

## **Situated Approaches to Information Literacy for Nurses: The View from a Canadian Nurse**

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### **Abstract**

In the 21st century, literacy education is a critical element of Learning Futures in lifelong learning. In particular, information literacy, defined as the ability to retrieve, evaluate and apply information to a stated need, is one of the emerging key areas of literacy education. This paper focuses on the issue of information literacy in the context of lifelong learning for nurses in Canada. Contemporary healthcare environments are dynamic and complex. They are characterised by continual advances in information and communication technologies and by increasing emphasis on service in meeting the demands of clients as consumers. Entry to practice knowledge and skills rapidly become obsolete. Healthcare workers are challenged to develop and maintain information literacy in order to retain currency in such a demanding professional environment. Situativity, considering content, context and purpose, is one of several learner-centred pedagogical approaches that are currently impacting on lifelong learning. This paper examines the suitability of applying situativity to the information literacy needs of staff nurses in a rural hospital setting in Canada.

### **Introduction**

The United Nations Educational, Scientific and Cultural Organisation (2002) has recognised the essential nature of literacy by promoting a Literacy Decade, 2003–2012, and stating that literacy is a tool for empowering individuals and their communities. This literacy for all challenge is part of the foundational development for lifelong learners and a key consideration in the emerging area of Learning Futures (see Kehrwald, this issue). Learning Futures seeks to address the need for individuals to remain competent in the face of rapid change and widening participation in global communities (Gouthro, 2002; Smith, 2002). The challenge posed for nurses, beyond content knowledge, is to “change, renew and rejuvenate” ourselves (Villeneuve & MacDonald, 2006, p. 116).

Information literacy, one focus of the United Nations Educational, Scientific and Cultural Organisation initiative, is defined as “...the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand” (Information National Forum on Information Literacy, 2005, p. 1). The concept of information literacy was introduced in the 1980s, prompted by changes in the economy and by increased complexity related to technological changes and sources of information (American Library Association, 1989). These changes identified the needs for literacy skills beyond reading, writing and mathematics. Today the term is becoming more commonplace,

acknowledging that an information literate person is one who has analytical and critical skills to ask questions and to evaluate answers (United Nations Educational, Scientific and Cultural Organisation, 2005).

This paper examines the concept of information literacy in the context of continuing education for staff nurses in a hospital setting in regional western Canada. In particular, ongoing literacy education is viewed through the lens of *situativity*, a learner-centred pedagogical approach which has become increasingly popular in lifelong learning programs (Stein, 1998; Zukas & Malcolm, 2000). Situativity is a pedagogical approach which emphasises the role of context in meaning-making and participation and the use of developing knowledge, as opposed to knowledge transfer (Jonassen & Land, 2000). Learning, in this approach, occurs not by the sharing of information but by the collaborative application of the knowledge in authentic activities.

### **Lifelong Learning in Regional Healthcare Facilities**

This paper focuses on lifelong learning in general and information literacy in particular from the perspective of a staff nurse educator in a rural health region in Canada. The region has several small community hospitals and one small city hospital. As in other parts of Canada, healthcare facilities in this region are subject to ever changing conditions of fiscal restraints, chronic health conditions, enlightened consumers, spiralling costs and technological advances (Domino, 2005).

The nurse educators in this region work with three groups of professional nurses: registered nurses; registered psychiatric nurses; and licensed practical nurses. These nurses have differing educational backgrounds. For example, the majority of registered nurses currently working in this region graduated with a two or three year diploma. In recent years, in acknowledgment of the needs of the dynamic healthcare environment, most of the provincial diploma programs have been replaced with a four year degree program. This move corresponds with recent legislation which has enacted the registered nurse baccalaureate entry to practice requirement for 2010 (Alberta, 1999).

This same legislation, the Health Professions Act (Alberta, 1999), mandates continuing competence programs for all health professions. A recent project sponsored by the Canadian Office of Health and the Information Highway underscores the need for continuous learning throughout the professional nurse's working life (Canadian Nursing Informatics Association, 2003). The findings included the distinct possibility that practice would outpace academia in information and communication technologies. As a result, documentation of continuing competence is now a registration requirement for all health professionals. Continuing competence is also expected by the public and the fact that this rural health region has a specific department dedicated to staff education underscores the value that the employer places on lifelong learning for nurses.

