units and management of external project funding. However, as Gosling et al. (2009) have noted, control of financial resources is crucial in exercising leadership in middle roles. Without this, middle leaders, such as those in this study, may feel disempowered despite having devolved responsibility for leading change. Bolden, Petrov and Gosling (2009) go further by warning that a distributed approach to leadership which delegates this responsibility without a measure of financial control is unlikely to flourish. For the leaders in this study, these challenges which they have identified, while not appearing to diminish their efforts, appear to result in a level of frustration with the slow pace of change, and desire for greater direction and buy-in from senior management, on whose support they depend to provide impetus for initiatives.

Acknowledging, as Mike does, the need for an adaptive style in which one "can't always take the same kind of approach", these leaders adapt their leadership orientations as they work in different directions, with academic colleagues, institutional leadership, and their own teams.

5.4.2 Leading softly

A range of accredited and non-accredited activities appear to be effective in encouraging academics to integrate technology into practice. These involve modelling and sharing practice, using evidence from the literature, and deriving credibility from the experiences of educational technology specialists and champions. Leaders in this study also appreciate that change takes time to permeate, recognising that there are many reasons for academics being slow to engage, ranging from lack of confidence to time constraints or even resistance. On closer examination, the fostering of relationships and trust appears central to their efforts. These relationships are based on care and consideration and, importantly, respect for the expertise of academic colleagues. Being available, approachable, helpful, patient, willing to listen, and able to identify with the academics' experiences is key to building these relationships (Grupp and Little 2019; Timmermans 2014). Fiona explains her collaborative approach as "not *telling* people what to do", capturing it as "leading softly" or "leading as gently as possible". In her view, "When you're actually trying to build a relationship with somebody and you're trying to build capacity within an institute, I think you can only do it if you're working together". Mirroring the shared leadership described by Fletcher and Kaufer (2002), this relational approach is a core dimension of leading (Parkin 2022). As in Parkin's (2022, p.98) programme leadership model, the leaders in

the current study stress the value of investing in relationships to develop "spheres of influence that go beyond positional or expert authority". This people-oriented leadership, also emphasised by Whitchurch (2015), is demonstrated in serving and empowering others, motivating and encouraging them through building relationships (Grupp 2014).

As noted earlier, their own credibility in the eyes of academic colleagues is an important element in engendering confidence. The credibility associated with their expertise is complemented by that derived from evidence-based approaches, their teaching experiences, and modelling technology in their own practices. In addition, this provides a reassurance to academic colleagues that these leaders can identify with their experiences and appreciate "the teacher's point of view" as they have been "in the situation".

Their people-focused approach was particularly apparent in their response to the COVID-19 situation in which their focus was first to communicate with and reassure colleagues, particularly those who had concerns about using technology, and then to support and build confidence.

5.4.3 Influencing upwards

In their interactions with institutional management, who Mike calls the "level above, the decision-makers", these leaders rely primarily on influence and persuasion. Again, building relationships, they thoughtfully navigate institutional boundaries and structures (Browne and Beetham 2010; Green and Little 2013; Whitchurch 2015). Heads of units, like Mike and Paula, who are likely to have more frequent dealings with management colleagues, describe taking a strategic, judicious approach when guiding, advising, and inputting into decisions, choosing carefully which aspects to "get invested about". On the other hand, learning technologist Fiona, describes her position as a "tricky place to be", one in which she is conscious of her boundaries, needing to distinguish between overstepping and stepping up.

Despite appreciating that there are many competing demands for the attention of management, many participants express a level of frustration at the slow pace of change in relation to educational technology, which they believe is affected by their management's level of engagement. In the survey and interviews, these leaders identify the need for evidence of a vision and strategic direction in this regard, effected then through policies and concrete initiatives and sustained by management buy-in to encourage implementation on the ground. Apart from the pace of change, it appears that the lack of coherence or alignment between what may be articulated in mission statements or strategic plans and the tangible actions needed to support these statements, is a source of frustration. Echoing Quinlan's (2020, p.74) view of leadership as "having a vision and bringing others along toward that vision through a set of actions", Mike speaks of being guided by a belief in "involving and aligning others towards a

vision . . . for the future". The importance of vision supported by actions is affirmed by survey participants who speak of the need for a "clear and meaningful mission and vision" (45-M) in which institutional leaders "articulate what [they] want from technology"(30-L), "follow through on the policy rhetoric" (01-M); "backed up with initiatives to promote and reward adoption" (05-L); demonstrate by "vision and actions" (01-M) the value that is placed on teaching and the use of technology to support it (62-M). Like Quinlan (2020), who places such vision and corresponding actions at the core of leadership, Parkin (2022) suggests that the key to leading authentically is being purpose-driven, guided by a vision, and remaining true to the values that support it. Such coherence or congruence (Parkin 2022) is what participants in this study appear to seek from institutional leaders, an approach that would demonstrate an alignment between the rhetoric of strategic goals and the reality on the ground.

While support for initiatives may still not bring about change at the pace that leaders might wish, it would at least signify the value placed by institutional leaders on the integration of technology. Importantly, such endorsement or "support and public 'championing' from the formal leadership hierarchy" (Jones 2014, p.138) would exemplify alignment between stated goals and visible actions. This alignment appears to be highly valued by the educational technology leaders in this study and is an aspect that they endeavour to model in their own practices and among their own teams.

5.4.4 Leading together

Perspectives on other facets of leadership may also be gleaned from the experiences of Paula and Mike, who lead their own teams. Paula places a strong emphasis on her team rather than her own role as its leader, frequently using "we" when referring to her role and unit. In leading the team, hers is a collaborative, collegial approach, resisting any notion of being seen as "the boss" and echoing Whitchurch's (2015) assertion that those in similar roles in Third Space are diffident about being seen as managing or supervising others. She sees the members of the team, each with different characteristics and areas of expertise, as blending together to complement each other. She views working with her team as a partnership (Whitchurch 2015) in which she guides and supports the members. In doing so, she hopes that her own actions exemplify the positive characteristics that she sees as defining a leader.

Mike is comfortable as leader of the team, which he has built thoughtfully and consisting of the "right people". Like Paula, he tries to ensure that the members' skills and backgrounds complement each other and "fit within the team". Also adopting a shared approach, giving responsibility, and acknowledging achievements, he believes it essential to be approachable and

seen by the team as supportive. He sets the tone for the team through displaying and building trust, leading by example, and modelling behaviours that he hopes will percolate among them.

Thus, the leadership that they appear to exercise within their teams, epitomises the culture of distributed leadership (Bolden, Petrov and Gosling 2009), described by Fletcher and Kaufer (2002) as a collaborative effort involving acts of enabling and support. Their shared approach sees them "shifting the focus . . . from 'me' to 'we'" (Parkin 2022, p.101), empowering team members and working humbly alongside these colleagues rather than directing them (Parkin 2022).

5.4.5 Summary

Given the dearth of literature on the leadership dimension of educational technology (Jameson 2013; Arnold and Sangrà 2018) and the lack of attention given to those working in middle positions in this area from the perspective of leadership (Devine 2015), it is perhaps not surprising that the leaders in this study do not focus primarily on the leadership aspect of their roles. Despite not seeing their roles in this way, in articulating their experiences, they offer us a view on their perspectives on leadership and how they practise it in different contexts. Key to their approaches, which rely mainly on influence and persuasion, is the building of relationships and trust, grounded on their credibility. In their interactions with academics, institutional management, and their teams they seek to demonstrate alignment between their words and actions. In addition, they look to institutional management for leadership that exemplifies a similar alignment between strategic goals, policies, and supporting actions in the effort to integrate technology. Their expectations of institutional management reflect a perspective in keeping with the HEFCE definition of leadership, which involves agreeing strategic direction, communicating this, ensuring capacity and resources, and supporting implementation (HEFCE 2004), leadership activities that are mainly within the remit of those in formal leadership positions. There is also the expectation of support from institutional leadership alluded to in the ALTC (2011) definition, which, in the context of distributed approaches, referred to institutional leadership as involving "support of staff with expertise and passion who engage with colleagues to strengthen learning and teaching as part of their general duties" (ALTC 2011). In sum, these leaders appear to view leadership, their own and that of their institutional leaders, as captured simply by Quinlan's (2020, p.74) definition of "having a vision and bringing others along toward that vision through a set of actions".

5.5 Leadership influences

Sub-research question (e)

What has influenced educational technology leaders understanding of leadership and their leadership roles?

The leaders in this study do not appear to be influenced by wishing to be seen as a leader in the more traditional sense or seeking personal prominence or recognition for their efforts. They appear, instead, to be driven by their mission or vision of using technology to improve teaching and, ultimately, the student learning experience. When asked about what their institutions might do to better support them in their roles, their focus was on actions that would facilitate this mission such as policy, resources, time, and clarification of roles. Their motivation in seeking the latter clarification and recognition was to clearly define the role and, as with the other enablers identified, signify the value that their institutions and their senior leaders place on the efforts to integrate technology. Their view of leadership tends to align with a shared approach, demonstrating what Davis (2012, p.117) refers to as "leadingful leadership literacy", a distributed approach that "moves the spotlight from leader to the work of leading", also reflected in Jones et al. (2012).

5.5.1 Leading and learning to lead "on the job"

Although these leaders may not view their roles in terms of leadership as such, apart from those who lead teams or units, they do see themselves as agents of change. They appear in the main to have learned to lead primarily from carrying out their role rather than through professional development or preparation, echoing the experiences of academic leaders in Scott et al. (2008). Thus, they appear to have learned to lead through lessons learned from their experiences of leading and attempting to bring about change.

In relation to working with academics, for example, Paula, a Head of Learning and Teaching, speaks of learning "the hard way", recalling that on taking up the role she expected that colleagues would embrace technologies because of their benefits. It has been similar for Mike in his role as head of an Educational Technology unit. Contrary to his initial assumptions, change has come more slowly than expected and promoting such change requires patience and a realistic appreciation that some people may not engage. Their solution, then, is to work with the willing, "people who are going to work with you", champion "who are keen to do things differently". In this way, the use of technology ultimately "permeates out even to others who . . . may have very good reasons for not wanting to do a particular thing or change something".

They have also come to understand that, in their position in the middle without authority to make institution-wide decisions on implementation, they are reliant on influencing senior management colleagues to support their initiatives. Therefore, they have developed a "political nous", alluded to by Whitchurch (2015) and Sugrue et al. (2018), in their interactions with senior leadership, appreciating the demands on their attention, recognising the boundaries and using their influence judiciously and proportionately. They have built relationships and learned to negotiate institutional structures, knowing "what to get invested about" to maximise the chances of gaining support.

In addition, evidence-based practices and inter-institutional partnerships provide important learning opportunities. So, too, with building a network of colleagues in similar roles beyond one's institution, which can act as a sounding board, providing support and a safe space in which to share and learn from the experiences of others. Such interactions with like-minded people were identified by Whitchurch (2015) as an important support for those in similar roles who work on the edges of formal institutional structures. Academic leaders in the study by Scott et al. (2008) also suggested that similar support networks, while important for all leaders, are particularly so for those, who like the leaders in the current study, have limited authority and budgetary control and rely instead on exercising influence and persuasion. Opportunities to hear the experiences of others in similar positions were also strongly welcomed by leaders who discussed the findings of Scott et al. (2008) in follow-up workshops. These leaders noted that it was encouraging to realise that their experiences were not unique to them but shared by many of their peers, thus helping them make sense of such experiences. An important lesson from studies such as these is, just as opportunities to share experiences and reflect on them are effective in changing academic's practices, so too may opportunities, which give leaders room to learn from and reflect with peers on their experiences of leading, be a key element in learning and developing leadership (Jones 2014).

5.5.2 Sustained by purpose

The aspects of their roles that participants find most satisfying also offer clues to what influences and sustains them in their leadership roles. For those who work mainly with academics, satisfaction derives primarily from the impact of their work on teaching practice and, consequently, on students' learning experiences. Working with colleagues ranging from those who are enthusiastic about technology to those who have never used it, they are motivated by seeing them engage and innovate, building their "competence and confidence" (26-L), becoming "energised" (20-L) as they integrate technology into practice (47-L). Ultimately, it is the positive impact on students' experiences that is the key factor, when "student learning surpasses expectations" (62-M). This is summed up by Paula who explains,

> *"It's all about the student experience for us . . . where it helps the staff, where it helps the student. It's the engagement of students, the student learning experience at the end of the day, that's what we're trying to impact".*

Unsurprisingly, for those academics who champion or take a lead in promoting educational technology, the student experience is also to the fore as they speak of increasing student engagement (32-F, 34-F) and improving the experience in general (07-F).

As one might expect, a belief in the positive affordances that educational technology offers (Gaebel et al. 2021; European Commission 2020; European Commission 2014) is central to the work of these educational technology leaders. Mike, who leads an Educational Technology unit, believes in the potential of educational technology to "change things for the better" and concludes that "there isn't any aspect of teaching and learning that EdTech can't contribute to". Taking a broader view, he points out the increased opportunities it offers in terms of access and flexibility and its potential in "breaking down learning barriers". Other leaders refer to the benefits of change, a vision for the future, and the importance of bringing their own passion and enthusiasm to bear in persuading and convincing colleagues to engage. It is this mission or purpose that appears to guide and sustain their efforts.

5.5.3 Guided by pedagogy

However, they stress that, in this mission, pedagogy remains their primary concern, as highlighted in other studies (NFETLHE 2015b; Oliver 2002). Head of Learning and Teaching, Paula, speaks of a pedagogy-first approach while Mike, in his role as head of Educational Technology, also emphasises a teaching-led focus which is supported by technology. Describing the integration of educational technology as the "merging of technology and pedagogy" and appreciating the affordances, benefits, and the value added by technology, his priority is "teaching and learning, and the EdTech's coming in to support that". Learning technologist, Dave, adopts a "teaching approach to the technology", emphasising that "it's never just about the technology, we always can start with the pedagogy". Fiona echoes this as she looks at the technology from the teacher's perspective, stressing that it's "the pedagogy part of what technology we're going to use first". In the same vein, a faculty member who champions educational technology comments that the role of educational technology leaders is to ensure that "it's not a techno-centric approach that is adopted but one that is grounded in pedagogy and evidence-based" (07-F).

Leaders such as Paula and Dave also refer to negotiating some tension between their identity as academics and their current positions. Although Paula still identifies as an academic, she believes she may be perceived by her academic colleagues as having gone to the "dark side" and "doing management's bidding", a perception also noted in relation to educational developers (Green

and Little 2017; Manathunga 2007). This experience is not unique to such leaders who work with academics yet may be seen as being set apart from them. Academic leaders in formal positions, leading departments and schools, have noted a similar tension, where they may feel or be perceived as torn between competing demands of academic colleagues and the institution (Bolden, Petrov and Gosling 2009; Bryman and Lilley 2009). Yet, for leaders such as Paula and Dave it appears to be their strong pedagogy-based conviction that acts as a compass to guide them in maintaining this delicate balance, alluded to by Whitchurch (2015), and described by Beach et al. (2016, p.147) as positioned between being "champions for faculty" and "handmaids of the administration". Their purpose-driven approach, "doing the right things for the right reasons" (Parkin 2022, p.100) is evident in Paula's assertion, "We're not saying we're doing it because management want it, we're doing it because it's going to be good for staff and students".

5.5.4 Navigating the middle

The positioning of these leaders in the middle of their institutions, where they rely on influence to promote change, inevitably shapes their leadership approaches. They experience the tension noted by Oliver (2002) between the autonomy of generally being left to their own devices, their lack of authority, and their responsibility for change initiatives. In Dave's case, this contrasts with his autonomy and ability to make decisions in his teaching role. His approach in his educational technology role, then, is to change his language to recommending and suggesting. In relation to academics, they employ a suite of professional development activities grounded on the relationships they build through influencing, persuading, and giving advice rather than telling or directing. In their dealings with senior management, on whose support they rely, they strategically navigate institutional politics and structures, using their influence thoughtfully, in the knowledge that the integration of educational technology is only one of many institutional endeavours. Echoing Whitchurch's (2015) "safe but risky" paradox, Fiona speaks of this "tricky place to be", noting, at the same time, the safety of not having the burden of decision-making responsibility.

5.5.5 People-focused

As we have seen, at the core of the practices of these leaders is a relational dimension, which is fundamental to their work with colleagues at all levels (Parkin 2022). This is exemplified in their people-focused approaches and the importance they attach to fostering relationships and trust, being available, listening, and respecting the expertise of colleagues. In addition, they appear to have a strong orientation to service, a disposition which was particularly apparent in the stories of those interviewed in the context of the COVID-19 pandemic. Emerging immediately as "front-line workers" in their institutions (Cunningham et al. 2021), feeling morally compelled to step

forward to help, with “all hands on deck”, they speak of eagerly asking “What is it you need from us? What can we do to help? We’re here, we have this expertise”. Particularly notable was their early role of being “one of the only ones communicating with staff”, working around the clock as the first point of contact and support for staff and, by extension, students. Despite their own uncertainty as to how the situation was to unfold, their priority was to reassure colleagues, academic and management, who were anxious about the situation (Hakala 2022).

5.5.6 Summary

It appears that these leaders, who seek to lead change from the middle of their institutions despite having limited authority, are sustained in their efforts by their sense of purpose. The positive pedagogical effects of educational technology on academics’ teaching and, consequently, on students’ learning is what appears to motivate, guide, and provide satisfaction. Central to their approaches appears to be a strong people-centred orientation, involving building relationships and bringing people along (Quinlan 2020). They appreciate that, ultimately, it is their colleagues, academic and management, who will effect the changes that they are aiming for. Aware of the limitations and boundaries of their position, they understand that if the many positive changes that have come about are to have institution-wide impact, the support of senior leaders is essential. This would demonstrate alignment between stated strategic aims in relation to educational technology and concrete actions, reflecting the value placed on this change process.

5.6 Educational technology leadership

The higher education landscape is complex, thus making leadership in this landscape a complex undertaking (Watermeyer et al. 2022; Bolden, Petrov, Gosling, et al. 2009; Scott et al. 2008), woven from many different threads. This study has focused on a particular area of higher education leadership, that of leading educational technology change from the “middle” of an institution. It has examined experiences and practices of this leadership from the perspective of challenges, effective approaches, barriers and enablers. In addition, it has explored perceptions of and influences on the leadership from the perspective of those who have responsibilities in this area, with a view to answering the central research question of the study.

Research question

What can be learned about educational technology leadership from the voices of those who work in the “middle” of implementing institutional change in Irish higher education?

5.6.1 Leadership markers

In weaving together the threads from the sub-research questions, we can identify a number of key elements in the approaches of these leaders, markers or signposts which we might term as dimensions of their leadership in educational technology integration. These dimensions, which are represented in Figure 5.1, are embodied in a congruence in the leadership practised by these leaders.

Notably, these dimensions appear to have much in common with leadership approaches in other areas of higher education such as academic development (Fields et al. 2019; Grupp 2014; Timmermans 2014; Taylor 2005), programme coordination (Parkin 2022), instructional design (Drysdale 2021), third space (Whitchurch 2015; Whitchurch 2013), and higher educational leadership in general (Newton 2020; Quinlan 2020; Watermeyer et al. 2022; Bolden, Petrov and Gosling 2009; Scott et al. 2008).

