

Deirdre Corby, RMHN, Dip. Personnel Mgt, Grad. Dip Public Mgt, MSc. (Nursing)
Lecturer
School of Nursing,
Dublin City University,
Glasnevin,
Dublin 9, Ireland.

Peter Boland, RGN, RPN, RMNH, RNT, BNS, MA(Ed), H.Dip Learning Disabilities.
Director
Centre of Nurse Education
Northern Area Health board
Portrane
Co. Dublin, Ireland.

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Abstract

This paper addresses the issue of curriculum innovation and development for nursing education and the inclusion of assistive technology as a subject for student nurses. The paper examines the nurses' role as part of the interdisciplinary team in creating awareness and ensuring that people with disabilities are the focus of the assistive technology process. Nurses have the greatest contact with users of healthcare services, and are therefore in a key position to ensure that assistive technology contributes to addressing their needs.

Curriculum development is the point of growth for all educational activities and a curriculum is the offering of socially valued knowledge, attitude or skill, made available to students during formal education. Contemporary nurse education needs to be relevant and flexible with curricula that will address the present and future health and social care needs of society. In Ireland nurse education has moved from a hospital to a university based programme and assistive technology has been included as an optional module in the nursing degree programme in Dublin City University.

Introduction

Curriculum development is a form of social engineering (McKernan, 1996) that entails making selections from the vast corpus of knowledge and skill in the area of nursing and disability. A curriculum is the offering of socially valued knowledge, attitude or skill, made available to students through a variety of arrangements during formal education (Bell 1973). Curriculum innovation and development is the applied site of this definition and its purpose is to transmit to the next generation, those things within the culture that are most valued, including ideas, beliefs, skills, tools, aesthetic discernment, methods of thinking and institutions (Smith, Shanley and Shore, 1950 cited by Golby, 1994). The curriculum and its attendant pedagogy are the principal means whereby an educational institution pursues its educational purpose and organises and structures learning.

The education system itself is a social institution which does not stand still, being subject to adjustment at a time when society is experiencing dramatic changes (Kelly, 1989). Rapid technological advances prompt much of this change and in the area of

assistive technology more products are becoming available. With this increase there is a need for competent, well-informed professionals from a variety of backgrounds to become involved in delivery of these devices and services (Cook and Hussey, 2002). The adaptation of assistive technology within the educational structure of an educational institution represents a situational adjustment to emerging needs in health and social care delivery (Skillbeck, 1994). In healthcare services, its inclusion is an innovation that can help ensure that potential users may now benefit from the increased awareness of assistive technology among nurses.

Nurse Education and Assistive Technology

It is argued by Joyce (2000) that contemporary nurse education is challenged to design curricula that will address current and future health and social care needs of society. Inherent in this view is the notion that such curricula have utility and relevance, flexibility, eclecticism, commonality and equivalence, and are supported by evidence.

The concept of assistive technology, although not new, has over the past decade become an area of such major growth and innovation for the amelioration of symptoms for all people including those with disabilities, that its inclusion as an optional module in the nursing degree programme in Dublin City University was considered imperative by the programme development group.

Letwin (1994) argues that the only absolute duty of a school is the provision of grounding. This entails the acquisition of a range of skills and a certain amount of knowledge, which will enable the student to live in a liberal and democratic society. A person with grounding has a basis on which to build an understanding of the world. Consequently an inherent purpose of the assistive technology curriculum innovation is to affect grounding in the subject at a level where knowledge and skills are indistinguishable from one another.

The module on the nursing degree programme aims to provide a grounding in assistive technology by introducing the student to the concept and to explore how assistive technology devices can be used to support the person with a disability or illness in pursuing self-care and educational, vocational and recreational independence. A further aim is to prepare the student to engage in a specific placement where they will observe an individual using assistive technology or observe the development and design of assistive technology devices. The program emphasises a dynamic, problem-based approach to learning through this individual project, and exposure to current research literature including web based resources. The syllabus provides students with a comprehensive introduction to assistive technologies to enable them to have a solid base on which to build an understanding of those in their care who may use assistive technologies. The learning outcomes include defining assistive technology, looking at its characteristics and history and identifying hard and soft technologies and their application. Professional practice is also discussed and the ethical implications involving the use of assistive technology. The curriculum attempts to assure that the module content is relevant to the student's experience and that there is a balance between the acquisition of knowledge and the practice of methods. In addition, the practical nature of the module will reflect the everyday experiences of the student and emphasise how assistive technologies can

