TRANSITION TO TERTIARY EDUCATION AND VISUAL IMPAIRMENT: THE ROLE OF ONLINE CoPs

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Abstract

This research-in-progress paper presents an outline of my research project. The purpose of the research project is to understand and explain how the process of transition to tertiary education among visually impaired students in New Zealand can be supported through the use of online communities of practice (online CoPs). A qualitative research has been chosen as the most suitable approach to examine the perspectives and needs of this group of students. Additionally to its empirical contribution, this research project will contribute theoretical knowledge to the scholarly community. I propose a model that is compounded by activity theory, the theory of student departure and factors affecting visually impaired students’ transition.

Keywords: transition, tertiary education, visually impairment, online CoPs, activity theory, action research.
1 INTRODUCTION

Recently, the number of students with disabilities attending tertiary education in developed countries, including New Zealand, has steadily increased (Getzel & Wehman, 2005). This trend is accompanied by a growing awareness about the need for inclusive tertiary policies targeting this particular disadvantaged group in society (Barnes & Mercer, 2006; Getzel & Wehman, 2005). In this respect, transition to higher education has been identified as one of the most significant topics affecting student with disabilities (Kochhar-Bryant, Bassett, & Webb, 2009). However, the transition for students with disabilities, in contrast with non-disabled students, is, at best, more stressful and, thus, difficult (Caton & Kagan, 2007). Consequently, helping to “smooth” the transition to tertiary education has become a crucial issue not only for disabled students but also for their families and university organizations.

Similarly, there is an increasing, but still insufficient, body of knowledge looking at the potential of information technology (IT) for helping people with disabilities. This interest has emerged because IT provides new ways of communication and interaction and also because it has become more and more embedded in people’s everyday lives (Boase, Horrigan, Wellman, & Rainie, 2006). While research has mainly centred on self-determination, participation and learning (see Burgstahler, 2003; Cook, et al., 2005; Thoreau, 2006) there is still a huge knowledge gap regarding IT in the context of disability and transition to tertiary education, especially from disabled students’ perspectives and needs.

Having said this, this paper presents the main considerations for my research project, which looks to understand how the transition process to tertiary education among visually impaired students is supported through the use of online communities of practice (CoPs). The paper is organized as follows. Section two explores the concept of transition and highlights the issues affecting the transition process to higher education among visually impaired students. Section three defines online communities of practice. The theoretical background of the research project is depicted in section four. Section five presents the theoretical model that will guide the research. The research methodology adopted for this research is explained in section six. Finally some issues and challenges are presented in the final section.

2 TRANSITION TO TERTIARY EDUCATION AND DISABILITY

Transition to tertiary education is a longitudinal process. It entails a set of three stages: separation, transition (that is, the transition stage, not transition as a whole process) and incorporation (Tinto, 1993). The transition process is the “passage between the old and the new, before the new full adoption or new norms and patterns of behaviour and after the onset of separation from old ones” (Tinto, 1993, p. 97). It entails students’ adaptation to the tertiary environment and involvement with the academic and social systems of the tertiary setting (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Tinto, 1993).

The experience of transition to tertiary education among students could cause a sense of loss and confusion among students (Tinto, 1993). In the context of students with disabilities, the transition to tertiary education is even more challenging compared with the transition experienced by non-disabled students (Caton & Kagan, 2007; Hughes, 2001). This is because the tertiary environment differs from that in school. Disabled students need to move from a system designed to provide personalized assistance and/or support programs to a system of services based on eligibility and in which learning depends on, to a large extent, the student itself (Bakken & Obiakor, 2008).

2.1 Visual impairment and transition

Students with visual impairments represent a heterogeneous group with a broad range of etiologies, abilities and personalities (Kelley, Sanspree, & Davidson, 2000). The impact of the transition process
on personal development and learning is more significant in young visually impaired students than other older groups of this population (Kelley, et al., 2000). Schneider (2001) points out that visually impaired students not only have to deal with changes faced by all students but also “the challenges of learning a new environment and constructing a network of services and support people” (Schneider, 2001, p. 8). This view is reinforced by Erin and Wolfe (1999) who explain that in the post-secondary setting, visually impaired students have to assume the responsibility for their own time management. For instance, at school, visually impaired students receive support from specialists who take responsibility for providing books and other materials; in the tertiary setting students with visual impairments become their own advocates and have to plan ahead in order to obtain class materials (Erin & Wolfe, 1999; Kochhar-Bryant, et al., 2009).