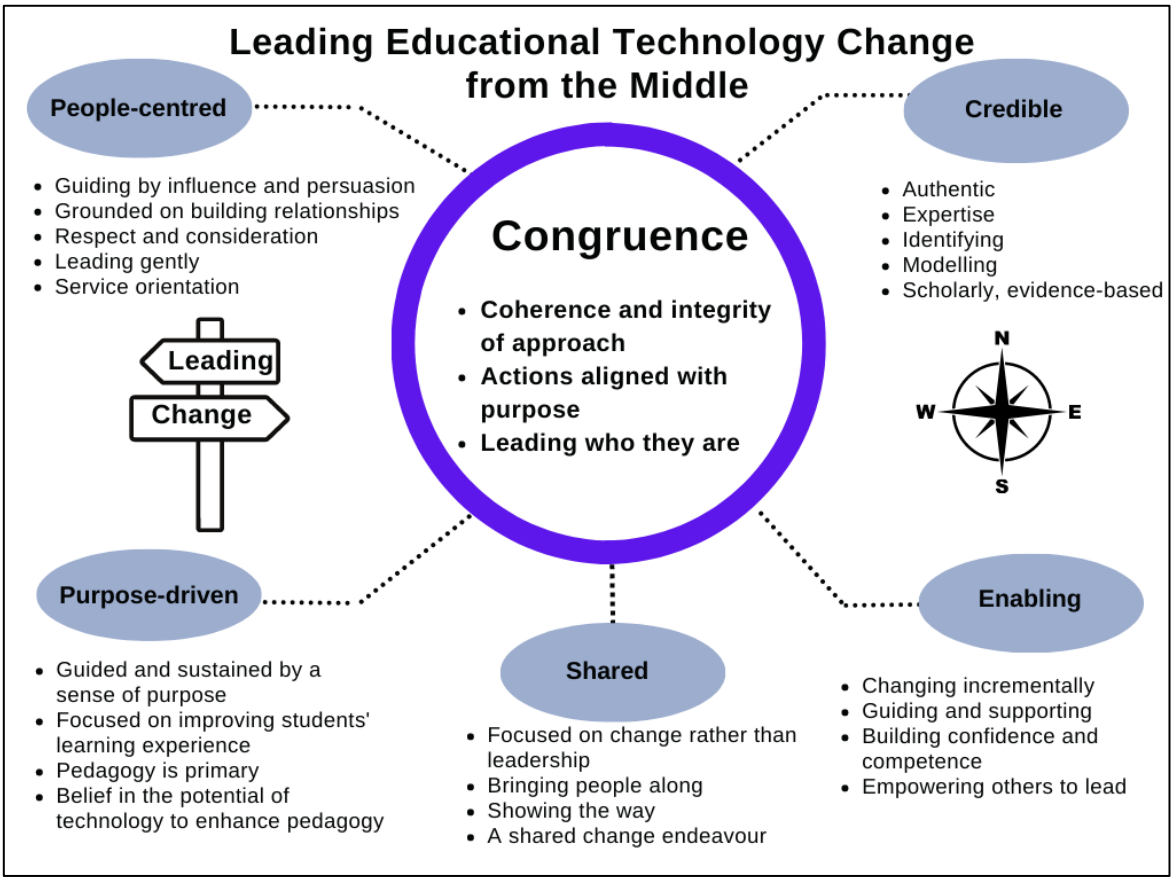

Figure 5.1 Leadership dimensions

People-centred

Given their position in their institutions where they have little or no formal authority, their efforts rely primarily on influencing and persuading colleagues (Whitchurch 2015; Childs et al. 2013; Dawson, Mighty, et al. 2010; Oliver 2002). They see collaboration and building relationships with

colleagues, based on respect and consideration, as at the heart of their approach (Whitchurch 2015; Fletcher and Kaufer 2002). Their orientation towards service, while leading "softly", is evident in their commitment to being available and approachable, respecting the expertise of their colleagues and the multiple demands on their attention.

Purpose-driven

The goal of their work is to change academics' practices and, in this way, improve students' learning experiences, visibly working in the interests of student learning (Taylor 2005). While they believe in the potential of educational technology to assist in this goal, they firstly emphasise good pedagogical practice, which can then be supported by technology (Oliver 2002). This purpose is the compass that appears to guide and sustain them in their endeavours (Parkin 2022; Scott et al. 2008).

Shared

Their primary focus is on enhancing learning and teaching, acting as levers for this change (Grupp and Little 2019; Whitchurch 2015). While their actions embody leadership practices (Taylor 2005), they are for the most part reticent about using the term "leader", preferring to see their efforts as part of a collaborative and shared change endeavour (Fields et al. 2019; Whitchurch 2015; Fletcher and Kaufer 2002). Rather than seeing themselves at the forefront of this endeavour, they see themselves as bringing people along and showing the way (Parkin 2022; Quinlan 2020).

Credible

To influence colleagues and bring them along, they depend on being seen as having credibility in this area, as is the case for academic developers and third space professionals (Little and Green 2022; Grupp and Little 2019; Whitchurch 2013). While their expertise and evidence-based scholarship are key elements of this credibility (Grupp and Little 2019; Taylor 2005), so too is their ability to identify with the experiences of colleagues and their modelling of good practice, all of which demonstrate an authenticity in their approach (Little and Green 2012).

Enabling

They seek to enable and empower colleagues (Cunningham 2022; Grupp and Little 2019; Whitchurch 2015) to take the lead in their own classrooms and with their peers. They seek to build colleagues' confidence and competence by providing guidance and support and, in this way, sustain changes in practice. In their efforts to provide opportunities for others to grow and develop (Parkin 2022), they have come to understand that such changes are likely be achieved incrementally. In many ways, the key indicator of the success of their efforts may be the extent to which they empower others to also lead, reflecting Newton's (2020, p.16) view of leadership as involving "purpose, influence, and ultimately enabling ordinary people to achieve

extraordinary things . . . to realise that they have unrecognised potential and to achieve even more".

Congruent

The identity of these leaders is exemplified by the central dimension of congruence. This congruence is the lynchpin which connects the other dimensions and from which they emanate. This is echoed by Parkin (2022) who argues that the word "congruence" encapsulates modern leadership. This congruence involves coherence or alignment between what leaders say, do, and are. A further element in this coherence is the embodiment of the values of a learning leader, alluded to by Scott et al. (2008) and Ramsden (1998), and echoing Davis' (2012, p.115) "learningful dispositions". Such congruence represents an integrity or wholeness, captured by the term "embodied leadership" (Parkin 2022, p.98), resonating with Shulman's assertion about academic developers, that they "have to *be* certain kinds of human being" (Shulman 2005, p.3). Further, as Palmer (1998, p.2) suggests of teachers, "we teach who we are", this leadership coherence may be so inextricably bound to the identity and integrity of leaders in this study, and perhaps leaders in other areas, that one might argue that they lead "who they are". Newton (2020, p.6) terms this embodied leadership "self-leadership", encompassing notions of integrity and authenticity which, in turn, enhance credibility. It is such that, if leaders are to be true to themselves, they can *only* lead who they are.

If, as Quinlan (2020) suggests, leadership encompasses one's actions in bringing others along towards a vision, then these actions will be guided by values and purpose. For Parkin (2022, p.100), "being truly purpose-driven as a leader . . . [and] staying true to core values" means that leaders act authentically and intentionally in their commitment to these values and purpose (Quinlan 2020). Echoing Bolden, Petrov and Gosling. (2009), Watermeyer et al. (2022, p.33) describe this values-based leadership as "empowering staff, enabling them to act as leaders (informally and formally) ideally in a distributed fashion". They identify being authentic, collaborative, and credible as hallmarks of good leadership and suggest that this values-based approach, guided by a vision, is foundational to the credibility and legitimacy of higher education leaders and their ability to exert influence. Such influence extends beyond positional or expert authority and is based on a legitimacy that comes from the relational dimension of "mutual respect, honesty, compassion and connectedness" (Parkin 2022, p.98). This shared dimension is embodied in the leader humbly working alongside colleagues (Parkin 2022).

The facets of this congruence have much in common with the elements of the credibility framework proposed by Little and Green (2022) for educational developers. Such credibility, they argue, is at the core of educational developers effecting change to academic practice in their

roles as non-positional leaders. This credibility consists of three key components: trustworthiness, expertise, and identification. These are, in turn, grounded on six key elements or dimensions: benevolence, integrity, ability, credentials, academic activities, and academic mindsets, shown in Figure 5.2. Trustworthiness is made up of the three dimensions of benevolence, integrity, and ability. Expertise consists of ability and credentials while identification involves credentials, academic activities, and academic mindsets. While the emphasis in this framework is primarily on credibility, there are parallels with the dimensions of leadership identified in the current study. The people-centred and enabling dimensions reflect aspects of leadership, which involve working in the interests of colleagues rather than one's own, building relationships, listening, caring, support and is essential for trustworthiness. Integrity, in which the developer is guided by principles, echoes the current study's purpose-driven and congruent dimensions. The dimension which this study terms credible features aspects of Little and Green's (2022) expertise and identification components. Expertise, which is evident in developers' competence, knowledge, and credentials, contributes to their credibility. Similarly, their ability to understand and identify with academic colleagues is enhanced through their experiences of engaging in academic activities and adopting academic mindsets manifest in their commitment aspects such as evidence-based practices, rigour, and academic freedom.

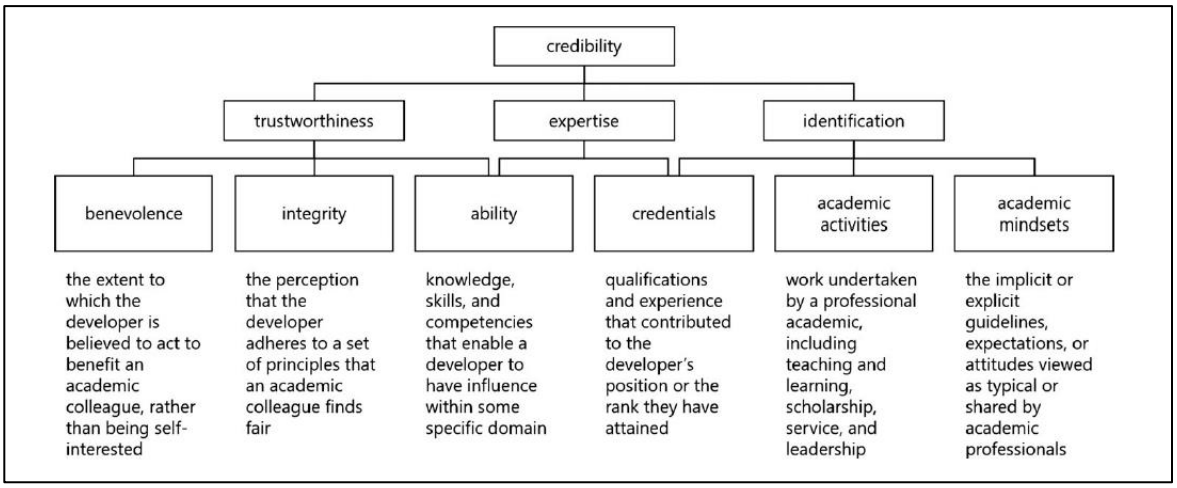

Figure 5.2 Competency framework for educational developers (Little and Green 2022 p. 815)

Therefore, coherence is visible as these leaders, guided and sustained by their mission to integrate educational technology, build on their credibility to influence colleagues, bringing them along by building relationships, empowering them to lead in what they see as a shared endeavour.

5.6.2 Leadership at all levels

It appears that this coherence is also central to the credibility of these leaders in their efforts to effect change from the middle. As is the case for other middle leaders, they are in an in-between

position (Grupp 2014; Little and Green 2012), negotiating the rocks and hard places of this terrain, facing in different directions (Whitchurch 2015), spanning boundaries, as they interact with academics and institutional management. Their work is paradoxically central to strategic priorities, yet their institutional positioning is often peripheral, their importance not recognised, their roles often ill-defined and sometimes insecure (Browne and Beetham 2010; McNutt 2010; Oliver 2002). Nevertheless, participants in this study have indicated that this work can be satisfying, particularly when there are visible improvements in academic colleagues' practice, and most importantly in students' learning experience. Despite being in this liminal state, they may also find working in the margins a good vantage point from which to engage with different groups and lead change (Grupp 2014; Little and Green 2012).

A challenging feature of this position is the absence of decision-making and budgetary authority, meaning that these leaders rely primarily on influence and persuasion in their change efforts. While the leaders in this study are acutely aware of, and sometimes frustrated by, this situation, their experience may not be unique. It has been argued that all leadership involves the use of influence (Connolly et al. 2019) and much of the leadership in higher education, particularly in relation to systemic change such as academics' teaching practices, is better effected through influence rather than authority (Newton 2020). While it may be possible to mandate change to procedures or protocols, exercising authority may not be sufficient for effecting change in teachers' classrooms. As academics are ultimately the gatekeepers to learning experiences (Jeffrey et al. 2014), changes to practice are likely to rely more on convincing or persuading them of the merits of doing so. So, perhaps those leaders in the middle, who may sometimes feel powerless in the in-between spaces, limited in the changes they can achieve, may be reassured to realise that the influence that they are able to exert may actually be more effective than authority.

However, these leaders have learned, and it has been recognised more widely (NFETLHE 2018; Devine 2015), that they are limited in the extent of the change that they can facilitate. Wider institutional change is more likely to be achieved if there is a consistent and coherent institutional approach, with support and commitment by those in formal positions being visible and attaching value to the effort (Gaebel et al. 2021). Such a coherent approach on the macro level would mirror the alignment that these leaders seek to exhibit in their own practice at the micro level. Institutionally, this requires "strategic coherence", "a system of mutually compatible meanings among organisation member about desirable organisational directions" (Lusiani and Langley 2019, p.1), which may be demonstrated by collective direction, alignment, and commitment, key elements of leadership identified by Drath et al. (2008).

The alignment these leaders seek at institutional level would be demonstrated by a clear strategic direction, policies that give impetus to this strategy, and visible support for the work involved. The value attached to this endeavour would also be reflected in increased personnel and funding, remission of time for academic champions, clarity and consistency in roles, appropriate contracts reflective of these roles, and definitive career progression opportunities, the latter two applying in particular to learning technologist roles. This would make a tangible statement about the value that those in formal positions attach to the work of integrating educational technology.

Thus, leadership for educational technology will be manifest in different ways depending on one's position in the organisation. For example, those in positional roles may exercise leadership through a consistent commitment that values the endeavour; those in informal middle roles, who specialise in educational technology, can lead through influencing and supporting colleagues; and academics can lead in their classrooms through modelling the integration of technology to enhance their students' learning. To successfully embed technology across an institution, this leadership needs to be coherent, consistent, and visible at all levels. Each piece of this jigsaw is crucial, mutually dependent, needing to work in tandem with the others. In this way, this leadership can permeate throughout the institution. It should be recognised, and even celebrated, as leadership even though such leaders may humbly (Parkin 2022) suggest that they are simply doing their jobs.

This institutional alignment for educational technology has parallels with the coherent approach that Carless (2009) calls for in relation to assessment reform. Key to the latter are higher levels of assessment literacy at all levels from senior management to teaching staff, particularly middle and senior management, given their positions of influence. Alluding to the importance of credibility rather than authority, Carless (2009) suggests that the expertise of the assessment leader may be more relevant than the status of the manager. However, such are the demands and constraints within institutions that it may require an accountability event to provide impetus to such an approach.

One might argue that the COVID-19 pandemic has been such an event. Reflecting on lessons learned prior to and during the crisis, the *Digital Education Action Plan 2021-2027 (DEAP)* (European Commission 2020) emphasises that digital education is a central component of learning, teaching, and assessment. It concludes, therefore, that, rather than being a marginal issue with responsibility often delegated to a team within institutions or bodies, all education leaders,

> *need to understand how and where digital technologies can enhance education; provide appropriate resources and investment; empower educators; learn from best practice and support relevant organisational change and a culture that values and rewards innovation and experimentation.*
>
> (European Commission 2020, p.9).

Thus, to ensure that leadership in educational technology is manifest at all levels, there may be a need develop educational technology and leadership literacy for those working at each level. In the short, and possibly medium term, this leadership for educational technology is likely to require a level of professional development for those in hierarchical positions in institutions so that they understand, or at least have an appreciation of, the affordances and challenges of integrating educational technology into practice in their institutions. Without needing to focus on the technical side of implementation, this bigger picture understanding would better equip those in formal positions and enhance their leadership in this area. In the absence of such knowledge, there is risk of inertia, risk-aversion, or risk avoidance among institutional management, which can reduce the priority given to this area.

In this way, the hyperbole or rhetoric from positional leaders about educational technology and digital learning, alluded to by some study participants, can be matched with a commitment to first be informed and then to channel this understanding into active support, all the while working within the constraints and challenges of higher education (NFETLHE 2016).

5.6.3 Identity as leaders

While much of what they do can be characterised as leadership, participants in this study appear to view their work more in terms of change agency than leadership. Some were reticent, even uncomfortable, with being referred to as a leader. Some interviewees who head units were more at ease with the term, possibly because they see their leadership in terms of leading their own teams. Some learning technologists say they have come to see themselves as leaders by virtue of the responsibility and the trust placed in them. However, although their colleagues may look to them as leaders, this aspect of their role does not appear to be visibly acknowledged or recognised in their institutions. This may be due to a more traditional view of leadership and the fact that educational technology roles may be seen primarily in terms of supporting academics and facilitating change (NFETLHE 2015a; Oliver 2002) with little or no emphasis on the leadership dimension. The study's participants, rather than seeking recognition for themselves, appear content to work "under the radar", placing more emphasis on the collective endeavour than individual acknowledgement (Parkin 2022). What they appear to appreciate, as opposed to being seen as leaders or even held up to their colleagues as leaders, is the value that might be attached to the work that they do and its purpose. This value or recognition for the work of

integration would be reflected in the alignment and coherence of the broader institutional approach, evidenced by commitment and buy-in from management. This appears to be their primary concern.

If leadership is to be encouraged to happen at all levels within institutions, then the concept of leadership and its practice need to be acknowledged and nurtured. In almost 30 years working in higher education, my experience has been that leadership is a topic that is seldom mentioned, let alone discussed, in my institution except perhaps to bemoan what might be seen as a lack of leadership at times or, less frequently, laud the leadership exercised by some in senior positions. A first step in sowing the seeds of a leadership culture, one where leadership is shared and exercised throughout the organisation, albeit manifesting itself differently at different levels and in different areas, may be to begin "leadership conversations", which intentionally recognise, or even celebrate, the many ways leadership is enacted. While many "quiet" leaders do not seek recognition for themselves (Davis 2022), this "giving voice" (Fields et al. 2019, p.228) to the term and public acknowledgement of the leadership dimension of the roles of those who lead in areas such as educational technology may be an important step in their recognition of their own identity as leaders. If we want to develop leaders and build leadership capacity in our institutions, such an initiative may prove effective, while costing little in terms of resources.

Educational technology is just one of the many facets in the mission of leading learning, intersecting with many other areas that also merit attention with a leadership lens, such as assessment, feedback, curriculum design, academic integrity, inclusive teaching, and accessibility. Leadership conversations can also support and develop leadership in these areas, shifting from a view of leadership as the sole responsibility of those "at the top". Mirroring some of the approaches that educational technology leaders say are effective for them in their work with academics, these conversations may develop into critical friendship, mentoring, networks, and professional development with a leadership focus (Jones, Harvey, et al. 2012)

This intentional focus on leadership addresses an important issue that can arise in educational institutions, the expectation that leaders simply emerge from academia or that colleagues will rise to the occasion when leadership responsibilities are bestowed or thrust upon them (Vettori 2020). This expectation parallels the traditional approach to teaching in higher education, where there has been an implicit assumption that, as an expert in one's discipline, one can teach and does not require a professional development qualification. Such assumptions leave much to chance and, if valid, would obviate need for learning and teaching bodies such as the National Forum and the increased recognition of the importance of professional development (European Commission 2014). Just as good teachers do not simply emerge, so too with leaders. In

leadership, as in teaching, while there may be no requirement for a formal qualification, much can be learned on the job (Scott et al. 2008). However, there is also a need for professional development, formal or informal, with space for reflection, evaluation, and support from peers (Jones, Harvey, et al. 2012). As Guskey asserts,

> *At the core of each and every successful educational improvement effort is a thoughtfully conceived, well-designed, and well-supported professional development component . . . it is an absolutely necessary ingredient in all educational improvement effort.*
>
> (Guskey 2000, p.4)

Such approaches seek to develop a leadership literacy in our institutions (Arnold 2021; Davis 2012) and an understanding of what this means for all levels. While leadership development initiatives, such as those organised by Advance HE and Jisc in the UK, Educause and the Online Learning Consortium in the US, are seeking to address this gap, Bunescu and Estermann (2021) report that, for a considerable number of European universities, leadership development takes the form of occasional events rather than structured programmes. It appears also that, where such leadership programmes are offered, they focus primarily on formal positional leaders, which is perhaps to be expected as a starting point in developing leadership capacity. However, if the ideal is for leadership to be exercised at all levels, then such initiatives need to be tailored for leaders in roles other than formal positional roles. There appears to be a gap in this area within the Irish higher education community.