help individuals throughout their daily lives. Furthermore, the module will develop the skills of imaginative and disciplined inquiry, including systematic observation, testing hypothesis, design experimentation, drawing inference from evidence, and formulating and communicating conclusions in a way that will add to the corpus of knowledge regarding assistive technology. In short, because the student has a grounding in the subject, they are more open to identifying everyday items that can be used in helping those with disabilities become more independent.

Assistive Technology and the Nurse – Client Relationship

Assistive Technologies have been identified as helping those with disabilities move from dependence to living a more independent life by reducing the amount or level of assistance needed from other people (Scherer and Galvin, 1996). Professionals have a responsibility to ensure they are vigilant and aware of any new technologies that may assist their clients towards increased independence (Gray, 1998). People with disabilities come in contact with a diverse range of professionals and those who are involved in the delivery of Assistive Technology devices have a variety of backgrounds (Cook and Hussey, 2002). Nurses are a large group of professionals that are involved at many levels in most health and social care services.

The numbers employed in the Irish Public Health Service for 2001 show that in total 92,996 people are employed, 31,429 of these within the nursing category. As a percentage of the total number of staff including all categories, nurses represent 34 % of this workforce. If the categories that are not involved in direct client care, such as management / administration and general support staff are excluded from the total, this percentage increases to 49%. Nurses are clearly the largest group that work with patients and clients giving an indication that this group of people have the largest amount of contact with possible users of Assistive Technologies. Dolan (2002), in an editorial for *Emergency Nurse* wrote about who has the most contact with clients and discussed that while senior nursing staff may be driving the agenda as regards quality, it is often more junior staff nurses and student nurses that have the greatest impact on client care. Nurses and student nurses are in a key position as part of the interdisciplinary team to be able to contribute to increased knowledge and use of assistive technology.

Nurses are a group of professionals who work directly with people with a variety of needs and by creating an awareness of assistive technologies and what they may offer, nurses can disseminate information to those in their care and significant others in their lives. Gray (1998) identifies that challenges for professionals include providing possible users of assistive technologies with information and education. Nurses have direct contact on an ongoing basis with people who may benefit from its use. They are also in a position to form a relationship with those who attend their services and be able to act as an advocate for individuals regarding resources such as assistive technologies. While the type of nurse-client relationship that exists will vary depending on factors such as commitment, the duration of the contact, client needs, and the willingness of the client to trust the nurse, there is evidence that a relationship is formed at some level (Ramos 1992, Morse 1991). The lack of the development of a significant nurse-client relationship has been associated with clients being denied an advocate or the quality of their care being compromised (Watson, 1988). Nurses also

have a high level of skill and practical expertise in assessment, which is essential in deciding if assistive technologies would be useful to a person with a disability.

Much has been written about the lack of use or abandonment of assistive technology devices due to factors such as a change in an individual's ability, lack of motivation, poor training or lack of choice in selecting a device (Gray 1998, Scherer and Galvin 1996). While it may be possible to identify ways to increase the continued use of a device by an individual, professionals also need to be aware how an individual feels about using a device. Previous experience, and knowledge of what has happened for an individual may impact on whether or not an assistive technology device is offered at a particular time (Gray, 1998). Nurses have a close professional relationship with the users of their services and they can be in a position to help identify the needs and wants of those in their care.

Conclusion

Assistive technology has the ability to impact greatly on the lives of people with disabilities (Cook and Hussey 2002, Gray 1998). Professionals who come in contact with possible users of assistive technology need to have both awareness and an understanding of the benefits and possibilities created by assistive technology. Nurse education is influenced by many factors and is challenged to adapt with changing needs and expectations. Student nurses must be given knowledge and skills so they can contribute to creating a health care service that has the ability to offer the best possible service to those they come in contact with.

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