2.2 Transition issues for the visually impaired

There are a number of issues that students with visual impairments need to be aware of as these can potentially affect their transition to post-secondary education. If these issues are confronted in a timely manner, the chances for a successful transition experience increase; if they are not, the students’ experiences in the tertiary setting could be frustrating (Erin & Wolfe, 1999). Although these issues have mostly been identified in the context of the transition to the school environment among young children with visual impairments, they can be adapted to the experience of tertiary students with visual impairments, though only as a rough guide as more systematic research in this respect needs to be done. These issues are:

Transportation: Dealing with transportation is one of the most tangible and important issues for visually impaired students accessing the tertiary setting (Bakken & Obiakor, 2008). Driving provides a sense of control, freedom, responsibility, and opportunity for new social contact for young people in general (Erin & Wolfe, 1999). However, for visually impaired students driving is not an option and they need to prepare themselves for transportation management (Erin & Wolfe, 1999).

Family: Family involvement has a paradoxical effect on visually impaired students’ transition. It can positively impact on their academic outcomes by assisting them, for instance, in learning (deFur, Todd-Allen, & Getzel, 2001). However, research (Beresford, 2004) has also shown that low family involvement in the transition process can have a negative effect. Even family over-protection (Sanders, 2006) is an issue that influences visually impaired students’ development of their full potential.

Information Technology: It is important that IT is made available and accessible to visually impaired students (Sutcliffe, 1999). Some of the concerns about this issue is that technology is not made available to students because stakeholders do not know about appropriate hardware and software and because there is lack of adequate funding (Burgstahler, 2003). Even if technology is physically available, it needs to be customized to satisfy the needs of visually impaired students in diverse areas. If these challenges are not solved opportune, students may decide not to use technology making the transition to tertiary education even more complex.

Accommodation: Nowadays, a significant number of visually impaired students are looking for the opportunity to live independently (Erin & Wolfe, 1999). For those deciding to move from their parents’ house, finding a suitable place to live could be very difficult task. As appropriate accommodation for visually impaired students is insufficient, any housing alteration or change will require from them some additional financial expense.

Socio-psychological: As visually impaired students experience many changes in a short period of time, the quality and maintenance of their social relationships become very important for them (Kef & Dekovic, 2004). Family and friends represent for them the most important relations and sources of social support (Huurre, 2000). However, they find it harder to obtain in educational environments such as universities (Sacks, Wolfe, & Tierney, 1998). There is evidence that students with visual disabilities attending school and university programmes are more likely than their sighted peers to
struggle with social isolation (Sacks, et al., 1998) and rejection as well (Kekelis & Sacks, 1992). Thus, not being able to build social relations could affect visual impaired students’ perceptions of self-esteem, self-assurance, feelings of self-worth as well as a sense of security and control over oneself and the environment (Huurre, Komulainen, & Aro, 1999).

Financial: Disabled people are more than twice as likely to live below the poverty line than sighted students (Kochhar-Bryant, et al., 2009, p. 12). Visually impaired people facing financial scarcity are less likely to have private health insurance and more likely to live in areas where the household income is lower than the average (Livingston, McCarty, & Taylor, 1997). Visually impaired students face extra costs as a consequence of going to tertiary education which could include the acquisition of adaptive technology for academic purposes, the use of taxis to go to university and home or making some needed adaptations in their accommodation in order to feel secure and safe.

3 ONLINE COMMUNITIES OF PRACTICE

Communities of practice are “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002). Not all social groupings are communities of practice. Sharing a concern or interest alone is not sufficient to make one. A community of practice originates when people engage in a process of collective learning that creates bonds between members and help them to deal with the shared issue of concern (Wenger, 2001).

Communities of practice are conformed by three elements: the domain, which is the shared concern or issue that affects or interests all members of the community; the community, which is about people interacting and creating a sense of belonging and mutual commitment; and the practice, which implies the creation of a shared repertoire of resources among the members of the community to address their concern (Wenger, 2001).