In taking the bold step of encouraging and participating in such leadership conversations, those in formal leadership positions may perceive a risk – one of exposing vulnerabilities, uncertainties, lack of expertise in certain areas, or experiencing the imposter syndrome. Yet, opportunities to "listen to and be heard by peers with compassion and empathy" (Watermeyer et al. 2022, p.12) are "fleetingly rare but incredibly important" (Watermeyer et al. 2022, p.8). While these may be cathartic at a minimum (Watermeyer et al. 2022), they are likely to provide encouragement and support as noted by senior leaders in Scott et al. (2008). In a similar vein, a number of participants in the current study expressed appreciation for the opportunity it gave them to reflect on their roles and consider them from a leadership perspective.

5.6.4 Educational Technology Leadership

This study sought to respond to Jameson's (2013) call for a greater level of research on "e-leadership" in higher education. Emerging in the context of business organisations, "e-leadership" originally referred to leadership as a social influence process mediated by information technology (Avolio et al. 2000). While perhaps appropriate at the time of its emergence, the term "e-leadership" may no longer have the same currency. Just as use of the

term “e-learning” has declined and been replaced by terms such as “digital learning”, one might argue that “digital leadership” may a more appropriate term. However, appending the word “digital” may no longer even be necessary as in the past 20 years digital technologies have become so embedded in many organisations that they are now part of the fabric of their operations. Thus, the digital aspect as envisaged by Avolio et al. (2000; 2014) may already have been subsumed into organisational leadership.

Equally, it seems reasonable to ask if the same can be said of “e-leadership” in higher education. It may be the case that leadership in educational technology will eventually be considered another facet of educational leadership in general. However, in this area, where educational technology meets educational leadership, the focus is on the leadership required to embed educational technology rather than leadership being mediated by technology. This embedding involves the intentional and purposeful integration of technology as a catalyst to enhance teaching practices and student learning. We have seen that, despite incremental progress primarily from small-scale middle-out and bottom-up initiatives (NFETLHE 2018; Devine 2015), and much increased engagement with technology during the COVID-19 pandemic, there remains much work to be done in this endeavour. Therefore, given the work that remains, the specialised knowledge required, and the pace of change in technology solutions, this area continues to warrant particular attention as a dimension of educational leadership to ensure its inclusion in institutional strategies and priorities. Importantly, as Jameson (2013, p.908) has argued, “it cannot be guaranteed to be a routine part of leadership”. In time, technology and digital learning may become so embedded in the cultures of higher education institutions and integral to the fabric of learning, that we may no longer require the same level of focus in terms of leadership. However, it is not clear that we have reached such a point yet (MacNeill and Beetham 2022; European Commission 2020). Correspondingly, as the findings in this study suggest, within the field of educational technology there is a need for the importance of leadership dimension to be acknowledged and recognised so that those charged with the specific responsibility of leading change in this area and those they work with understand this core aspect of their roles.

As with business organisations, the term “e-leadership” may no longer be appropriate in higher education. Throughout the study, we have used the term “educational technology leadership” (Jameson 2013). More recently, in their scoping study of higher education leadership, Watermeyer et al. (2022) use the term “digital leadership”. However, a challenge with a term such as the latter is that, like “distributed leadership”, those using it may have very different concepts of what it refers to (Gosling et al. 2009). As Olcott (2021) points out, digital leadership is not synonymous with adopting digital technologies. Nor indeed will digital technology necessarily improve leadership. A further danger is that of focusing primarily on the digital

aspect. The leadership envisaged and enacted by participants in this study is leadership for the integration of educational technology, with the educational or pedagogical aspect being primary. Such integration will require leadership at many levels within institutions and across the sector. It will be manifested in different ways at each level but, at a minimum, requires a level of literacy or understanding of the possibilities that technology offers.

Technology of itself is not a solution that will improve learning (OECD 2015; Kirkwood and Price 2014; Selwyn 2011). The key to its impacting learning lies in its use in an intentional and appropriate manner as advocated in the *Digital Education Action Plan 2021-2027* (European Commission 2020). This plan identifies strategic priorities for two interrelated aspects of digital education, the deployment of digital technologies to improve education and training and the need to equip learners with digital competences. One might argue, then, that leadership for digital education encompasses both of these aspects whereas leadership for educational technology primarily focuses on the first as it seeks to "purposefully and strategically embed digital technologies into educational practices" (European Commission 2020, p.3). Perhaps, therefore, a more accurate term to convey this essential aspect would be 'leadership *for* educational technology', leadership to drive its integration and potential for transformation (Brown et al. 2020), leadership which can be exercised at all levels, though perhaps differently at each level. This notion may ultimately captured by terms such as "digital education leadership" (Phipps and Lanclos 2017; Brown et al. 2016), "digital learning leadership" (Educause 2022; Lieberman 2017), or "educational technology leadership" (Jameson 2013). However, appending these adjectives to "leadership" is not intended to denote a kind of leadership specific to the area of educational technology. Rather, it refers to exercising leadership with a focus on this particular aspect of higher education. Nevertheless, such a term may assist in making visible the key importance of leadership efforts in this area.

5.6.5 Navigating the terrain; guiding others

Green and Little (2013) have used the image of an isthmus to represent the positioning of academic developers between different institutional territories, located in the middle but strategically placed to move between these separate areas, interacting with the inhabitants (Figure 2.2). However, rather than envisioning educational technology leaders and those who have middle leadership responsibilities in other areas, such as assessment, feedback, accessibility, and academic integrity, as being located in a separate territory in the middle, perhaps it may be more useful to envisage them living in the educational landscape alongside academics, formal positional leaders, professional staff, other colleagues, and students. The terrain they traverse can be complex and varied, undulating, occasionally rugged and forbidding,

often uneven and tricky, sometimes smooth, continually changing and shifting, shaped by the prevailing climate, the seasons, and time.

Those who journey across this terrain, perhaps with different priorities and goals, follow pathways through many different areas, possibly choosing to stop or pause at various points. The destination may sometimes come into view but often remains unclear, difficult to bring into focus, perhaps remaining ever elusive. There are different journeys undertaken and various pathways followed. Reaching a particular area is not the end of the journey as there are always further pathways to follow. Somewhat like explorers or settlers in the past, what lies at the final destination, or even what the final destination is, may remain uncertain. And, as one route is travelled, this may lead to unplanned or unanticipated journeys along other routes, some well-travelled, others less so.

For example, many different routes can be taken on the journey towards educational technology integration, each dependent on the circumstances of those involved. The educational technology leaders in this study, may be seen as guides to colleagues as they travel the journey, pointing out pathways, pitfalls, crevices, rocks and hard places that they may meet along the way. As guides, they need to be a familiar with the routes but also be prepared for unanticipated obstacles or challenges, even when they haven't encountered them previously. Thus, they firstly seek to scout and navigate the different pathways themselves by studying and possibly traversing them. Equipped with knowledge of and experiences along these routes, their main focus is to guide colleagues along the paths best suited to their needs. Guided by their vision of what lies ahead and other key markers of their leadership, they accompany colleagues, walking with them, assisting them, reassuring them, and ultimately seeking to enable them to continue the journey themselves, possibly forging new routes.

5.7 Limitations of the study

Having discussed the study's findings, it may be appropriate at this point to also consider some of the limitations which it inevitably has.

Firstly, this study has been conducted in the context of a relatively small, but growing, population of educational technology leaders in Irish Higher Education. It provides a snapshot of the experiences of a proportion of this population at specific points in time and in particular circumstances. This picture could have been further refined and sharpened with an increased response rate. In addition, the interview phase has focused on the Institute of Technology(IoT)/Technological University (TU) sector where participants work in broadly similar contexts, generally attached to central units. A more complete picture of the sector as a whole could be formed by extending the study to also examine more deeply the stories of those working

in the traditional university sector and other higher education institutions. Such an examination would then allow for comparison between different types of institutions and settings within them.

In addition, it is important to acknowledge that the literature review did not examine the literature relating to aspects of educational technology leadership from a gendered perspective, a key area in educational leadership (Jarrett 2020; Shepherd 2017) and a lens that would have further strengthened the theoretical framework of the study. For this reason, this dimension of leadership was not used as a lens to guide the construction of the composite narratives of the interview participants.

Further, as an active participant throughout the research process, I am conscious that my own perspectives may influence my interpretation of the experiences of the participants. My position not only as a member of the Educational Technology community, but also in coming to the research from my own perspective and experiences as a male within that community, reflected by the gap in the consideration of gender-specific aspects in the review of literature, is likely to have affected my interpretation of the data. In particular, as a middle Educational Technology leader myself and, thus, a member of the group whose experiences are the focus of the study, I bring my own experiences and perspectives to the study. These, in turn, may have influenced the findings in relation to the research questions. and, ultimately, the recommendations from the study. That said, I have attempted to mitigate any potential bias on my part insofar as possible by following and recording systematic processes at each stage (Corbin Dwyer and Buckle 2009). However, it is inevitable that the interpretation of the data and the resulting emphases are affected to some extent, at least, by my own perspectives. Ultimately, though, it will be for the reader to judge the extent to which the study's findings are authentic, dependable, and transferable to other contexts.

Although increasingly used for presenting research findings in qualitative studies, the use of composite narratives remains a relatively new method. To date, there is a lack of guidelines for their construction and use (Johnston et al. 2021; Willis 2019), which, in turn, has led to differing approaches. However, confidence in the validity of such approaches can be enhanced by outlining a transparent method for constructing the composites. While some studies provide only a brief overview of their process (McElhinney and Kennedy 2021; Creese et al. 2021; Wertz et al. 2011), others offer more detailed accounts (Johnston et al. 2021; Willis 2019; Sonenshein 2010). In this study, I have adapted the approach used by Willis (2019) and followed this in the construction of the narratives. While I am conscious that this is just one possible approach in an emerging field that will be under increased scrutiny as it continues to develop, it is helpful also

to bear in mind the counsel by Pratt et al. (2022) that a one-size-fits all use of a specific template may have a limiting effect on the representation of the data.

A further issue that appears little discussed in studies using composite narratives is that of member checking each narrative with the participants whose experiences it seeks to capture. Following discussions with my supervisors on this issue, I returned to the literature to find that it offers minimal guidance on this aspect. With the agreement of my supervisors, I opted not to share the narratives with participants in advance of submission of the study for a number of reasons. Firstly, each narrative is made up of different facets of participants' experiences. Some of these are common to the members of each group but some apply to only one or two individuals. Thus, while participants might see much of their experiences reflected in the composite, not necessarily everything will resonate with them. Further, as reflected in the study's findings, the interview participants have many demands on their time. They have already given generously of their time to complete the survey, reflect on, and participate in the interview, and finally review the transcript of their interviews. Therefore, I was reluctant to ask them to review their own composite narrative as I felt it would be a major imposition to ask them to give time to this also. However, I have informed them of my intention to present the interview findings in this form, outlining how these are constructed and the reasons for not asking them to review their narratives.

On reflection, such a review of the composite narratives by participants, or perhaps a representative from each grouping, may have further enhanced the trustworthiness of the study. This is an element that may need to be further explored in the evolution of the composite narrative technique. In studies such as this, researchers might consider providing participants with the option to review the final composite should they wish, alerting them to this at the interview stage and clarifying the nature of such composites.

5.8 Chapter Summary

This chapter has drawn together the findings from the current study's two phases of data collection to determine what can be learned about leading change in educational technology from the experiences of those who lead from the middle of their institutions. Guided by the research and sub-research questions, the chapter has discussed the experiences articulated by the study's participants from a number of key perspectives.

These experiences provide insights into the challenges these leaders say they encounter in their efforts to promote the integration of educational technology, the approaches they find most effective in engaging colleagues, and the supports and enablers they believe would advance their efforts and increase the pace of change. In addition, these experiences indicate what has

influenced participants' understanding of leadership and how they perceive it in the context of their own roles.

While these leaders appear to view their roles more in terms of facilitating changes to practice rather than leadership, their leadership is evident in their approaches to this endeavour. Largely relying on influence and persuasion in their interactions with academic colleagues, positional leaders, and their own teams, their approaches have been categorised as having five key dimensions exemplified by a congruence which connects them and from which they emanate. These are the markers they use to navigate and guide others in negotiating the rocks and hard places of the learning and teaching terrain. They reflect a coherence, which aligns their actions with their purpose of improving practice, sees them take a people-centred approach, drawing on their credibility as they seek to enable colleagues to also take the lead in what they see as a shared endeavour to enhance students' learning experiences.

6 Conclusion

This final chapter reflects on the findings of the study, offers several recommendations, and considers the contribution the research makes to new knowledge. The thesis set out to address the dearth of literature that Jameson (2013) identified in educational technology leadership. Arnold and Sangrà (2018) confirm the continued lack of empirical literature in this area, suggesting also a need to refine the concept of "e-leadership" in higher education. The current study, in addressing this gap, has sought to answer the overarching research question:

> *What can be learned about educational technology leadership from the voices of those who work in "the middle" of implementing institutional change in Irish Higher Education?*

6.1 Key findings

In exploring participants' experiences, the study has examined the approaches they find effective, the challenges they face, and how their endeavours might be further supported and enabled. The key findings in relation to these are summarised in Figure 6.1.

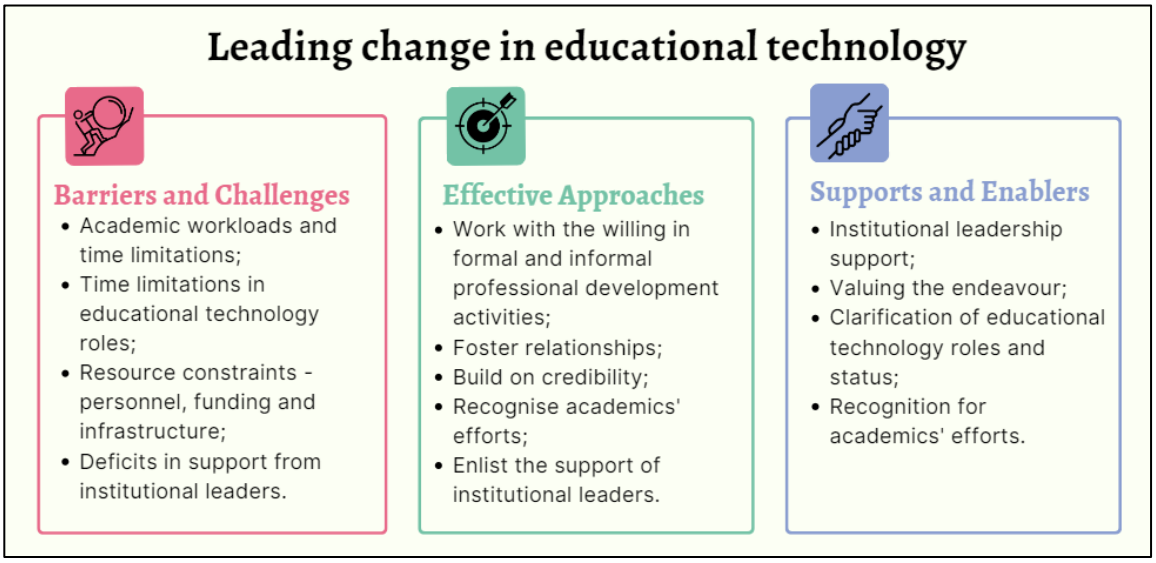

Figure 6.1 Barriers and challenges, effective approaches, and supports and enablers for educational technology integration

In addition, the study has explored how these leaders perceive and practise leadership, their motivation and guiding principles, thus extending our understanding of their work and leadership. The main findings from the sub-research questions on their perceptions of leadership and the influences on their leadership roles are summarised in Figure 6.2.

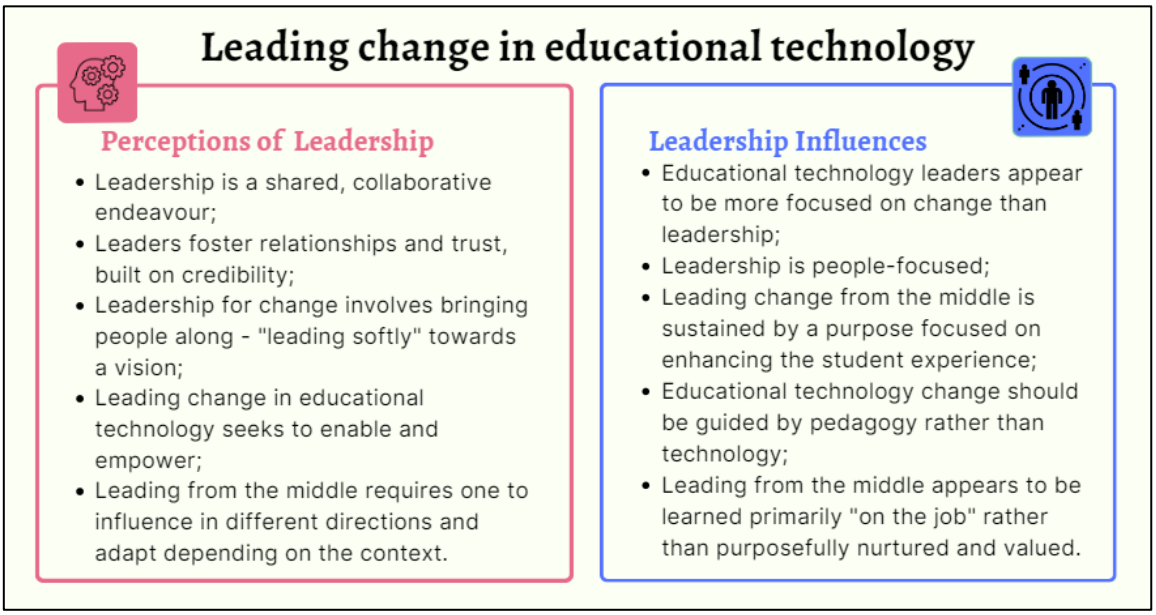

Figure 6.2 Perceptions of leadership and leadership influences.

The central research question for the study sought to find out what can be learned about leading educational technology change from the experiences of those who do so from "the middle" of their institutions. The key findings from the stories of these leaders are summarised in Figure 6.3.