Learning opportunities in this region fall into two main categories: non-formal (presentations during workshops and seminars, for example); and informal (such as a short review of a single topic at the beginning of the shift or an on the job collaboration). The majority of the learning activities are in small sessions. Many of these teaching opportunities arise from individual requests from the nurses themselves

or from their supervisors. Other learning opportunities address employer requirements and ultimately patient care and safety. The educators present information that needs to be re-addressed on a regular basis (for example, yearly mandated updates such as CPR, fire safety and back care) or yearly non-mandated information (such as the care of central venous catheters, the operation of pain pumps or informed consents). Another area of education deals with the teaching and learning of new skills, the use of new equipment and the implementation of new software programs (such as a bed utilisation tool and the provincial tracking system for cardiac patients).

Nurses themselves understand the importance of competency and the need to keep abreast of the current changes, demands and expectations (Villeneuve & MacDonald, 2006). However, they face barriers to lifelong learning as difficult workload issues such as the shortage of nurses and staff cuts of other departments negatively impact on time and money for professional development (Canadian Broadcasting Corporation, 2004; O'Brien-Pallas, Alksnis, & Wang, 2003; Spurgeon, 2000).

### **Information Literacy in the Healthcare Facility Context**

It is estimated that, within three to five years of graduating, one half of the nurse's knowledge is obsolete (Domino, 2005). The half-life is shorter for technological knowledge. This highlights the place of information literacy as a major component of continuing competence and lifelong learning initiatives for nurses.

In particular, information literacy has become increasingly important to registered nurses as they take on team leadership and care coordinator roles. They must possess the "intellectual framework for understanding, finding, evaluating, and using information through critical discernment and reasoning" (American Library Association, 2000, p. 1). Information literacy is important to the nursing process, which is a systematic problem solving method of ensuring consistent, quality nursing care (Cavanagh, 1991). This process involves assessment (gathering information), planning (analysing information to determine a plan of care to meet a patient's needs), implementation (acting on the analysis of the problem) and evaluation (determining if the plan was effective or if the results validated the interpretation of the problem).

Closely related to information literacy, and perhaps inseparable from it, is computer literacy (International Adult Learners' Week, 2003). Schloman (2001) notes that computer literacy is an essential survival skill for the profession and is important to enable information related activities. A major goal of the Canadian Nursing Informatics Association (2006) is to increase awareness of nursing informatics and the integration of nursing, computer and information sciences.

The need for information literacy can be linked to a major initiative which is currently underway for all rural health regions in this province. The Alberta Regional Shared Health Information Program will achieve a shared electronic health record across all seven regions (Meditech, n.d.). This software program is being implemented in stages over the next five years and will require extensive end user training on its use and application. All nurses and indeed all healthcare professionals will need to embrace this lifelong learning endeavour in order to maintain employment with these health regions.

## **Situativity in the Healthcare Facility Context**

Traditionally nurses have received their entry to practice education in discipline-based, classroom settings with supplemental learning situated in authentic settings (Baylor, Samsonov & Smith, n.d.; Philips, 2005). As a pedagogical approach, discipline-based learning is product oriented and relies on objective measures of rightness (Redish, 1996). The learner is invisible to the process and engages in acquiring knowledge through learning prescribed content. The nursing process extends this discipline-based knowledge to application in lifelike situations in the laboratory and practice settings (Cavanaugh, 1991). This application requires the social interaction and participation of the learner.

Situativity offers an alternative to discipline-based approaches. Situativity is a learner-centred approach where learning occurs through participation in authentic activity in context, such as a workplace (Stein, 1998). While the information to be learned is often 'prescribed', the learning is situated in an authentic healthcare context (Philips, 2005). 'Prescribed' content refers to current evidence-based research, information, techniques, products and procedures (Canadian Nurses Association, 2002). Decision-making and practice must be based on current information to keep the context renewed in today's setting.

The nurse will, for example, follow national guidelines for wound care, while choosing the treatment appropriate to the patient's particular need (Canadian Association of Wound Care, 2006). This requires the nurse not only to have a thorough knowledge of a range of prescribed wound treatment options but also to be able to make treatment decisions which are predicated upon the particular indications of the situation at hand. Situativity provides an environment which accommodates both the need for mastery of prescribed content and the development of heuristic knowledge related to appropriate decision-making in context.

## **Communities of Practice**

Communities of practice are excellent examples of situated learning environments (Barab & Duffy, 2000; Lave, 1996). Learning in a community of practice involves differing levels of engagement and participation for different members and is not simply a group of people working on a common task. A community of practice is a setting for social exchange and collaboration (Brown & Duguid, 1989). It provides the structure for building and sharing understanding (Lave, 1996). Both the educator and the learner are situated learners within communities of practice (Barab & Duffy, 2000). One has more experience and collaborates, supports and guides the other, who is more peripheral and inexperienced. Moreover, communities of practice are appropriate contexts for the processes of problem-solving: understanding, finding, evaluating and using information (American Library Association, 2000). All participants, from the novice to the experienced peer, can hone their analytical and critical skills in the context of the workplace.