The online component of communities of practice regards the use of technology to mainly mediate people’s interactions instead of face-to-face meetings. Online communities of practice (online CoPs) can adapt existing technologies to their purposes or use technological resources designed specifically to support their interactions and the achievement of their goals (Wenger, White, Smith, & Rowe, 2005). The importance of the technology component in communities of practice is that it works as an enabler that supports members to maintain and develop their level of interaction which could be affected if they are geographically dispersed, for instance.

I consider that an online CoP provides a suitable approach for visually impaired students as they could use available information technologies (either synchronous or asynchronous platforms) as means of interaction, knowledge sharing and mutual learning in regards to the transition journey in higher education.

4 THEORETICAL BACKGROUND

4.1 Theory of student departure

The theory of student departure emphasizes the central role that tertiary institutions play in influencing students’ social and intellectual development. According to this theory, it is the complex process of students’ integration or involvement with the social and academic systems of the tertiary institution that continually influence and modify students’ goals and commitments and thus lead them to either study completion or early departure (Tinto, 1975, 1982). The academic system takes place not only in the classroom but also in other tertiary environments such as laboratories and involves various faculty and staff whose primary responsibility is the education of students (Tinto, 1993). On the other hand, the social system focuses on the many members of the tertiary institution, especially the students, and their social and intellectual needs. The social system is shaped by social interactions...
among students, faculty and staff that mainly come about outside the formal academic system of the tertiary setting, for instance, university halls, cafeterias, students clubs (Tinto, 1993).

The theory of student departure also considers that the experience of being a member of a tertiary institution is marked by “stages of passage” that students “must typically pass in order to persist in college” (Tinto, 1993, p. 94). The conceptualization of the stages of passage in Tinto’s theory is as follows:

- The stage of separation: Separation is the stage that demands students to “disassociate themselves, in varying degrees, from membership of the communities of the past” (p. 95). It is characterized by the decline in interactions with members of the group from which the student has come (Tinto, 1993).

- The stage of transition: During the transition stage, students have started to separate themselves from the past. However, they still have to acquire the norms and patterns of behaviour appropriate to be incorporated into the life of the tertiary setting and its many communities (Tinto, 1993).

- The stage of incorporation: It entails students’ challenges of finding and adopting norms that will help them in their transition (as a whole process) and in establishing competent membership in both the social and intellectual communities of college (Tinto, 1988, p. 446). Social interactions are the primary means to achieve incorporation (Tinto, 1988).

4.2 Activity theory

In Kuutti’s (1996) words, activity theory is “a philosophical and cross-disciplinary framework for studying different forms of human practices as development processes, with both individual and social level interlinked at the same time” (p. 25).

An activity is any interactive process between a subject (an individual or a group) and an object in which the latter has to meet a certain ‘need’ of the former. Needs represent the ultimate reason or cause for human action as the fulfilment of these needs will result in outcomes (Kaptelinin & Nardi, 2009). The concept of artefact or tool mediation is important to activity theory regarding this subject-object interaction (Engestrom, 1999; Hasan, 1998; Kaptelinin, Kuutti, & Bannon, 1995; Kuutti, 1991). The role of tools is to mediate the interaction between the subject and the object through a number of forms that includes instruments, signs, machines, methods, laws, forms or work organization and accepted practices (Hasan, 1998; Kaptelinin, et al., 1995; Kuutti, 1991).

Activity theorists such Yrjo Engestrom (2001) (figure 1) have extended this seminal but simple conceptual explanation of activity. In Engestrom’s model of activity, one domain and two mediators are added to the model: community, rules and division of labour respectively. The community domain refers to those who share the same object of activity. Thus, in addition to the subject-object interaction, the community component adds two new interactions to the model: the subject-community interaction and the community-object interaction. As well, these two new interactions require of mediating components in the same way that tools mediate the subject-object interaction. Thus, the subject-community interaction is mediated by rules. Rules are a form of institutionalized practices that are represented in the way of administrative procedures, accepted work routines and union regulations, for instance (Kuutti, 1991). On the other hand, the division of labour becomes the mediating component of the community-object interaction. Division of labour refers to the explicit and implicit organization of a community as related to the transformation process of the object into the outcome (Kuutti, 1996).