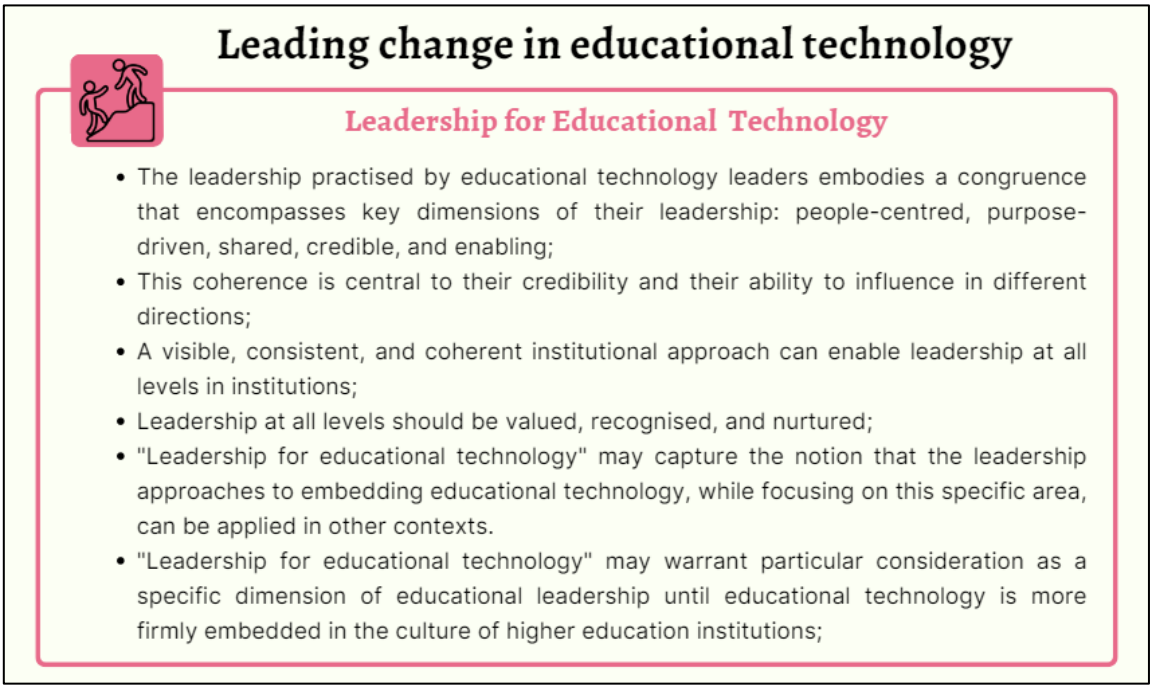

Figure 6.3 Leadership for Educational Technology

6.2 Overview

This study does not offer a formula or a template for leading educational technology change from the middle. Rather, it presents different facets of leading from this position and leaves it to leaders to choose those approaches that are most appropriate to their leadership roles in their

own contexts. Just as there is no formula for effective teaching, there is no simple formula for effective leading of learning and the learning of leading. While leaders may have common approaches, anchored in similar principles, ultimately, the way they lead reflects their unique identities and who they are as educators. In addition, their approaches depend on the institutional contexts and sectoral priorities in the "undulating and uneven landscape" (Sugrue et al. 2018, p.2346) of higher education. Thus, they wrap their leadership approaches around the institutional context in a manner that builds on their identities, personal qualities, and existing strengths in a way that fits the demands of an everchanging role.

The continued evolution of educational technology means that there are few areas of the learning and teaching endeavour which are not affected by developments in this field. It increasingly permeates areas such as assessment, feedback, academic integrity, inclusive teaching, and accessibility, areas which are also undergoing change. This evolution is also influencing our conception and traditional definition of delivery modes, particularly in the post-COVID environment (Johnson et al., 2022), and, hence, will also impact those in middle leadership roles such as academic developers, programme leaders, or third space professionals who seek to effect change in these areas. These often-overlooked leaders face similar issues and, therefore, can learn from the experiences of those in other, albeit apparently different, middle-out leadership domains such as educational technology. Similarly, these middle leaders need to be given opportunities to learn and develop their leadership in the face of a rapidly changing higher education landscape.

From an institutional perspective, there is a need for formal positional leaders to listen to the voices of leaders in these various areas, who, like the leaders in this study, seek to effect change from the middle of their institutions. While they appear to willingly take on the responsibility, this study's participants voice the need for a greater level of agency and visible support in their efforts. This support, demonstrating a congruent or coherent institutional approach, would clearly set out the value attached to the focus of their endeavours. When institutional leaders limit themselves to a bird's eye view of the academic landscape, the crevices, rocks and hard places in individual areas may become blurred and less obvious. However, by zooming in on the experiences of those leading in the middle, and giving greater voice and acknowledgement to their work, the study's findings suggest they may better appreciate the challenges involved in negotiating this complex space. This research suggests that, by providing their consistent commitment and support, institutional leaders can make the paths across this tricky terrain more navigable at a quicker pace.

This study highlights the leadership dimension of these middle roles, an element that the leaders themselves appear to rarely consider. For educational technology leaders in the middle, this is perhaps unsurprising as their roles are generally considered more in terms of support, facilitation, or change agency rather than specifically from a leadership perspective. The study suggests that this leadership dimension should be cultivated and valued, as should the leadership exercised at all levels in our institutions. To flourish, this leadership needs to be nurtured by acknowledging, recognising, and supporting it in visible ways. This recognition, focusing on the work of leading rather than the leaders themselves (Davis 2012), would not only make explicit the value attached to this work but would also enhance the leaders' sense of agency and support a culture of shared leadership. Such a culture would be further sustained by leadership conversations with a view to building "collective capacity" (Sharratt and Fullan 2022, p.20) through which leadership is enacted and celebrated at many levels.

However, Zhang (2022), in a major study led by the European Universities Association (EUA) examining leadership in teaching in European universities, notes that the enhancement of learning and teaching is generally not associated with this aspect of leadership. Moreover, apart from initiatives in some institutions, such leadership receives little attention in most European countries. Hence, there is no specific national-level training and, "no specific interest among staff or university leadership" (Zhang 2022, p.40). Therefore, this may be an opportune time to begin national and institutional conversations on leadership at all levels in different areas of learning and teaching to publicly recognise its key role in systemic change and establish it as a priority (NFETLHE 2021).

As the leadership exercised by the participants in this study has much in common with leadership in other areas of higher education, it may eventually be subsumed under the concept of educational leadership. However, although the experiences of COVID-19 may have accelerated digital transformation in higher education (Martin and Xie 2022), a process which will simultaneously have a disruptive effect, adept leadership for such change remains essential. Thus, given that most institutions have a distance to travel on this journey (Brown et al. 2020), this study suggests that there may be a need to specifically name this area of leadership until such time as technology is integral to the cultures of higher education institutions. Further, as advocated by Arnold and Sangrà (2018), there may also be need to clarify the terms used to describe such leadership. While terms such as "digital education leadership", "digital learning leadership" or "educational technology leadership" may eventually be more commonly used to capture the concept, this study suggests that a term such as "leadership *for* educational technology" may convey two key messages. Firstly, it has a dedicated leadership focus which seeks to "purposefully and strategically embed digital technologies into educational practices"

(European Commission 2020, p.3) and, secondly, it is not confined to educational technology specialists but can be exercised, albeit differently, at all levels within an institution.

6.3 Contribution to new knowledge

This thesis set out to address a gap in research into educational technology leadership in higher education. In doing so, it contributes to research on the work of those who lead educational technology change from their unique position in their institutions. This is the original contribution the thesis makes to the literature, although limited to a small sample in the Irish higher education context.

This section considers how the thesis has contributed to new knowledge. It identifies four main elements which stem from the central thesis of this research - that is, educational technology leaders in the middle of institutions play a crucial, but often neglected, role in the effective integration of new technology in learning and teaching.

1. Firstly, the thesis extends what is already known about the roles and activities of educational technology leaders in higher education by examining the experiences of such leaders in the Irish higher education context. It explores the challenges that they face, the approaches that they find most effective, and the supports that they require to promote the wider implementation of educational technology. It first provides an overview of these roles in Irish higher education followed by an in-depth examination of key roles in the then Institute of Technology (IoT) sector which, during the course of this study, has evolved into the emerging Technological University (TU) sector.

2. Importantly, where much of the previous work has focused on the roles and activities of educational technology specialists, this study extends this focus to include the leadership dimension of these roles and activities. This is an aspect of their work which appears to be frequently overlooked, even by the leaders themselves, and, hence, for which there appears to be a dearth of research. The study examines how these leaders, charged with the main responsibility for facilitating educational technology change, perceive leadership within their own contexts. It explores what they say influences them in their leadership efforts and how they practise this leadership in their context of seeking to influence colleagues, primarily academic and management, from their positions in the middle of their institutions without overt positional authority.

3. In drawing together the experiences of these leaders, the study identifies five key dimensions of their leadership from the middle: people-centred, purpose-driven, shared, credible, and enabling, all of which are embodied in a congruence or coherence which

connects them and from which they emanate (Figure 5.1). Further, it emphasises the need for institutional congruence in integrating technology, which represents a coherence at all levels that visibly manifests the value attached to endeavour by aligning strategy, policy, and actions.

4. Finally, the study also highlights parallels with non-positional leadership in other areas of higher education such as academic development, instructional design, programme leadership, and third space. It adds to knowledge of informal leadership emerging from the middle exercised by those at the centre of organisational change yet peripheral in terms of organisational structure or authority, who rely on primarily on influence and persuasion. In doing so, it highlights a lack of emphasis on the leadership aspects of such roles and argues for the nurturing and recognition of leadership in learning and teaching at all levels in higher education institutions.

The study provides insights into the experiences of educational technology leaders, illuminating their roles and work, which came to the fore during the study in response to the COVID-19 pandemic. These insights will assist current and future educational technology leaders in reflecting on their roles and in planning future activities. They demonstrate the importance of learning from peers and the value of fostering peer networks. Further, the study provides those in in formal leadership positions with a view of the multi-faceted roles of these middle leaders and indicates how institutional leaders might better support the educational technology endeavour.

The thesis also makes a valuable contribution to the literature at a methodological level. The overarching methodology for this study is Narrative Inquiry, which focuses on the storied nature of human experience, seeking to capture the experiences of participants through the stories they tell about the stories they live in and by. The methods used at each stage are mapped to Barkhuizen's (2019) core dimensions of Narrative Inquiry, a framework which provides a means of locating narrative inquiry studies within the broader Narrative Inquiry methodology (Figure 6.4). The study has extended the use of these core dimensions, which appear to have received limited attention in Narrative Inquiry literature to date. The benefit of this framework for those embarking on narrative inquiry studies is that it illustrates the range of approaches that be used and provides a means of situating such studies.

Within this context, the study's approach to the analysis of the qualitative data from the two phases is one that may be appropriate in similar studies. The study makes use of the commonly used method of thematic analysis to identify themes in the survey's qualitative data to provide an overview of the educational technology landscape. However, to ensure that the voices and

experiences of individual participants in the interview phase receive sufficient in-depth attention, it employs Interpretative Phenomenological Analysis (IPA) for the analysis of the interview data. This approach, while consistent with Barkhuizen's analysis of narrative dimension and grounded in phenomenology, appears to have been little used in narrative inquiry. Nevertheless, it appears appropriate for use in such studies as its idiographic orientation allows the researcher to focus first on identifying key themes from each participant's experiences before considering commonality and difference across cases.

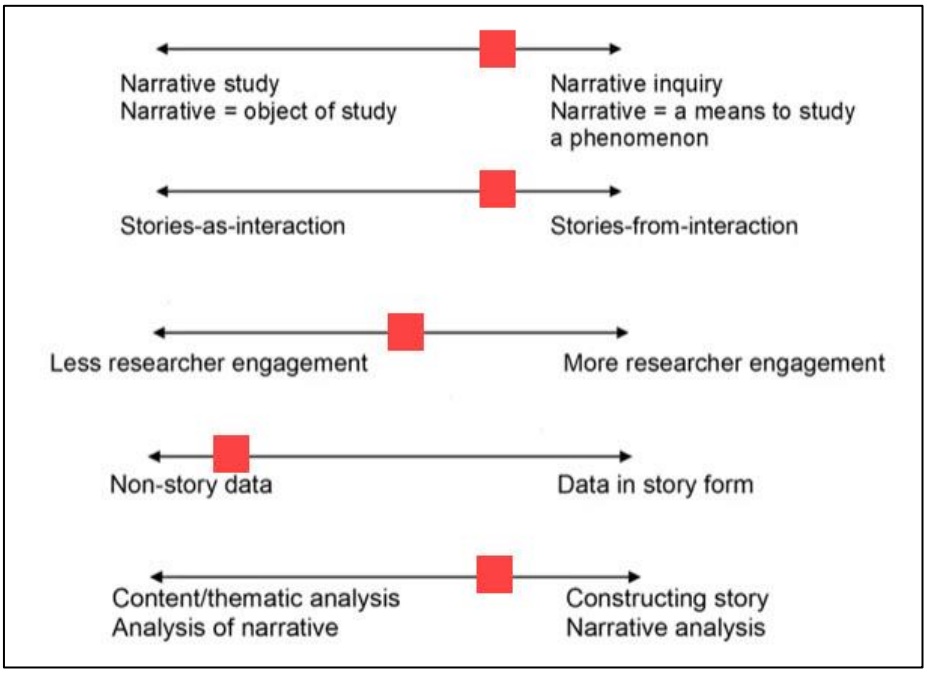

Figure 6.4 Positioning of current study on Barkhuizen's (2019) core dimensions of narrative inquiry

Further, the study extends the work in the relatively new technique of constructing composite narratives to present interview findings or participant narratives. (Johnston et al. 2021; Creese et al. 2021; Willis 2019; Wertz et al. 2011; Share et al. 2021). This approach provides a method of constructing stories that can remain true to the multi-faceted experiences and perspectives of participants in a way that is understandable and relatable for readers while at the same time preserving participants' anonymity.

Finally, the study is timely given the restructuring which the Institute of Technology (IoT) sector has undergone in recent years, with all but two institutes involved in mergers to create regional Technological Universities (TU). As these TU's evolve, the findings, particularly those relating to the crucial importance of management support and commitment to the strategic direction for educational technology, can inform discussions around further integration and transformation in these consortia. In addition, the findings in relation to the roles and activities of educational technology leaders should contribute to deliberations on educational technology structures and interfaces within these new universities. They may be particularly relevant for initiatives such as

the National Technological University Transformation for Resilience and Recovery (NTUTORR) project (THEA 2022), a major EU-funded digital transformation collaboration involving all of the TU's and remaining Institutes of Technology. This project has changing practice in learning, teaching, and assessment at its core and will involve leads and coordinators in each institution. As such, skilled leadership will be key to its success. Therefore, the findings in this study can provide direction in terms of approaches to address challenges but also, and crucially, in emphasising the importance of investing in and nurturing the learning leadership dimension at all levels within the institutions involved.

The study's contribution to knowledge is summarised in Table 6.1.

Aspect	Contribution to knowledge
Theory	• Illuminates the little-researched leadership dimension of the roles of middle-out educational technology specialists; • Identifies dimensions of leadership for educational technology; • Provides insights into the embedding of educational technology, emphasising the necessity for institutional congruence in the endeavour.
Empirical	• Extends previous work on challenges, approaches, and supports and enablers for effective implementation of educational technology across the sector; • Investigates initial findings in depth with a specific group of educational technology leaders with differing roles; • Provides data on the leadership perceptions, orientations, and influences of educational technology leaders.
Methodology	• Extends the usage of Barkhuizen's (2019) core dimensions of Narrative Inquiry; • Innovative use of Interpretative Phenomenological Analysis (IPA) in analysing interview data in Narrative Inquiry study; • Extends and adapts the use of emerging method of composite narratives in presenting participant experiences.
Context	• Addresses a gap in literature in relation to educational technology leadership, focusing on the leadership practices of middle-out leaders; • Explores the experiences of educational technology leaders in the context of Irish higher education;

	• Provides in-depth examination of experiences of educational technology leaders in the IoT/TU sector.

Table 6.1. Contribution to knowledge

6.4 Recommendations

Based on what this study has learned about leading educational technology change from the middle in Irish higher education, several recommendations arise for practice, policy, and further research. While some of the recommendations for practice and policy require attention at a sectoral level, others may be implemented locally in institutions.

6.4.1 Recommendations for Practice

Practice Recommendation 1: Learning to lead from the middle

Those in informal leadership positions, responsible for leading change from the middle of their institutions, should be supported in their efforts by professional development and guidance in the leadership aspect of their work. Rather than depending primarily on them learning to lead "on the job", through lessons from their experiences of leading change, professional development, delivered within networks or communities of practice, could offer evidence-based practices and provide opportunities to critically reflect with peers. Such activities, which are key to learning, may be particularly valuable in enabling and supporting leaders in areas such as educational technology and academic development. As it has professional development as a strategic priority, the National Forum may be the most appropriate body to lead and support an initiative such as this at national level, in partnership with professional networks such as the Irish Learning Technology Association (ILTA), the network of Irish educational technology professionals, and the Educational Developers in Ireland Network (EDIN).

Practice Recommendation 2: Leadership conversations

If institutions are to embrace or embody the notion of shared leadership that is practised at all levels, then there is a need for greater emphasis on the concept of leadership and its practice. To move beyond more traditional views of leadership, institutions should consider initiatives such as instigating "leadership conversations", which intentionally recognise, and even celebrate, the many ways leadership is enacted. Such a shared discourse to visibly bring leadership at all levels to the fore in the institutional consciousness may be a starting point in building leadership awareness and capacity across higher education communities. While such an initiative should be driven at a national level, it is also very much within the remit of institutions to implement this at a local level, perhaps coordinated through units for learning and teaching or educational technology units but, importantly, visibly encouraged and supported by institutional leadership. This emphasis on leadership in Recommendations 1 and 2 could be

further strengthened by ILTA and EDIN through the inclusion of leadership as an overarching theme, or at least a strand, in national conferences and seminars.

Practice Recommendation 3: Learning lessons and maintaining momentum

The essential use of educational technology in response to the COVID-19 pandemic has accelerated the exposure of academics and students to such technology for learning and teaching. Although not the primary focus of this study, the findings indicate that higher education institutions responded in a concerted and coherent way to this unprecedented emergency situation. Now, as institutions return to pre-pandemic delivery modes, it is crucial to reflect at all levels on learning and teaching experiences during this period. As they evaluate these experiences, there is now an opportunity for institutional leadership to capitalise on momentum in implementing technology, which has been built during this period, by continuing to prioritise and enable these efforts. This is essential if the pendulum that has been set in motion by increased embedding of technology is not to return to its previous equilibrium position. Thus, before the moment is lost, it may be an opportune time to reflect on experiences at a national level, collating insights shared through different fora and networks, with a view to guiding strategic direction. This reflection and evaluation can also be done at institutional level through institutional or programme reviews and, importantly, shared across institutions and more widely.

6.4.2 Recommendations for Policy

Policy Recommendation 1: Recognition for academics

To reflect the primary focus of the middle leaders in this study, which is on changing practice rather than on the leaders themselves, this recommendation relates to the academics with whom they work. The leaders in this study, whose efforts crucially depend on engagement by academic colleagues, have identified academics' heavy workloads as a persistent major challenge. At the core of this challenge is the need to recognise and attach value to teaching for academic career progression, identified by the EUA's LOTUS project (Leadership and Organisation for Teaching and Learning at European Universities) as a "major structural obstacle . . . a core issue for policy makers and institutional leadership" (Hovhannisyan and Zhang 2022, p.28). Although difficult to solve, it is essential that the academic workloads and priorities for academics who wish to innovate in their practice be examined throughout the sector. In relation to educational technology, the efforts of academics who champion its use should be recognised and valued, thus facilitating them in taking a leadership role that complements and supports those in educational technology roles. While remission of time is a potential solution to this issue, this may be constrained by institutional structures and sectoral practices. In the Irish

context, this could be addressed at institutional level by taking advantage of increased funding opportunities, such as those provided by the European Union and the Higher Education Authority (HEA) through the Technological Higher Education Association (THEA) and the National Forum, to buy out time to participate in innovative projects.

Policy Recommendation 2: Educational technology role definition

While many educational technology roles may have grown organically in institutions, the ever-expanding range of technologies, their increasing use, and their potentially transformative and disruptive effects on traditional learning and teaching practices, suggests a need to clearly re-define these roles. It is important to clarify the scope of such roles and how they interface with colleagues at all levels, not alone for the educational technology specialists themselves but also for the academics and formal institutional leaders with whom they engage. In the Irish context, the Higher Education Authority, through the National Forum, which has identified the digital aspect of learning and teaching as one of its strategic priorities (NFETLHE n.d.), may be best placed to examine this area in conjunction with ILTA. However, as this issue is not confined to Irish higher education, efforts to resolve it could be extended to similar European networks and to discussions on the implementation of the *Digital Education Action Plan* (European Commission 2020) and similar strategies, which will have the work of educational technology specialists at their core.

Policy Recommendation 3: Educational technology role status

If, as recommended in recent EU reports, there is increased resourcing to harness the potential of technology in terms of funding, personnel, and infrastructure, then the sector also needs to develop appropriate employment contracts and related structures for educational technologists and those who work in the increasingly overlapping roles of academic development and instructional design. In particular, consideration must be given to the status of these roles to address apparent inconsistencies in working conditions, where some roles have academic status while others are administrative, sometimes within the same institution. Situations where the duties may appear similar, but status and progression opportunities differ, may give rise to confusion if not friction. Ideally, such clarification should be addressed at a sectoral level. However, in its absence, it may be necessary for senior institutional leaders, working with HR departments, at least to clarify the difference between academic and administrative roles in these areas by defining the duties that distinguish each.