Nurses and educators are participants in various communities of practice, from the multidisciplinary team, specialty settings and group projects to smaller informal peer groups. The nurse educator is able to tailor the process to the educational background and job experience of the nurse (Lave, 1996). Learning occurs with differing levels of social interaction and collaboration with experienced others and peers. The

participants support one another in the process of acquiring the knowledge, seeking clarification and practising proper technique (Barab & Duffy, 2000). In each of these communities of practice, nurses gain exposure to the intellectual framework for finding pertinent information to solve a problem effectively.

### **Advantages and Disadvantages**

There are a number of advantages of applying situativity to this context. First, situativity is learner-centred and thus acknowledges the needs of the learners (Stein, 1998). This approach is sensitive to the tasks that the learners must learn to perform in the demanding, ever changing healthcare environment. Learning is situated in authentic contexts with real life applications of knowledge (Brown & Duguid, 1989; Wenger, 2005).

Second, situativity also acknowledges the ability of the educator to provide scaffolding appropriate to the learning needs of the nurses (Barab & Duffy, 2000). Regarding the implementation of the electronic chart, there are plans to ensure that all participants have basic computer knowledge before embarking on the region wide training sessions to introduce each module. In this approach, the scaffolding occurs in the community of practice and the scaffolding itself is supported by member participation and interaction (Stein, 1998).

Third, while the nurse must follow protocols, policies and procedures that are based on best practice guidelines, there is opportunity for situated critical analysis (Brown & Duguid, 1989; Canadian Nurses Association, 2002; Stein, 1998). The nurse considers the indications for each medication or treatment and obtains information from various sources: drug handbooks, the pharmacist, the patient, nursing journals or the Internet. The nurse relates this information to the patient's specific diagnosis and current condition.

On the other hand, the quality of the community of practice may represent a major disadvantage of this approach. When participation and collaboration are thwarted, the community is weakened (Smith, 2003). This could involve situations where discussion is encouraged with the knowledge that it will not effect change in the outcome. Benson (2004) identifies barriers such as organisation-centred rather than learner-centred initiatives and a lack of managerial support for identified staff needs. Staff shortages also impact on the quality of a community of practice when the nurses do not have the opportunity to participate and to collaborate and learn with their peers (Benson, 2004; Domino, 2005).

A recent study (Makary, Sexton, Freischlag, Millman, Pryor *et al.*, 2006) researching teamwork and operating room communications found that lack of respect for all participants impacted on the quality of communities of practice. When questioned about effective collaboration, nurses often described good collaboration as having their input respected and physicians often described good collaboration as having nurses who would anticipate their needs and follow their instructions.

Considering that the nurse's knowledge is outdated in two to five years, situativity provides the opportunity for the practical application of current evidence-based knowledge in authentic patient care situations. Understanding the advantages and

disadvantages of the community of practice environments will enhance the application of this approach (Smith, 2003).

## Conclusion

Learning Futures in lifelong learning is concerned with the learner's response to globalisation and the constant and ongoing changes in the workplace. In particular, this paper has examined the lifelong learning needs and responses of staff nurses in the context of continuous changes in the healthcare environment. Nurses struggle, as professionals, with the challenges of complex health conditions, staff shortages, heavy workloads, technological advances, information updates, economic upheavals and consumer expectations.

The United Nations Educational, Scientific and Cultural Organisation (2002, 2005) literacy campaign addresses a critical element of Learning Futures in lifelong learning. Information literacy, an emerging area of this campaign, is an important component of lifelong learning and continued competency for nurses. For these professionals information literacy involves the examination of the advancements in information to determine what is applicable and how it can be applied to the provision of quality patient care in the workplace.

Nurse educators seek to promote lifelong learning and to facilitate effective responses to the ever changing workplace. The application of situativity affords the opportunity for the educators to support the staff nurses and to facilitate information literacy through the processes of participation, collaboration and integration in an authentic setting.

As Toffler noted, "...the illiterate of the 21<sup>st</sup> century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn" (cited in Uys, 2002, p. 179). The lifelong pursuit of information literacy, learning, unlearning and relearning in the context of the workplace will help nurses respond effectively to the rapid changes and effects of globalisation.

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