Policy Recommendation 4: Developing leadership for learning and teaching

The active support and commitment of those in formal leadership positions is crucial to the endeavour of integrating educational technology into practice. However, this is but one of many

competing demands on their attention. Therefore, they may benefit from specifically designed and focused professional development to guide them in supporting and leading learning and teaching initiatives in this area. Such professional development would concentrate primarily on the leadership approaches and challenges in educational technology rather than on the technical or application side. While concerned primarily with leading change, such an initiative would seek to assist leaders in developing a common understanding and appreciation of the key pedagogical issues in the area. Similar professional development would also be relevant for other areas of learning and teaching. So, while the leadership approaches may be generic, specific understanding of particular areas can equip those in formal positions to lead more effectively. An initiative such as this, building on current work by Advance HE and Jisc in the UK, Educause and the Online Learning Consortium in the US and coordinated by the National Forum and professional networks, could be piloted initially on a small scale with a view to extending it nationally.

A focus on such leadership for learning and teaching could be given added impetus if it were identified as a strategic priority or theme in the allocation of funding such as the Strategic Alignment of Teaching and Learning Enhancement (SATLE) funding administered by the National Forum in partnership with the Higher Education Authority. Such funding allocations can act as key incentives or accountability events for initiatives.

Policy Recommendation 5: Positioning leadership for educational technology

This research suggests that there remains much to be done in integrating technology into academic practice. Therefore, although leadership in this area may eventually be considered just another facet of educational leadership, until such time as educational technology is woven into the fabric of higher education, it may be necessary to identify a term and clear domain of leadership development that gives visibility to its strategic importance.

This study has proposed "leadership *for* educational technology" as a more enduring term that denotes the importance of leadership efforts in this area while positioning the conception of leadership and leadership development in the more general literature. While other terms such as "digital education leadership", "digital learning leadership" or "educational technology leadership" appear in both practice and common use, the key point is that our nomenclature refers to the practice of leadership in this area rather than a type of leadership that is particular to educational technology. Further, the practice of "leadership *for* educational technology" at the institutional level will depend on the context and where it is positioned in the institution's vision, mission, and organisational culture.

6.4.3 Recommendations for further research

Research Recommendation 1: Institutional leaders

While this study identified the key importance of educational technology leadership at all levels, the findings emphasise, in particular, the need for visible commitment and support from colleagues in management positions through clear alignment between vision, strategic goals, policies and actions. Therefore, this research could be extended by examining leadership for educational technology from the perspective of those at different levels of management within higher education and at the interface with those working in the middle. Guided by questions of a similar nature to those in this study, such research would assist in forming a more complete and connected picture of leadership for educational technology, providing an opportunity to compare the perspectives of the different groups involved.

Research Recommendation 2: Other sectoral perspectives

The second phase of this study focused on the experiences of leaders from the institutions in the then primarily Institute of Technology sector from which the Technological Universities were being established. Extending this, further research could build on the results of the Phase 1 survey to examine more closely the experiences of leaders in other areas of higher education such as the universities, private colleges, and colleges of education. Such a comparative study would also add to the picture of the landscape of leading for educational technology change in Irish higher education.

Research Recommendation 3: International experiences

This research could also be extended to explore the experiences of middle educational technology leaders in other countries. Similar studies of leading educational technology change in international contexts would provide valuable opportunities for comparison and learning from the experiences of those in other jurisdictions, as suggested by the expert panel in feedback on the study at the European Distance and E-Learning Network (EDEN) PhD Symposium 2018.

Research Recommendation 4: Middle leaders in other areas

As this study has found, there are many parallels between the roles and experiences of those working educational technology and those working in areas such as academic development and instructional design, to the extent that we may be moving towards “hybrid practitioners”, with a blurring of boundaries between these areas (Cunningham et al. 2021). Therefore, it may be of interest to explore the experiences of middle leaders working in these areas from the perspective of the leadership dimensions identified in this study. Similarly, as many elements of the credibility framework for educational developers (Little and Green 2022) appear to be reflected in aspects of the experiences of the leaders in the current study, this framework could be

examined from the viewpoint of such leaders to determine more fully the extent to which these dimensions resonate with their experiences.

The study's recommendations for practice, policy, and further research are summarised in Table 6.2.

Recommendations		
Practice	**1. Learning to lead from the middle**	Provide professional development opportunities, formal and informal, delivered within networks or communities of practice, offering evidence-based practices and opportunities to critically reflect with peers.
	2. Leadership conversations	Initiate "leadership conversations" to intentionally recognise and celebrate the many ways leadership is enacted at all levels, thus building leadership awareness and capacity.
	3. Learning lessons and maintaining momentum	Reflect on and evaluate the experiences of technology during the COVID-19 pandemic to capitalise on momentum in implementing technology and guide future direction.
Policy	**1. Recognition for academics**	Examine academic workloads and priorities for academics so that those who champion innovation in areas such as educational technology in their practice can be recognised for their efforts.
	2. Educational technology role definition	Clarify the scope of educational technology roles, which continue to extend across so many areas of learning and teaching, for both the educational technology specialists themselves and the colleagues with whom they engage.
	3. Educational technology role status	Examine employment contracts, status, and progression opportunities for educational technologists and those who work in the increasingly overlapping roles of academic development and instructional design.

	4. Developing leadership for learning and teaching	Support institutional leaders in leading learning and teaching through specifically designed and focused professional development, which concentrates on the leadership approaches and challenges in educational technology and other areas of learning and teaching.
	5. Positioning leadership for educational technology	Identify nomenclature and clear domain of leadership development that gives visibility to the strategic importance of leadership for educational technology, emphasising that the terms refer to the practice of leadership in this area rather than a type of leadership that is particular to educational technology.
Research	**1. Institutional leaders**	Examine leadership for educational technology from the perspective of those at different levels of management within higher education and at the interface with those working in the middle.
	2. Sectoral perspectives	Comparative qualitative study of the experiences of leaders in other areas of Irish higher education such as the universities, private colleges, and colleges of education.
	3. International experiences	Comparative exploration of the experiences of middle educational technology leaders in other countries.
	4. Middle leaders in other areas	Examine the leadership experiences of middle leaders working in areas such as academic development and instructional design in Irish higher education.

Table 6.2 Recommendations for practice, policy, and research

6.5 Alternative approaches

In considering the conclusions of the current study, it is important to acknowledge that alternative methodological approaches might have been used in undertaking a Narrative Inquiry study such as this. It is clear from Barkhuizen's (2019) dimensions (Figure 3.2) that such studies can take different forms, while still falling under the Narrative Inquiry umbrella. Thus, the current study could have adopted alternative approaches, each reflecting its position on the continua representing these dimensions. For example, one might shift the focus more to examining the interaction in the interviews and examine how participants' stories are constructed, moving towards the stories-as-interaction side of Dimension 2. Also, in terms of researcher engagement

with participants, one might move from the survey and interviews to a greater level of engagement with a smaller number of participants, perhaps by conducting a number of interviews with each participant or spending time with them as they carry out their roles in their institutions. Further, rather than the semi-structured approach taken in the interviews, one might reduce the number of focused questions with a view to encouraging participants to simply tell their stories. Finally, in the analysis and presentation, one could present the study findings in more storied or narrative format using different narrative approaches.

Looking beyond Narrative Inquiry, yet remaining within the philosophical setting of phenomenology, the entire study could have been framed using Interpretative Phenomenological Analysis (IPA) as the methodology. As we have seen, IPA focuses on individuals' perceptions of their experiences, working with small and relatively homogenous samples of participants, thus making it suitable for working with participants such as those in the current study or with subgroups within these.

Alternatively, a case study approach examining the experiences of the members of Irish higher education educational technology community may also have been appropriate for answering the research questions (Cohen et al. 2011). Such a case-oriented approach (Sandelowski 1996) might have focused on individual cases within the broader single case under investigation.

6.6 Final thoughts

Reflecting as I near the end of this part of the research journey, I am reminded of Clandinin's (2013) assertion that no one leaves a narrative inquiry unchanged. It is probably fair to say that at the outset of this journey I was less than convinced about the leadership aspect of my own role. However, in being privileged to hear and explore the stories that my peers in the educational technology community have shared, I have come to see my role as very clearly having a leadership dimension as do the roles of my peers. My approach to my own role has been invigorated by their stories, reassured that many of their experiences resonate with my own. Further, I have realised the importance of acknowledging and then intentionally nurturing the leadership aspect of our roles and the many different roles in which leadership is practised in our institutions. As my own story continues to unfold, the stories of the leaders in this study have become part of it, re-shaping it. I hope that their stories can encourage and inspire others in similar positions who lead change from the middle of their institutions.

Through their stories, we have seen how these educational technology leaders go about exercising leadership from the perspective of the approaches they find effective, the challenges they encounter and the supports that they believe would enhance their efforts. They recognise that the systemic cultural shift required to integrate technology in practice involves leadership

at many different levels if it is to progress more quickly than hitherto. In particular, they envisage it as requiring a concerted and coherent institutional approach, supported by those in formal leadership positions and which reflects the value attached to the endeavour.

A key lesson is that these leaders, in negotiating the frequently rocky terrain of change in their institutions, are guided by their primary purpose of enabling colleagues to change practice and ultimately enhance students' learning experiences. As they bring colleagues along on this journey, a distinguishing feature of the participants in this study is that they do not seek to be at the forefront but rather are content to work in the background. In seeking to empower colleagues, their leadership from the middle is like the spring rain, essential for growth but frequently unheralded. It falls softly on the landscape, replenishing the crevices, awakening seeds hidden among the rocks and hard places, nourishing small shoots that, with continued sustenance, can blossom and flourish.

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Appendix A Study Timeline

Date	Activity
October 2018	Presentation on planned study – EDEN PhD symposium
November 2018	Ethical Approval
January 2019	Survey pilot
February 2019	Survey invitations circulated via email
March 2019	Survey reminder email
April 2019	Survey closes
May 2019	Presentation of preliminary findings – EdTech Conference 2019
November 2019	Presentation of survey findings – World Conference of Online Learning
June 2020	Pilot interview
June 2020	First set of six interviews
October 2020	Presentation of study methodology and findings – EDEN PhD Symposium
March 2021	Final four interviews
May 2022	Presentation on study methodology – DCU Institute of Education Postgraduate Research Unconference
May 2022	Presentation – EdTech Conference 2022

Appendix B Conference presentations

Gallagher, G., Brown, M. and Donlon E. (2022). *Central or peripheral? Experiences of Leading Educational Technology from the "Middle"*. Presented to the EdTech Annual Conference, Cork, 26-27 May.

Gallagher, G., Brown, M. and Donlon E. (2022). *Am I Missing Something? Navigating the rocks and hard places of a Narrative Inquiry*. Presented to the DCU Institute of Education Postgraduate Research Unconference, Dublin, 11 May.

Gallagher, G. Brown, M. and Donlon E. (2020*). Between the rocks and hard places: A Narrative Inquiry exploring the experiences of Educational Technology Leaders - Update*. EDEN PhD Symposium: EDEN 2020 Online Research Workshop, October 21-23.

Gallagher, G., Brown, M. and Donlon, E. (2019). Caught in the Middle: The experiences of Educational Technology Leaders in Irish Higher Education. Presented at *the 28th ICDE World Conference on Online Learning*, Dublin, November 3 – 7.

Gallagher, G., Brown, M. and Donlon, E. (2019). Between the rocks and hard places: A Narrative Inquiry Exploring the Experiences of Educational Technology Leaders. Presented to *EdTech Annual Conference*, 2019, Dundalk, May 30 – 31.

Gallagher, G. Brown, M. and Donlon E. (2018). *Between the rocks and hard places: A Narrative Inquiry exploring the experiences of Educational Technology Leaders*. EDEN PhD Symposium: EDEN PhD Symposium: EDEN 2018 Research Workshop, Barcelona, 24-26 October.

Appendix C Ethical Approval

Ollscoil Chathair Bhaile Átha Cliath
Dublin City University

DCU

Mr Gerard Gallagher
Institute of Education

2nd November 2018

REC Reference: **DCUREC/2018/198**

Proposal Title **Between the rocks and hard places: A Narrative Inquiry exploring the experiences of Educational Technology Leaders**

Applicant(s): **Mr Gerard Gallagher, Prof Mark Brown & Dr Enda Donlon**

Dear Gerard,

Further to expedited review, the DCU Research Ethics Committee approves this research proposal.

Materials used to recruit participants should note 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 amendment submission should be made to the REC.

Yours sincerely,

Donal O' Gorman

Dr Dónal O'Gorman
Chairperson
DCU Research Ethics Committee

DCU
Research & Innovation

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Appendix D Recruitment email for online survey

Subject: Invitation to participate in study on the experiences of Educational Technology Leaders in Irish HE

Dear xxx,

My name is Gerry Gallagher and I work as e-Learning Development Coordinator in Dundalk Institute of Technology. I am currently undertaking a doctoral study at Dublin City University which aims to explore the experiences of educational technology leaders in Irish Higher education.

The study seeks to examine the roles and experiences of those in formal and informal leadership roles in educational technology. By doing so, it hopes to provide current and future leaders with insights into their own roles and those of their peers as they engage in the complex processes of integrating technology into practice.

The first phase of the study involves a survey of staff in Irish Higher Education who have a leadership role in educational technology in their institution and/or have demonstrated leadership through the integration of educational technology in their practice.

I would like to invite you to participate in this study by completing the online survey which is available at the following link:

https://www.surveymonkey.com/r/Experiences_of_Educational_Technology_Leaders

The survey should take approximately 20 minutes to complete. IP address tracking has been disabled to ensure that the survey is anonymous. Please be assured that no individual or institution will be identified in the study. If you would like to review the survey in advance of participating, a PDF version of the survey is available at the following link:

https://bit.ly/2TUtGPK

Please find attached a plain language statement outlining the details of this study, which has been approved by the Research Ethics Committee at Dublin City University.

Thanking you in advance for considering this request.

Kind regards,

Gerry Gallagher

E-Learning Development Coordinator,

Dundalk Institute of Technology

Email: gerry.gallagher@dkit.ie or gerard.gallagher8@mail.dcu.ie

Appendix E Plain Language Statement

Study Title

Between the rocks and hard places:

A Narrative Inquiry exploring the experiences of Educational Technology Leaders

Researcher Name: **Gerry Gallagher**

Researcher email: gerard.gallagher8@mail.dcu.ie

Research Supervisor Name: Professor Mark Brown, Dr. Enda Donlon

You are being invited to take part in a research study to be carried out at Dublin City University.

Before you decide whether or not you wish to take part, you should read the information provided below carefully. Take time to ask questions – do not feel rushed or under pressure to make a quick decision.

You should clearly understand the risks and benefits of taking part in this study so that you can make a decision that is right for you. This process is known as 'Informed Consent'.

Please be assured that your participation in this study is entirely voluntary and that you can change your mind about taking part in the study any time you wish. Even if the study has started, you can still withdraw from the study by contacting the researcher. You do not have to provide a reason.

Why is this study being conducted?

This is a doctoral study which seeks to explore the leadership role and experiences of educational technology leaders in building cultures of change to more fully integrate educational technology in Irish higher education.

Who is organising and funding this study?

This study is being carried out by Gerry Gallagher as part of a doctoral programme at Dublin City University. There is no funding associated with the study.

Why am I being asked to take part?

You have been invited to take part because you play a leadership role in the integration of educational technology in your institution.

How will the study be carried out?

The first phase of the study will consist of an anonymous online survey. After this, volunteers will be sought to participate in follow-up interviews of approximately one hour's duration with the researcher.

What will happen to me if I agree to take part?

If you agree to participate you will be invited to complete the anonymous online survey.

At a later stage, you may also be invited to participate in an interview in which you will have an opportunity to discuss your experiences further.

What are the benefits?

There are no benefits to you from taking part. However, participating will provide you with an opportunity to share your experiences in relation to the integration of educational technology.

What are the risks?

There no risks involved in participating in this study.

Will it cost me anything to take part?

It will not cost you anything to take part.

Is the study confidential?

All data including the surveys and audio recordings of the interviews will be stored securely in password-protected files on a password protected PC. Only the researcher and the project supervisors will have access this data.

The surveys will be anonymous. All interview data will be anonymised so that it will not be possible to identify either participants or their institutions.

All data will be deleted when the final doctoral thesis is submitted.

Will any of my personal data be collected and processed?

No personal data will be collected in the anonymous online survey. If you wish to participate in the second phase of the study, you will be asked to provide your name and institutional email address using a separate online form which will not be linked to your responses on the survey, thus maintaining the anonymity of the survey. Your name and email address will be the only personal data held and this is solely for the purpose of contacting you in relation to participating in the second phase of the study. This data will be held by the principal investigator (contact details below) and will be stored in a password-protected workbook on a password-protected PC. It will be deleted on submission of the final doctoral thesis.

Audio recordings and the transcripts of these will be used solely for the purposes of this study.

If you choose to withdraw from the study at any point, all data relating to you will be deleted.

If you have any concerns in relation to this data and wish to contact an independent person, please contact the DCU Data Protection Officer, Mr. Martin Ward (data.protection@dcu.ie Ph. 7005118/7008257).

Where can I get further information?

If you have any further questions about the study or if you wish to withdraw from the study,

please contact:

Name: **Gerry Gallagher (Principal Investigator)**

Phone No: **087-2075196**

E-mail: **gerard.gallagher8@mail.dcu.ie or gerry.gallagher@dkit.ie**

If you have concerns about this study and wish to contact an independent person,

please contact:

The Secretary, Dublin City University Research Ethics Committee, c/o Research and Innovation Support, Dublin City University, Dublin 9.

Tel 01-7008000, e-mail: rec@dcu.ie

Appendix F Informed Consent Form

Research Study title: Between the rocks and hard places: A Narrative Inquiry exploring the experiences of Educational Technology Leaders

School: School of STEM Education, Innovation and Global Studies, DCU Institute of Education

Researcher: Gerry Gallagher

Supervisors: Professor Mark Brown and Dr. Enda Donlon

Purpose

This study seeks to explore the leadership roles and experiences of educational technology leaders in building cultures of change in to more fully integrate educational technology in Irish higher education.

The study will consist two phases. The first phase consists of an anonymous online survey. After this, volunteers will be sought to participate in follow-up audio-recorded one-to-one interviews of approximately one hour's duration with the researcher.

Please complete the following by ticking Yes or No for each statement.

I have read the Plain Language statement (or had it read to me).	**Yes** ☐	**No** ☐
I understand the information provided about this research study.	**Yes** ☐	**No** ☐
The information has been fully explained to me and I have been able to discuss this study and ask questions, all of which have been answered to my satisfaction.	**Yes** ☐	**No** ☐
I have received satisfactory answers to all my questions.	**Yes** ☐	**No** ☐
I am aware that my interview will be audio-recorded.	**Yes** ☐	**No** ☐
I understand that I do not have to take part in this study and that I can withdraw at any time. I understand that I do not have to give a reason for withdrawing.	**Yes** ☐	**No** ☐
I have been assured that information about me will be kept private and confidential.	**Yes** ☐	**No** ☐
I have been assured that all data, including the surveys and audio recordings of interviews, will be stored securely on a password protected PC. All interview data will be anonymised.	**Yes** ☐	**No** ☐
I have been given a copy of the Plain Language Statement and this completed consent form for my records.	**Yes** ☐	**No** ☐

I have read and understood the information in this form. My questions and concerns have been answered by the researcher(s), and I have a copy of this consent form. Therefore, I consent to take part in this research project.

Participant Signature: _____

Participant Name (Block Capitals): _____

Witness: _____

Date: _____

Appendix G Survey reminder email

Subject: Survey on your experiences as an Educational Technology Leader in Irish HE – Invitation to participate

Dear colleagues,

Thank you very much to all who have participated in the survey on your experiences as educational technology leaders, which I am undertaking as part of a doctoral study in Dublin City University. Your views and insights are very much appreciated and will be most valuable in developing a picture of the roles and experiences of those in formal and informal educational technology leadership roles in Irish higher education.

If you have not yet had an opportunity to participate in the survey but would like to do so, it is still available at the following link:

https://www.surveymonkey.com/r/Experiences_of_Educational_Technology_Leaders

The survey has typically taken participants 15 to 20 minutes to complete. IP address tracking has been disabled to ensure that the survey is anonymous. Please be assured that no individual or institution will be identified in the study. If you would like to review the survey in advance of participating, a PDF version is available at the following link:

https://bit.ly/2TUtGPK

A plain language statement outlining the details of the study, which has been approved by the Research Ethics Committee at Dublin City University, is available at the following link:

https://bit.ly/2Ue480o

Thanking you in advance for considering this request.

Kind regards,

Gerry Gallagher

E-Learning Development Coordinator,
Dundalk Institute of Technology

Appendix H PDF version of Online Survey

Exploring the Experiences of Educational Technology Leaders in Irish Higher Education

Introduction

I am currently undertaking a doctoral study at Dublin City University which aims to explore the experiences of educational technology leaders in Irish Higher Education.

The study seeks to examine the roles and experiences of those in formal and informal leadership roles in educational technology. By doing so, it hopes to provide current and future leaders with insights into their own roles and those of their peers as they engage in the complex processes of integrating technology into practice.

You have been invited to participate in this survey because you have a leadership role in educational technology role in your institution and/or have demonstrated leadership through the integration of educational technology in your practice.

I would very much appreciate if you could complete the following survey which should take approximately 20 minutes. IP address tracking has been disabled to ensure that the survey is anonymous. Please be assured that no individual or institution will be identified in the study.

The survey is divided into the following sections:

1. About you
2. Your role
3. Areas of focus in your role
4. Effectiveness of Professional Development activities
5. Challenges in integrating educational technology
6. Educational technology in your institution

Please note that the term "educational technology" is used throughout the study and should be interpreted in the wider sense of including educational technology tools which can be used for a range of activities from face-to-face to fully online delivery.

If you have any questions in relation to the survey, please contact me at

Email: gerry.gallagher@dkit.ie or gerard.gallagher8@mail.dcu.ie

Phone: 087 2075196

Thanking you in advance for your assistance with this study.

Gerry Gallagher

1

E-Learning Development Coordinator, Dundalk Institute of Technology/ PhD student, Dublin City University

Supervisors' Details
Professor Mark Brown
National Institute for Digital Learning
Dublin City University
Email: mark.brown@dcu.ie

Dr. Enda Donlon
Institute of Education
Dublin City University
Email: enda.donlon@dcu.ie

Exploring the Experiences of Educational Technology Leaders in Irish Higher Education

1. If you would like to participate in this study, please choose Agree below.

By choosing Agree you indicate that

· You have read the participant information

· You voluntarily agree to participate

· You are 18 years of age or older

- ◯ Agree - I wish to participate in this survey
- ◯ Disagree - I do **not** wish to participate in this survey

3

Exploring the Experiences of Educational Technology Leaders in Irish Higher Education

About you

2. Gender

- ◯ Male
- ◯ Female
- ◯ Other

3. Age (years)

- ◯ Under 30
- ◯ 30 - 45
- ◯ 46 - 60
- ◯ Over 60

4. Institution type

- ◯ University
- ◯ Institute of Technology
- ◯ College of Education
- ◯ Private College

5. Which one of the following best describes your role in relation to educational technology in your institution?

- ○ I am the head of a team which has responsibility for integrating educational technology in my institution.
- ○ I am a learning designer/technologist and a member of a team which is responsible for providing pedagogic and technical support in technology-related activities in my institution.
- ○ I am head of a central learning and teaching team and have an interest in the use of educational technology.
- ○ I am responsible for co-ordinating the use of educational technology in my institution and am a member of a central learning and teaching team.
- ○ I am a learning designer/technologist and am responsible for co-ordinating the use of educational technology in my institution.
- ○ I am a Learning Developer advising colleagues in relation to teaching and learning but I have a particular interest in educational technology
- ○ I am a faculty member and, in addition to my teaching duties, have been assigned a role as an educational technology champion in my department or school.
- ○ I am a faculty member with a particular interest in integrating educational technology in my practice.
- ○ Other (please specify)

6. How many staff report directly to you?

- ○ None
- ○ 1 – 2
- ○ 3 – 5
- ○ 6 – 10
- ○ 11 – 20
- ○ More than 20

7. How many years have you held your current role?

- ○ Under 1 year
- ○ 1 – 3 years
- ○ 4 – 6 years
- ○ 7 – 10 years
- ○ 10 – 15 years
- ○ More than 15 years

8. What did you do prior to your current role and for how long?

9. Which one of the following best describes your approach to your role in relation to educational technology?

- I see it very much as my responsibility to ensure that I am an expert in the area of educational technology. I share my knowledge with colleagues and students through provision of training, advice and resources. It is essential that my colleagues have confidence in my expertise if they are to become competent in the use of educational technology and in this way increase the integration of educational technology tools in my institution.
- I see it as essential that teachers and student engage with educational technology to improve learning, as mandated by national and institutional policies and strategies. Given the range of tools available, it is my responsibility to identify the most appropriate tools and then organise professional development activities to facilitate their integration. In addition to this, I monitor the use of technology tools in my institution, celebrating colleagues who adopt them and targeting those who are resistant to their use.
- I see the integration of educational technology in my institution as a collaborative effort that I participate in or perhaps coordinate. I see this integration as a shared responsibility that can best be achieved by tapping into the many different areas of expertise of my colleagues. I actively encourage my colleagues to take on this responsibility and support them in doing so.
- I believe in the importance of educational technology and see myself primarily as an influencer. Through building relationships with colleagues (and students) I hope to motivate and encourage them to use educational technology. I try to persuade others of the value of educational technology, modelling its use and sharing my practice and, in this way, bring about changes in practice. In doing this, I am conscious that it is important that my colleagues choose the technology tools that will work for them and their students.
- My role in primarily as a teacher who uses educational technology in my practice because I believe it helps my students learn. I am enthusiastic about educational technology. I am happy to talk to my colleagues about it, share my experiences and give advice and help if needed.
- Other (please specify)

10. Is there anything else that you would like to add to the description you have selected above?

6

Exploring the Experiences of Educational Technology Leaders in Irish Higher Education

Areas of focus in your role

This section asks you to consider the importance of particular activities in the implementation of your role.

11. How important is each of the following areas or activities is in the implementation of yourrole in relation to educational technology?
Please indicate the level of importance or choose**Not Applicable** if the activity is not part of your role.

	Not at all important	Somewhat important	Important	Very important	Most important	Not Applicable
Delivering educational technology workshops for students	○	○	○	○	○	○
Delivering educational technology workshops for teachers	○	○	○	○	○	○
Maintaining and developing my institution's Virtual Learning Environment	○	○	○	○	○	○
Managing colleagues on my team	○	○	○	○	○	○
Contributing to programme development	○	○	○	○	○	○
Developing Blended/online modules	○	○	○	○	○	○
Supporting the delivery of Blended/Online modules or programmes	○	○	○	○	○	○
Testing or trialling educational technology tools	○	○	○	○	○	○
Engaging with educational technology vendors	○	○	○	○	○	○
Providing one-to-one support for teachers	○	○	○	○	○	○
Organising seminars/showcase events	○	○	○	○	○	○
Networking with colleagues in other institutions	○	○	○	○	○	○

	Not at all important	Somewhat important	Important	Very important	Most important	Not Applicable
Sourcing funding opportunities for educational technology initiatives	○	○	○	○	○	○
Contributing to policy development in my institution	○	○	○	○	○	○
Gathering data and preparing reports on the use of educational technology	○	○	○	○	○	○
Integrating educational technology into my own teaching practice	○	○	○	○	○	○
Engaging in research in educational technology	○	○	○	○	○	○

12. Are there any other activities that are an important part of your role?

13. What would you say are the most **SATISFYING** aspects of your role in relation to educational technology?

14. What would you say are the most **CHALLENGING** aspects of your role in relation to educational technology

15. For each of the following activities or approaches, based on your experience please indicate how **EFFECTIVE** you believe it is in promoting the integration of educational technology.

	Not at all effective	Somewhat effective	Effective	Very effective	Most effective	Don't know
Practical workshop sessions	○	○	○	○	○	○
Instructional video resources	○	○	○	○	○	○
Instructional notes	○	○	○	○	○	○
Small group trials of educational technology tools	○	○	○	○	○	○
Sharing practice or showcase events	○	○	○	○	○	○
Recognition of achievements e.g. awards, digital badges	○	○	○	○	○	○
Remission of time for teachers to work on innovative teaching projects	○	○	○	○	○	○
Participation in external showcase events e.g. conferences, seminars	○	○	○	○	○	○
Accredited CPD modules or programmes in educational technology	○	○	○	○	○	○
Working with small teams of academics	○	○	○	○	○	○
Working with programme development teams	○	○	○	○	○	○
Working in partnership with groups of students	○	○	○	○	○	○
Working with individual academics on specific interventions in their modules	○	○	○	○	○	○
Funding targeted at small-scale interventions	○	○	○	○	○	○

10

16. Are there any **other** activities not listed above that you have found to be effective?

17. Based on your experience, which **three** approaches to professional development have you found to be **most effective**?

18. Why do you think these approaches have been effective?

Challenges in integrating educational technology

In this section, you are asked to consider challenges that you may have encountered in the integration of educational technology in your institution.

19. To what extent does each of the following factors act as a challenge to the integration of educational technologies in your institution?

	Not challenging	Somewhat challenging	Challenging	Very challenging	Most challenging
High workload of academics	○	○	○	○	○
Lack of technical competence on the part of academics	○	○	○	○	○
Lack of technical competence on the part of students	○	○	○	○	○
Cost of technology tools	○	○	○	○	○
Academics' concerns on intellectual property issues	○	○	○	○	○
Insufficient support staff e.g. educational technologists or champions	○	○	○	○	○
Institutional culture does not support or encourage teaching innovation	○	○	○	○	○
Lack of support from institutional leadership	○	○	○	○	○
Lack of visibility in institutional policy and/or strategy	○	○	○	○	○
Lack of opportunities for teacher professional development in TEL	○	○	○	○	○
Lack of evidence of the benefits of educational technology	○	○	○	○	○
Teacher resistance to change	○	○	○	○	○

	Not challenging	Somewhat challenging	Challenging	Very challenging	Most challenging
Inadequate IT infrastructure e.g. WiFi	○	○	○	○	○
Greater emphasis on discipline-specific research activities over teaching	○	○	○	○	○
Lack of recognition of innovative teaching	○	○	○	○	○
Rigidity of timetabling structures and work allocation models	○	○	○	○	○
Lack of trust by academics in the technology	○	○	○	○	○

20. Please list any **other** challenges that you have encountered.

13

Educational Technology in your institution

This section asks you to consider some aspects of educational technology in the context of your institution.

21. Please indicate your level of agreement with each of the following statements.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
The use of educational technology is mandated in my institution.	○	○	○	○	○
Institutional management frequently seek my advice in relation to educational technology.	○	○	○	○	○
Educational technology features in our institutional strategy but it is not a priority.	○	○	○	○	○
The integration of educational technology has been identified as a priority in my institution.	○	○	○	○	○
The integration of educational technology is actively supported by senior and middle management in my institution.	○	○	○	○	○
My institution actively supports innovation in the area of educational technology.	○	○	○	○	○
In my institution, educational technology is primarily adopted and promoted through pockets of innovation.	○	○	○	○	○

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
My colleagues in my institution look to me as a leader in this area.	○	○	○	○	○
I have regular interactions in relation to educational technology with those in formal leadership positions within my institution.	○	○	○	○	○

22. What analogy best describes what it is like to be in your current role in relation to educational technology?

Being an educational technology leader in my institution is like ...

23. What **ONE** thing could your institution do to better support you in your role?

24. Please add any other comments you would like to make.

Invitation to participate in Phase 2 of this study

Phase 2

For the next phase of this study, I would like to probe some of the survey themes and outcomes more deeply by interviewing educational technology leaders in Irish Higher Education.

If you would be willing to participate in an interview at a time and place that is convenient to you, please click on the link below to enter your contact details.

Please be assured that, in order to maintain the anonymity of this survey, any details you submit on the Phase 2 form will be stored separately and will not be linked in any way to your responses in this survey.

Please click here to enter your contact details for Phase 2

Thank you

Thank you

Thank you for taking the time to complete this survey.

Appendix I Sample Interview invitation email

Subject: Requesting your help with PhD study on the experiences of Educational Technology Leaders in Irish HE

Dear xxx,

I hope you are keeping well in these very challenging times. No doubt the past few months have been particularly hectic for you since the sudden change to remote teaching and all that it has entailed.

I am writing to you in relation to a doctoral study that I'm undertaking at Dublin City University and which is exploring the experiences of educational technology leaders in Irish Higher education. You may recall that last year you participated in the online survey which was the first phase of the study. The aim of the study is to examine the roles and experiences of those in formal and informal leadership roles related to educational technology and, by doing so, it hopes to provide current and future leaders with insights into their own roles and those of their peers.

You may recall that at the end of the survey you indicated that you would be willing to participate in the second phase of the study, the interview phase. Thank you very much for this. I had hoped to begin the second stage much earlier but unfortunately, due to work commitments, I have been unable to do so until now.

I am writing to you now to ask if you are still willing to participate in this part of the study and if you might be available for interview at some point in the coming weeks. In doing so, I'm very conscious that this is a particularly busy time of the year but would very much appreciate your participation as your thoughts and experiences would make a valuable contribution to the study.

If you are still willing to participate, we could arrange an online interview at your convenience and I can send you on further details of the study and the topics that we might discuss in the interview.

Thanking you in advance.

Kind regards,

Gerry

Appendix J Sample pre-interview email

Subject: Interview for PhD study – further details and Zoom link for

Dear xxx,

Once again, many thanks for agreeing to participate in the interviews for the study. I really appreciate you giving me your time.

Hopefully, you're still available to meet on this Friday. We can use the following Zoom link for the interview. I will include it in an Outlook invitation as well.

https://zoom.us/j/92881277097?pwd=TTYyQThUV0xDUWFNUnpVX3c2V1lwQT09

Meeting ID: 928 8127 7097

Passcode: 572211

I also wanted to give you some more background on the study and the main areas that I hope to discuss with you in the interview.

As I mentioned in the earlier email, the study seeks to examine the roles and experiences of those in formal and informal leadership roles in educational technology. By doing so, it hopes to provide current and future leaders with insights into their own roles and those of their peers in integrating technology into practice.

Some of the areas that I would particularly like to explore with you in the interview include:

- Your role and responsibilities and the educational technology dimension involved.
- The effects of the Covid-19 crisis on your role.
- Your strategies for embedding educational technology, the challenges involved and what success might look like.
- How educational technology/online learning might develop as a result of the current crisis.
- Your experiences of leading educational technology change in the institute prior to the current situation and how you approach your leadership role. What it is like leading from the middle, as it were?
- How your institute supports you to develop as a leader and how this could be enhanced.
- Characteristics or qualities needed for a leadership role such as yours. Advice for someone starting out in a similar role.

I'm also attaching a copy of the Plain Language Statement which provides further details of the study and copies of the consent form as Word and PDF files.

Looking forward to chatting to you on Friday.

All the best,

Gerry

Appendix K Interview Guide – Phase 2

Welcome/Introduction

1. Your role and responsibilities

Question: Could I begin by asking you to tell me a little about your institution and then perhaps what you do in your role and your main areas of responsibility.

Prompts: Institution – numbers of students/teachers; position in the organisational structure; leader or member of a team; level of autonomy – decision-making/budget; priorities; key areas of focus. What do you enjoy? What excites you? How is your role viewed within the institution?

Follow up Question: To what extent is the integration/embedding of educational technology involved in your role? Is responsibility for this a separate role?

2. About you

Question: Could I ask you how you got into the area of educational technology and why you see it as important.

Prompts: Have there been critical turning points in your career? What motivates you?

3. Question (Heads of units) Could you tell me about the team in your unit?

Prompts: Numbers, roles, position of EdTech in unit. Reporting line; position in organisation.

4. Effect of Covid-19 crisis

Question: To what extent has the current Covid-19 crisis affected your role?

Prompts: Main areas of focus; different priorities; changing emphases during crisis; examples; interaction with management, colleagues, students.

5. Embedding educational technology - strategies, approaches, challenges

Question: The process of embedding educational technology is very much one of changing practices. Thinking back to before the current situation, I would be interested in hearing about what strategies or approaches you use to do bring about this change and what challenges have you encountered?

Prompts: Perhaps if we begin with strategies/initiatives that have been successful from your point of view and why? What strategies/initiatives have been less successful and why? What supports have helped? What challenges have you encountered? How have you dealt with these? Institutional strategy/policy? Support from senior/middle management?

Follow-up Question: What would you consider as success in relation to the integration of educational technology in your institution and how might it be achieved?

Prompts: What changes will be necessary to do this? What supports would you need to achieve this?

6. Looking to the future

Question: Looking forward, how do you see the use of educational technology/online learning developing as a result of the current crisis?

Prompts: Will it be different? What opportunities does it provide? Will things revert to the more traditional ways? Will the challenges be different? Will it be viewed differently by different groups e.g. teachers, managers? What would be your advice to your institution?

7. Leadership in your role

Question: You are taking a leading role in educational technology (through your position and/or your activities). Thinking back to the time before the current situation, what was it like being a leader in the area of educational technology within your institution (or beyond) or at least having educational technology within your remit? How did you approach this aspect of your role?

Prompts: Are you comfortable being described as a leader?; What is it like leading from the "middle" as it were?; To what extent is it a good place to be? To what extent is is challenging or even frustrating (survey findings)? How do you navigate this position between different groups of colleagues?

How might you describe your own leadership style – do you approach it from the point of view of being an expert, influencer, encourager, adviser, model, change agent, persuader?

What kind of leaders do you look up to or model yourself on? What are the characteristics you would look for in a leader?

Question (Heads of units): – How do approach leading your own team?

Follow up Question: Would you say your approach to leadership changed during the Covid crisis? In what ways, if any?

8. Your development as a leader

Question: Returning briefly to your role as a leader in the area of educational technology, in what ways does your institution support you in developing as a leader both formally and informally? How might this be improved or what further supports would you need?

Prompts: Mentoring; feedback; professional development; peer network; institutional leadership.

Question: What drives or motivates you in your role? What is it that keeps you going?

9. Advice for those starting out in your role.

Question: Finally, as you reflect on your experiences, what would you say are the most important characteristics or qualities for someone in a role such as yours? What advice would you give to someone starting out in this area in the same position as you?

Prompts: Lessons learned; priorities

Question: If 10 years from now, you were to receive a reward for you leadership, what would you hope that others say about you on the night?

10. Other comments

Question: Is there anything else you would like to add to what we have discussed?

Appendix L Sample follow-up email

Subject: Thank you

Hi xxx,

Just a quick note to thank you for giving me so much of your time yesterday for the interview. I really appreciate it. You have given me some really useful insights for the study and what was particularly striking was that so much of what you said echoes our own experiences here.

Looking forward to chatting to you in person at some stage when the pandemic passes.

Thanks again.

All the best,

Gerry

Appendix M Thematic Analysis of open-ended survey responses

This section provides an outline of how Thematic Analysis (Braun and Clarke 2006) was applied to analyse open-text responses in the online survey in Phase 1. The analysis of Question 22 ("Being an educational technology leader in my institution is like . . .") is used to illustrate this process.

Question 22 – Data and initial coding

The following is a screenshot of part of the dataset for Question 22. It also includes key phrases extracted from the responses. Each phrase is preceded by an identifying participant number to facilitate sorting and searching of data.

1	Institution type	Role	Analogy		
2	Response	Response	Open-Ended Response		
3	Institute of Technology	Head - EdTech team	being an advocate for change. see Whitchurch's work on third space professionalism	03 advocate for change	
4	University	Faculty member	Being a prophet in a foreign land	04 prophet in foreign land	
5	Institute of Technology	Learning Technologist - team member			
6	University	EdTech coordinator	swimming against a tide - the tide being a combination of time and promotional pressure and trying to appease the student satisfaction survey.	06 swimming against a tide	
7	University	Other	preaching to the already converted, but not having a pulpit to reach beyond.	07 preaching to the already converted	
8	Private College	Head L&T Centre	Being a colourful joker in a pack of a mainly black deck of cards	08 Colourful joker in mainly black deck of cards	
9	Institute of Technology	Other	being a painter. Just as he/she has to choose the right brush, we have to choose the right technology. The mix of brush with paint is akin to the mix of technology with the skills of the academic- you have to tailor how you teach to match the skills of the person. Finally, the canvas is analogous with the audience- the result will be different for different groups of people.	09 Painter. Right brush, right paint, audience is the canvas	
10	Institute of Technology	Champion	Being a bull on a sheep farm....	10 Bull on a sheep farm	
11	Institute of Technology	Other	leading a horse to water and hoping that they are thirsty enough to	11 Leading horse to water	11 hoping they are thirsty
12	University	Learning Technologist - team member			
13	University	EdTech coordinator	playing a game of snakes and ladders. Steps forward are often followed by steps back or stagnation or delay	13 Game of snakes and ladders.	13 Steps forward often followed by steps back
14	University	Learning Technologist - team member			
15	University	Head - EdTech team	(At the moment as we are transitioning from one VLE to another) .. skiing down a steep slope with hidden speed bumps along the way!	14 Skiing down a steep slope	14 Hidden speed bumps along the way
16	University	Other	thing that signals modernity. Often there is a complete lack of understanding or interest from senior management in learning technology.	15 Swimming in custard	15 Complete lack of understanding/interest from senior management
17	College of Education	Learning Technologist - team member			

Figure M-1 Screenshot of partial dataset for Question 22

Some initial codes

Result of a first pass through the codes/phrases.

A	B
Code	**Initial Code**
03 advocate for change	Advocate
04 prophet in foreign land	Apart from crowd
04 prophet in foreign land	A new message
06 swimming against a tide	Apart from crowd
07 preaching to the already converted	Message
08 Colourful joker in mainly black deck of cards	Standing apart
09 Painter. Right brush, right paint, audience is the canvas	Preparing new ground
10 Bull on a sheep farm	Apart from crowd
11 Leading horse to water; hoping they are thirsty	Persuading, coaxing
13 Game of snakes and ladders;Steps forward often followed by steps ba	Slow progress
15 Complete lack of understanding/interest from senior management	Frustration
15 Swimming in custard	Challenge, struggle
22 Jack of all trades;So many things wrapped into one!	Variety of roles
23 Salesperson; trying to convince people, reassure fears	Persuading, coaxing
24 Salesperson at times Detective at others	Persuading, coaxing
24 Salesperson at times; detective at others	Variety of roles
25 Not sure if I am really a leader	Unease with term
27 Banging head against wall without painkillers	Frustration
28 Pushing a big boulder up a hill	Challenge, struggle
28 Pushing a big boulder up a hill ; it keeps slipping back down	Frustration
30 Wise uncle - ignored when it comes to real change	Frustration
30 Wise uncle - listened to when not too much trouble	Persuading
31 Four seasons in one day - every day!	Variety of roles
32 Trying to drive a car with the handbrake on	Challenge, struggle
35 Riding the waves; then encountering wipeouts	Challenge
36 Banging your head against a wall, sometimes	Frustration
39 Running to keep up	Slow progress
40 Sharing the keys to the edtech kingdom with others	A new message
41 Part of a small but enthusiastic cult	Standing apart
42 Fighting a constant uphill battle for recognition	Struggle

Table M-1 Initial coding for Question 22

Initial codes – colour coded and sorted

The initial codes were colour-coded into categories and then sorted by colour.

A	B	C	D	E	F
	Comment				
Standing out from the crowd	04 prophet in foreign land	Uni Faculty			**Standing out from the crowd**
	06 swimming against a tide	Uni ET Coordinator			**With message**
	08 Colourful joker in mainly black deck of cards	PC Head L&T			**Challenge**
	10 Bull on a sheep farm	IOT Champion			**Slow progress - frustration**
	45 a pioneer	IOT Faculty			**Variety of roles**
	48 Playing exotic instrument in a hugh orchestra	Uni Ltech			**Persuader/influencer**
Sharing a message	03 advocate for change	IOT Head Edtech			**In the middle**
	04 prophet in foreign land	Uni Faculty			**New ground**
	07 preaching to the already converted	Uni Widening participation			**Getting it done**
	40 Sharing the keys to the edtech kingdom with others	Uni Ldes/Tech - other			
	41 Part of a small but enthusiastic cult	IOT Faculty Chair TL Ac Council Other			
	57 Slow but persistent advocacy	PC Head L&T			
Challenge	15 Swimming in custard	Uni Head EdTech team			
	28 Pushing a big boulder up a hill	Uni Ltech			
	32 Trying to drive a car with the handbrake on	Uni Ldev			
	42 Fighting a constant uphill battle for recognition	Uni - Head EdTech team			
	55 Walking backwards up a hill	Uni - Head EdTech team			
Slow progress - frustration	13 Game of snakes and ladders;Steps forward often followed by steps ba	Uni - EdTech Coord			
	15 Complete lack of understanding/interest from senior management	Uni - Head EdTech team			
	27 Banging head against wall without painkillers	IOT Faculty			
	28 Pushing a big boulder up a hill ; it keeps slipping back down	Uni - Ltech			
	30 Wise uncle - ignored when it comes to real change	IOT Champion			
	35 Riding the waves; then encountering wipeouts	Uni - Head L&T			
	36 Banging your head against a wall, sometimes	Uni - Faculty			
	39 Running to keep up	Uni - Ldev			
	49 Treading water	Uni - LTech team member			
	57 Slow but persistent advocacy; two steps forward, one step backward	PC Head L&T			
	54 Being invisible	PC - Ltech			
	64 Groundhog day; Same conversations, same battles, same arguments	Uni - Head EdTech team			
Variety of roles	22 Jack of all trades;So many things wrapped into one!	PC - LTech team member			
	24 Salesperson at times; detective at others	Uni Ac Dev - interest			
	31 Four seasons in one day - every day!	Ac Prog Director			
	61 Jack of all trades, master of none	Ltech - team member			
Persuader/influencer	11 Leading horse to water; hoping they are thirsty	Uni - Head L&T			
	23 Salesperson; trying to convince people, reassure fears	IOT Ltech			
	24 Salesperson at times Detective at others	Uni Ac Dev - interest			
	30 Wise uncle - listened to when not too much trouble	IOT Champion			

Figure M-2 Colour-coding and sorting initial codes

Initial codes and categories – sorted by role

Comment				
03 advocate for change	R1	IOT Head Edtech		Standing out from the crowd
11 Leading horse to water; hoping they are thirsty	R1	Uni - Head L&T		With message
15 Complete lack of understanding/interest from senior management	R1	Uni - Head EdTech team		Challenge
15 Swimming in custard	R1	Uni Head EdTech team		Slow progress - frustration
42 Fighting a constant uphill battle for recognition	R1	Uni - Head EdTech team		Variety of roles
44 Being the college bus	R1	Uni - Head EdTech team		Persuader/influencer
44 Limited resources - only certain routes	R1	Uni - Head EdTech team		In the middle
44 Not a sports car but can travel in bus lanes with least obstruction	R1	Uni - Head EdTech team		New ground
47 A ticked box on a compliance form	R1	Uni - Former head of EdTech team		Getting it done
55 Walking backwards up a hill	R1	Uni - Head EdTech team		
59 Laying foundations to create space for artists	R1	PC - Head EdTech team		
64 Groundhog day; Same conversations, same battles, same arguments	R1	Uni - Head EdTech team		
31 Four seasons in one day - every day!	R10 31	Ac Prog Director		
22 Jack of all trades;So many things wrapped into one!	R2	PC - LTech team member		
25 Not sure if I am really a leader	R2	Uni - Ltech team member		
49 Treading water	R2	Uni - LTech team member		
51 Problem solver - the "how to" person	R2	IOT Ltech team member		
54 Being invisible	R2	PC - Ltech		
54 Being invisible	R2	PC - Ltech		
61 Jack of all trades, master of none	R2	Ltech - team member		
08 Colourful joker in mainly black deck of cards	R3	PC Head L&T		
35 Riding the waves; then encountering wipeouts	R3	Uni - Head L&T		
50 Being a bridge; you sometimes get caught in the middle	R3	IOT Head L&T		
57 Slow but persistent advocacy	R3	PC Head L&T		
57 Slow but persistent advocacy; two steps forward, one step backward	R3	PC Head L&T		
06 swimming against a tide	R4	Uni ET Coordinator		
13 Game of snakes and ladders;Steps forward often followed by steps ba	R4	Uni - EdTech Coord		
23 Salesperson; trying to convince people, reassure fears	R5	IOT Ltech		
28 Pushing a big boulder up a hill	R5	Uni Ltech		
28 Pushing a big boulder up a hill ; it keeps slipping back down	R5	Uni - Ltech		
48 Playing exotic instrument in a hugh orchestra	R5	Uni Ltech		
40 Sharing the keys to the edtech kingdom with others	R5	Uni Ldes/Tech - other		
24 Salesperson at times Detective at others	R6	Uni Ac Dev - interest		
24 Salesperson at times; detective at others	R6	Uni Ac Dev - interest		
32 Trying to drive a car with the handbrake on	R6	Uni Ldev		
39 Running to keep up	R6	Uni - Ldev		

Figure M-3 Initial codes and categories sorted by role

Final themes

Management				
Standing out from the crowd	1			
With message	2			
Challenge	3			
Slow progress - frustration	4			
Variety of roles				
Persuader/influencer	1			
In the middle	2			
New ground	1			
Getting it done				
			Theme	**Description**
			Stepping forward	Standing out from the crowd, standing apart or being set apart, possibly going in the opposite direction; breaking new ground.
Learning technologist			Sharing a message	There is a particular message to be shared. Persuading, influencing, advocating There are also religious connotations - prophet, converted, keys to the kingdom - and an element of advocating for the message.
Standing out from the crowd	2		Slow progress	Challenge, effort, struggle and frustration. Challenge and extreme effort are evident here, resulting only in slow progress. The slowness of progress is frustrating. It may be more a case of standing still, invisible, ignored and at times going backwards.
With message	2		Wide-ranging role	Roles combining may different aspects. Wide range of roles, many different aspects.
Challenge	2			
Slow progress - frustration	5			
Variety of roles	4			
Persuader/influencer	2			
In the middle				
New ground				
Getting it done	2			
Faculty				
Standing out from the crowd	3			
With message	2			
Challenge				

Figure M-4 Final themes and descriptions

Appendix N Using NVivo to apply IPA in analysing the semi-structured interviews

This section provides an outline of the process used in NVivo to apply Interpretative Phenomenological Analysis to the analysis of the 10 semi-structured interviews as explained in Table 3.3 in Section 3.10.2.2.

The process involves six steps with the first five being applied to each case (i.e. participant interview) before looking across the cases for commonality and difference.

Step 1 – Listening, reading and re-reading

This step involved listening to the interview recording a number of times , reading the interview transcript a number of times, moving between the two, making initial observations. During this stage, I recorded these initial observations in a research notebook.

Step 2 – Initial noting using Annotations

To prepare for the analysis process in NVivo, I created a folder structure for the transcript files, as Bazeley (2013) suggests. Firstly, I created a folder for each group of participants, Heads of Learning and Teaching units, Heads of Educational Technology units and Learning Technologists (i.e. Heads L & T, Heads of EdTech and Learning Technologists). The transcript file for each participant was then added to the appropriate folder. The files within each folder were assigned numbers. For example, the transcripts of interviews with the three heads of Learning and Teaching units were names Head01, Head02, Head03. A similar naming convention was used for the files in the other two folders.

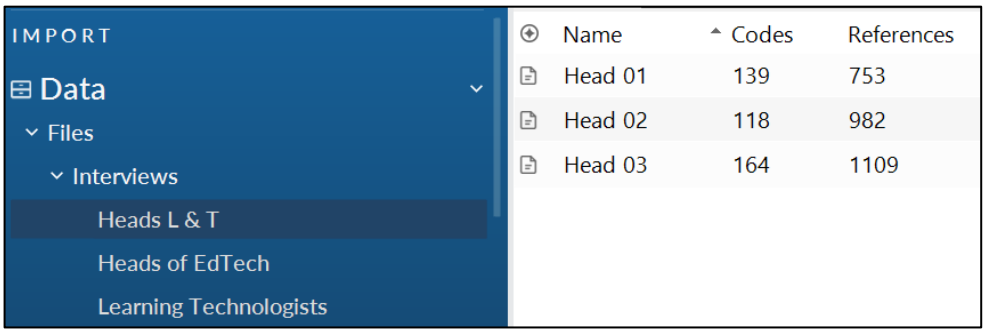


Figure N-1 Transcripts for each group of interviewees in separate folders

The following steps provide an outline of the process applied in the analysis of the first of the interviews.

Adding annotations

Following the steps outlined above, I added annotations to the transcript of the interview. A sample set of annotations for an excerpt of the transcript is shown on Figure N-2. The associated text from the transcript has been omitted to ensure anonymity.

Annotations

Item	Content
14	Impact of Covid - brought unit to the fore throughout organisation
15	Analogy with front-line workers - seen as that during crisis but not previously?
16	Units (like this) work in the background; work not easily measured.
17	Identified priorities - connectedness and alternative assessment
18	Unit was one of the few communicating with staff after the crisis.
19	Not involved at a high enough level to know when the change was coming.

Figure N-2 Sample NVivo Annotations

I then downloaded the transcript and annotations to Microsoft Word and checked for any errors or omissions. This is more convenient to do in Word than in NVivo. This was an iterative process and provided an opportunity to reflect on and revise the initial notes. The final step was to amend the list of annotations in NVivo to arrive at a final set of annotations which could then be downloaded with the interview transcript to prepare for the next step.

Step 3 – Developing Emerging themes

For the next phase, Phase 1, which involves using the transcript and notes to identify emergent themes (or initial codes), I set up a folder structure to ensure that each case could be analysed separately.

As there were three distinct groupings of participants, I created a folder for each and within each folder created further subfolders for each participant, as shown in Figure N-3. Thus, there is a folder for each group, Heads of Learning and Teaching, Heads of Educational Technology and Learning Technologists. Within a group or folder, I have created subfolders for each interviewee e.g. Head01, Head02, Head03,Head EdTech01, Learning Tech01 etc.

So, the interview with participant, Head01, is coded to the folder Head01, the interview with Heads02 is coded to the folder Heads02, thus allowing me to treat each case separately.

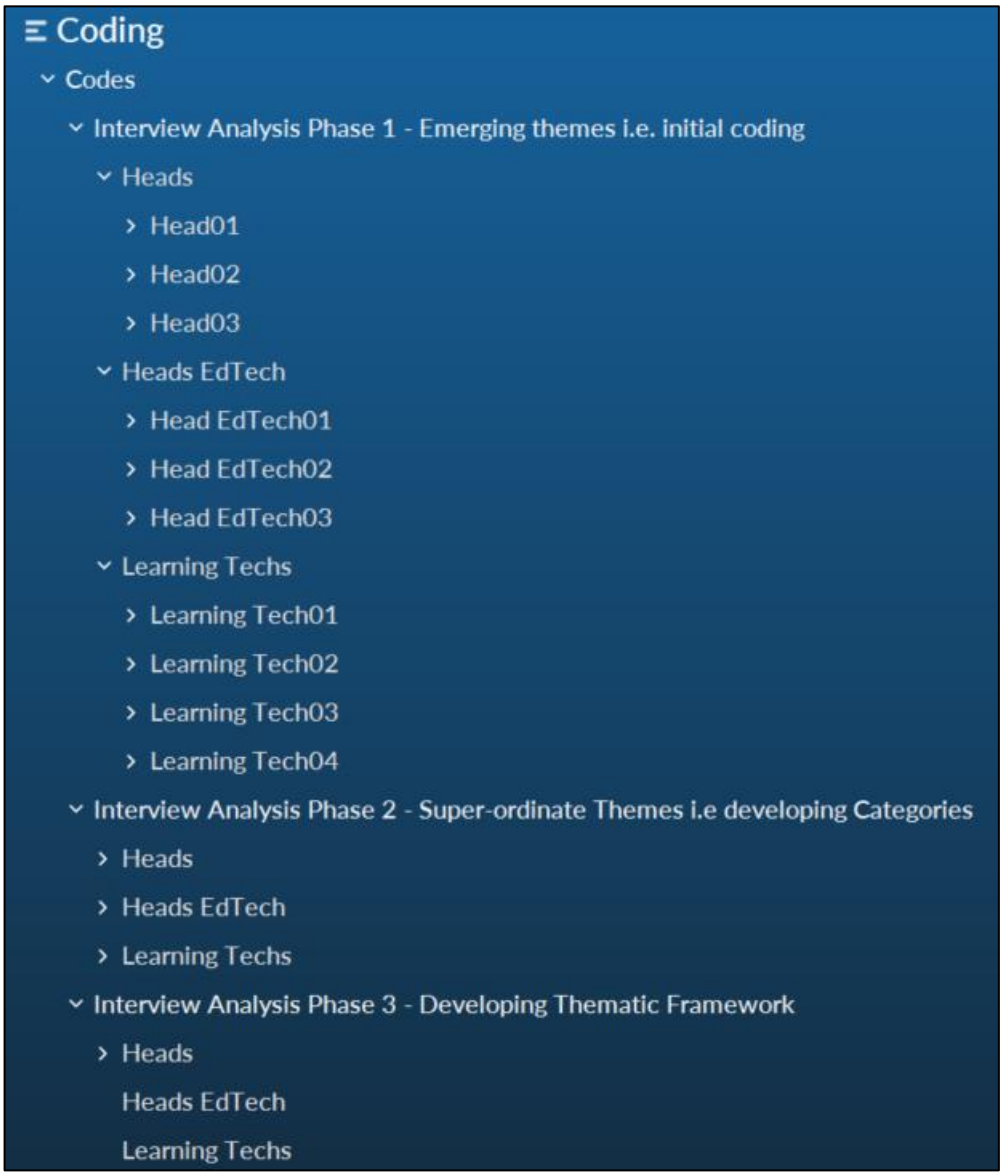


Figure N-3 Folder structure for each phase of the analysis

Within each of these folders I created further folders based on key areas the interview questions and sub-researched questions i.e. 01_Role, 02_Role-impact of Covid etc. as shown in Figure N-4. This allowed to use a structured approach to the coding process. These folders hold the emerging themes or initial codes, represented in NVivo as codes, for each of these sections of the participant's interview.

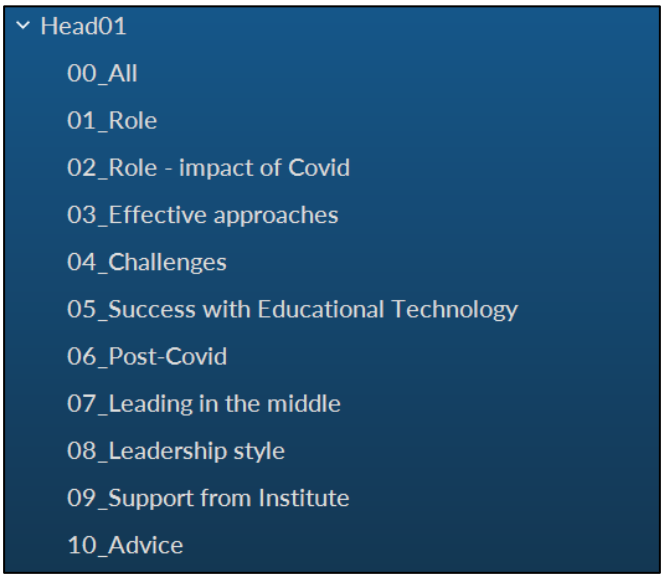


Figure N-4 Initial folder structure for Head01

Figure N.5 shows some of the initial codes and descriptions related to leading in the middle.

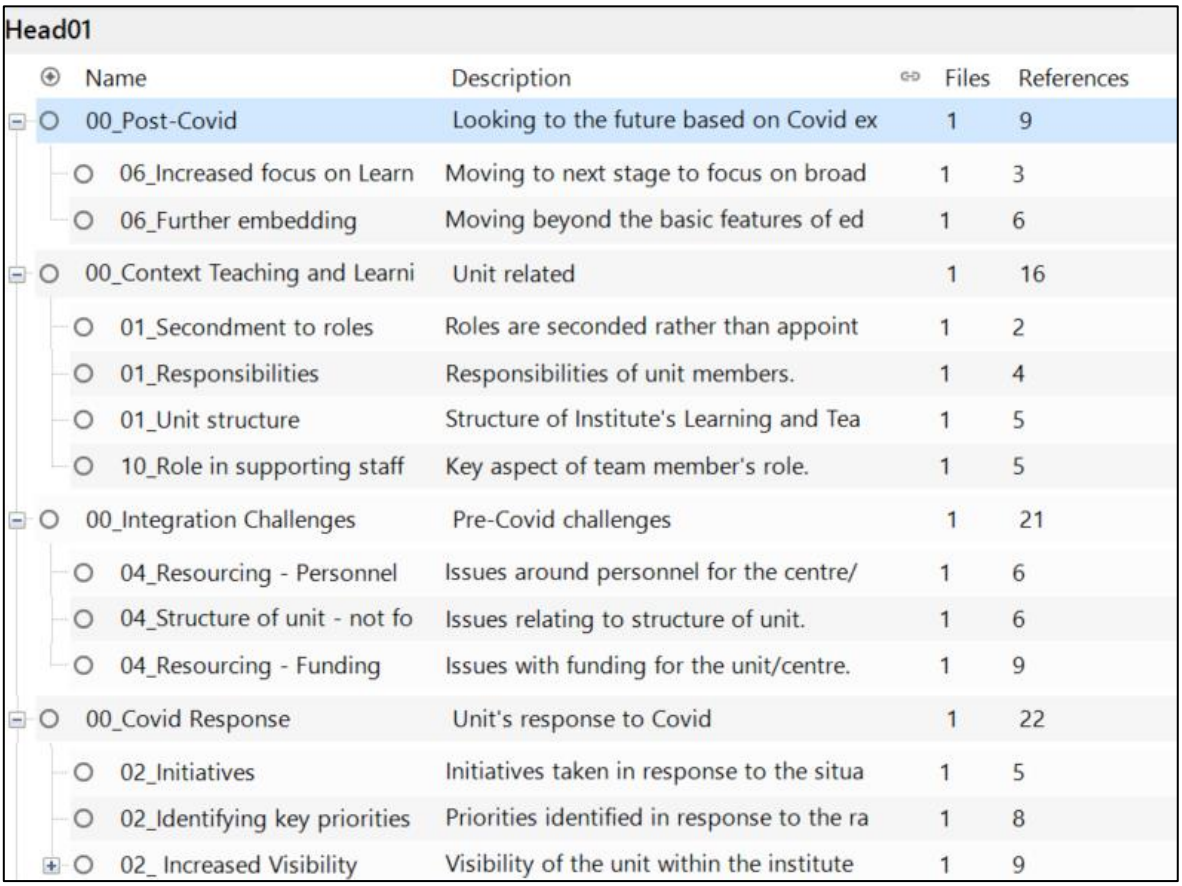
07_Leading in the middle

Name	Description	Files	Referenc
07_Change management aspe	Approaches to change management when in the	1	8
07_Discomfort with term Lead	Reluctance to use the term "leader".	1	1
07_Many directions	Facing in multiple directions.	1	4
07_Middle	Being in the middle	1	6
07_Positive or negative	Experience positive or negative	1	2
07_Team approach	Team approach rather than individual.	1	1

Figure N-5 Initial codes and descriptions for Leading the Middle

Step 4 – Super-ordinate themes: Searching for connections across emerging themes

The next stage involved examining how the emerging themes (or codes) fit together and cluster them into super-ordinate themes where appropriate. To begin this process, I downloaded the NVivo codebook for the interview into Microsoft Word and reviewed to codes and their descriptions to identify connections. Figure N-6 shows the codes and descriptions for the 01_Role section of Head01's transcript.



Head01

Name	Description	Files	References
00_Post-Covid	Looking to the future based on Covid ex	1	9
06_Increased focus on Learn	Moving to next stage to focus on broad	1	3
06_Further embedding	Moving beyond the basic features of ed	1	6
00_Context Teaching and Learni	Unit related	1	16
01_Secondment to roles	Roles are seconded rather than appoint	1	2
01_Responsibilities	Responsibilities of unit members.	1	4
01_Unit structure	Structure of Institute's Learning and Tea	1	5
10_Role in supporting staff	Key aspect of team member's role.	1	5
00_Integration Challenges	Pre-Covid challenges	1	21
04_Resourcing - Personnel	Issues around personnel for the centre/	1	6
04_Structure of unit - not fo	Issues relating to structure of unit.	1	6
04_Resourcing - Funding	Issues with funding for the unit/centre.	1	9
00_Covid Response	Unit's response to Covid	1	22
02_Initiatives	Initiatives taken in response to the situa	1	5
02_Identifying key priorities	Priorities identified in response to the ra	1	8
02_ Increased Visibility	Visibility of the unit within the institute	1	9

Figure N-6 Clustering the emerging themes (codes)

At this point, I returned to my research notebook to begin to form a picture of the super-ordinate themes for the participant. An initial draft is shown in Figure N.7.

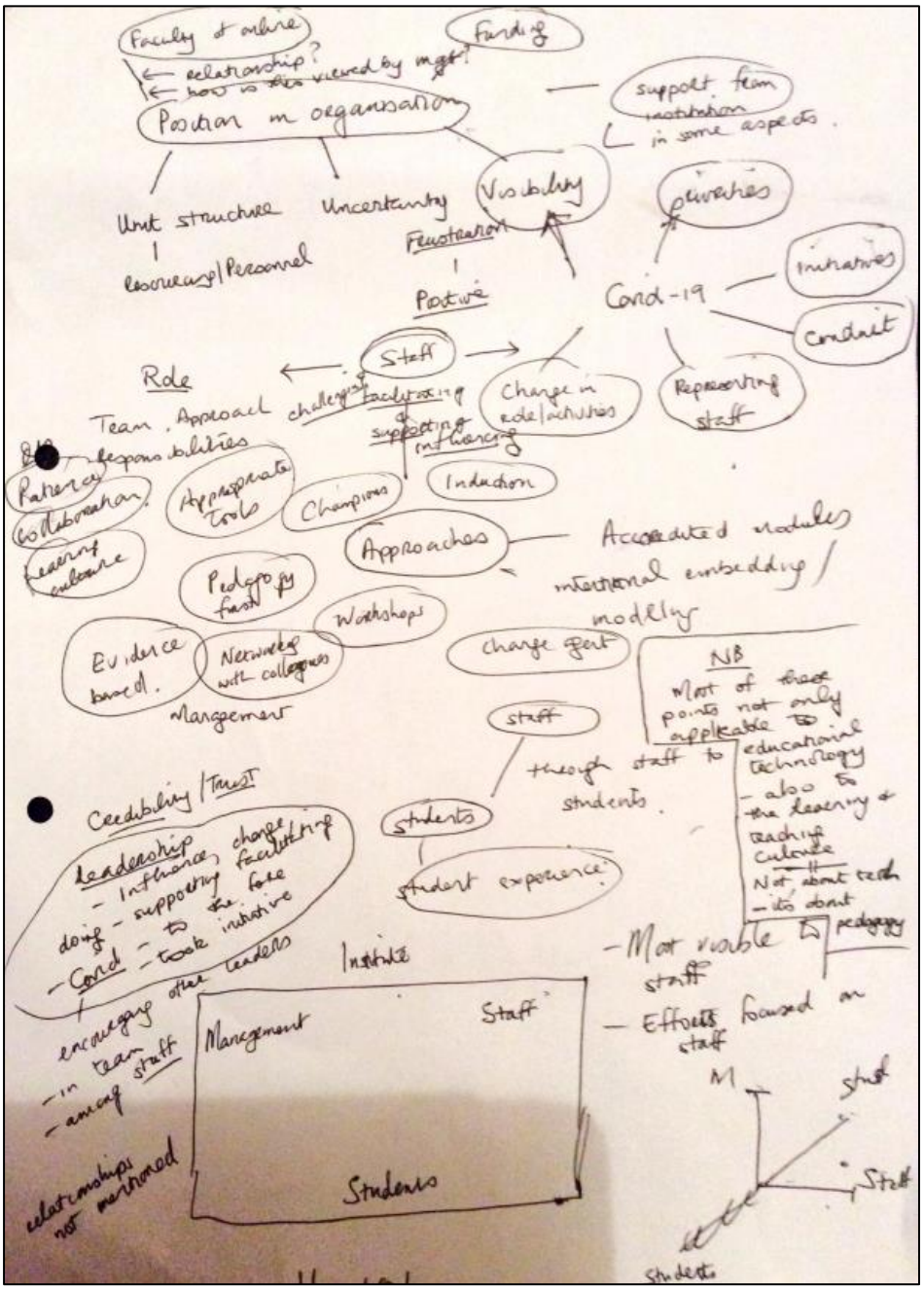


Figure N-7 Initial draft of superordinate themes for participant

Figure N-8 shows a detailed outline of super-ordinate themes identified for Head01in NVivo.

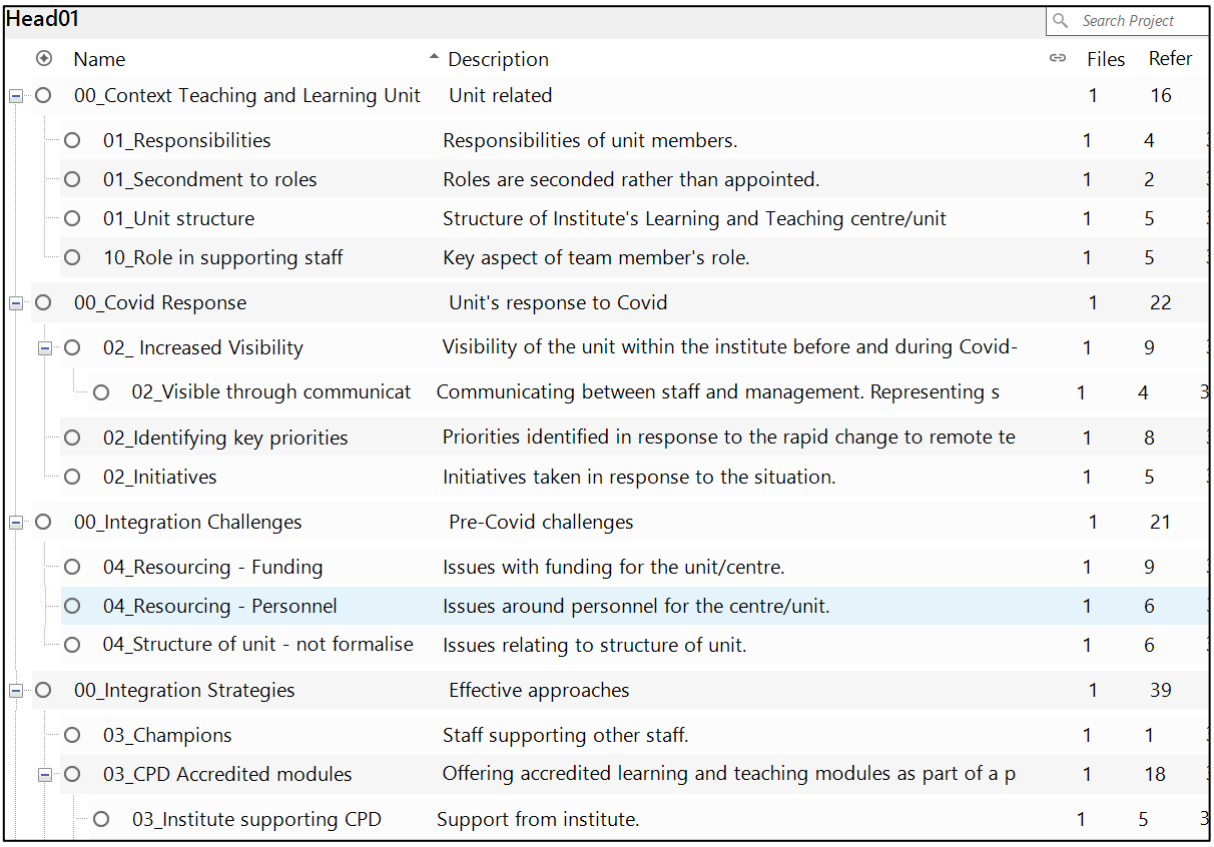


Figure N-8 More detailed outline of super-ordinate themes for Head01in NVivo

Step 5 – Moving to the next case

At this point, the focus of the analysis shifted to the next participant. The same process as outlined in Steps 1 to 4 was followed for each interview.

Step 6 – Looking for patterns across cases

In the third phase of the analysis, I sought to identify key themes for each group of participants. On completion of these steps for each participant, I began to look across each of the three groups.

For each group, created a Word document with a column for each participant, allowing me to scan across the participants for areas of convergence and divergence, identifying superordinate themes for the grouping. My intention at this point was to report the findings thematically for each grouping. Below is a excerpt from the overview document for the Heads of Learning and Teaching group.

Figure N-9 shows key themes and sub-themes for the heads of Learning and Teaching units.

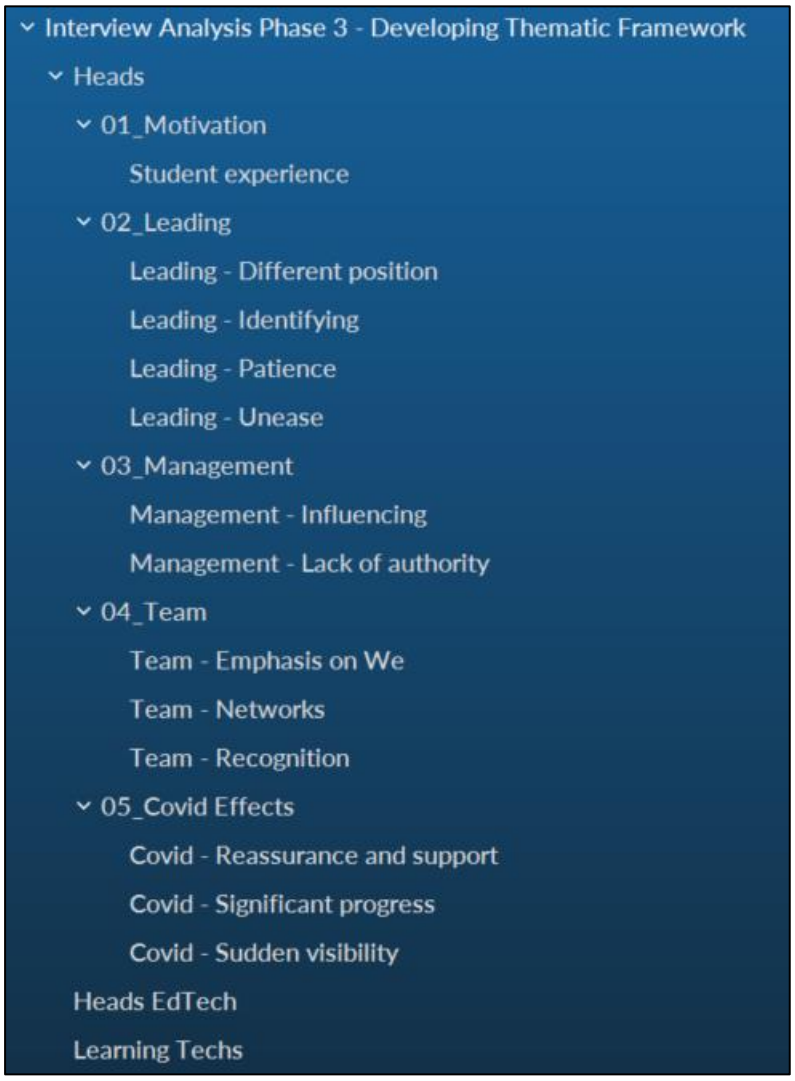


Figure N-9 Themes and sub-themes for heads of Learning and Teaching units

I then collated the themes for heads of learning and teaching units, including descriptions and illustrative quotations. These were compiled in a Word document, an excerpt from which is shown in Figure N.10.

At this point, I sought to look across the cases for commonality and difference.

Head 01	Head 02	Head 03
Funding – reluctance to ask for funding for initiatives or equipment, making do, some reliance on external funding sources such as National Forum; some personnel in unit funded by Forum projects.	**Funding** - Not given any decision-making power or budgetary authority. Seeking this as a recognition of the value placed on position. Frustration at having to go through senior management for everything (not necessarily solely related to funding). Funding for personnel an issue.	**Funding** - No real issue with funding – "No issue with funding or managing money or anything like that"; "I have the funds I need to run the projects. If I need budget I get it. I have the, you know, support at executive level"; "if anything, I'm like the fairy godmother sometimes"
Value placed on L&T – valued in terms of supporting staff doing accredited CPD, new teacher induction, requirement to do first two modules and yet issues with unit stability and funding.	**Value placed on L&T** – Accredited CPD is supported. Making Head of Centre position a Head of department would formalise it. Importantly, Head is not seeking status but rather recognition. Sense that T&L is an afterthought – just contact somebody from T&L.	**Value placed on L&T** – Accredited CPD is supported. Also, funding is not an issue. Regular interaction with VP Academic Affairs/Registrar to ensure that issues are represented at Executive Board.
Team culture - Frequent use of the word "we". Sees self as the leader of the team and fosters the team culture. Somewhat uncomfortable with the term "leader" in general. It's a multidisciplinary team, working together in a collaborative, supportive environment, team teaching. Individuals "supported and that's very important", a "culture where people feel protected, particularly when they start off". Strong emphasis on a learning culture and use of evidence.	**Team culture** - Frequent use of the word "we". – "I would say we the whole time". "I would refer to the T&L centre". Structured as a flat structure, team of equals, all reporting to the Registrar. Strange position – "how do you coordinate when we're all the same? Who makes the final decision?" "It's not as if I can say, 'Do this or do that'".	**Team culture** - Again, frequent use of the word "we". Blending the team so that they complement and support each other – a peer mentoring circle. "You don't end up with all people that are the same but you end up with people with different expertise and different capabilities but somewhere they meet in the middle you know that supports the institute". "It's all about creating partnerships … not seeing yourself as the boss" "I'd never see myself as that way, ever, so I always say we're a team"; "a community … we're a team, we're there to solve problems …"; "listen to all sides"
Working in the middle. Primarily a positive experience. Sees self as working in the third space, facing in different directions, towards academics, institute management and students. "We're kind of in the middle of all that", with "different types of things going on at the same time". Negotiating the politics of the role, acting as a change agent and influencer. Importantly, doing things because they are the right things to do for staff and students, not simply based on management directive, "implementing things but	**Working in the middle** – feels "totally in the middle", in an "odd role", working with academics, sitting at management table but not management. Working primarily with direct superior, VP for Academic Affairs, particularly during Covid.	**Working in the middle** **Strategic approach to working within the system** - "I've good project systems set up", good relationship with Finance dept. "I found that good partnership with Finance is key, right" **Garnering management support – Communication and relationships** "I'm one of the many things on his (VP for Academic Affairs) agenda … So what I've learned over the years is that I cannot assume that he knows what the hell is going on"; "You have to invest time in meeting that

Figure N-10 Excerpt from key themes for heads of Learning and Teaching

A similar process was used for the analysis of the transcripts in the other two groupings of participants.