Engestrom’s development of activity theory allows us to understand “the systemic relations between an individual and his environment” (Kuutti, 1991, p. 533) and the application of the theory in the context of group activities (Hasan, 1998).
4.2.1 Activity theory and IS

The use of activity theory as a valid research approach in the field of information systems (IS) dates from the early 1990s (Mursu, Luukkonen, Toivanen, & Korpela, 2007). It has been applied in IS research (Hasan, Gould, & Hyland, 1998) and other related areas of study such as computer-supported cooperative work (see Morten, et al., 2002) and human-computer interaction (see Kaptelinin, 1996; Nardi, 1996).

The concept of tool mediation is an important component in activity theory and its application in the IS field is of critical importance. Clearly, information systems represent the tool in the structure of the activity (Kuutty, 1991; Hasan, 1998). For instance, ICTs (e.g. computers, the Internet) embody the technical or physical tools that allow members of an organization or society to accomplish the activity of searching and/or retrieving information (Crawford & Hasan, 2006). Nevertheless, from an activity theory perspective, ICTs are not only constrained to their material nature but they can also influence the psyche and behaviour of subjects and, thus, became psychological tools (Hasan, 1998). As their pervasiveness and complexity in organizations and society have increased, ICT tools have also been used to facilitate communication and interaction and, thus, the flow of information and knowledge (Crawford & Hasan, 2006).

In the context of the transition to tertiary education, students, particularly those with visual impairments, are understood to pass stages, each of which imply an activity necessary for students to become involved or engaged in the tertiary organization. New technologies can be seen as mediating tools that assist students through these stages of the transitional process. In conclusion, as Crawford and Hasan (2006) point out, the relevance of activity theory is that it “provides a rich holistic understanding of how people do things together with the assistance of sophisticated tools in complex dynamic environments” (p. 49). This is the reason why activity theory is a suitable theoretical lens for this research project.

5 CONCEPTUAL MODEL

Due to the lack of an existing theoretical approach for the study of transition to tertiary education for visually impaired students, this section proposes a conceptual research model (Figure 2), which is informed by the literature review and incorporates a body of theoretical views. The conceptual model is the lens that will help me to answer my research question: how does the formation of online communities of practice support the transition process to tertiary education among visually impaired students in New Zealand? It integrates core elements of the theory of student departure and activity theory combined with a set of factors or issues which, according to the literature, may influence the transition of visually impaired students to tertiary education.

The conceptual research model sees the transition to higher education as a longitudinal process experienced by students with visual impairments. Its purpose is the inclusion and/or involvement of the student in the life of the tertiary setting. This process entails three stages: the separation stage, the transition stage (as a particular stage of the whole wider process) and the incorporation stage. Each of these stages is oriented towards specific goals or motives but at the end their interrelation will shape
the level of students’ involvement in higher education. For instance, students’ goals in the stage of separation can be marked by the need to get used to the fact that some school services are no longer available to them, the fact that family and friends will not be as close as they expect to be, and being responsible for a more independent learning according to the tertiary level. In other words, their motive is to step forward towards the transition stage.

The model also includes two domains: the internal domain and the external domain. The internal domain is formed by the academic and social systems of the tertiary institution proposed in Tinto’s theory of student departure. This domain depicts the students’ academic and social interactions that occur within the tertiary organization. The external domain is constituted by a number of issues or factors identified by the literature as potentially affecting the experiences of visually impaired students in the tertiary setting. We have found that they are family, transportation, information technology, accommodation, socio-psychological (personal) and financial issues. These issues are independent and outside of the tertiary setting itself but their effects on the stages of the transition process are as important as those of the systems of the internal domain. It should be noticed that both domains, the internal and the external, are present along the three stages of the transition process and the extent of their influence differs from one stage to another according to the individual and collective needs of student with visual impairments.

Transition Process

Figure 2. Conceptual research model for transition of visually impaired students to tertiary education

The model sees the stages of the transition process as a set of three activities which are independent but also connected. As independent activities, each of them holds their own motive and, thus, an object with which visually impaired students (the subject) interact. Thus, we could refer the transition process as encompassing the separation activity, the transition activity and the incorporation activity. These three activities form the longitudinal transition process which reflects their cultural-historical development and that will result in diverse level of students’ inclusion/involvement with the tertiary organization.

There is clearly a common subject and a general mediating tool in this chain of activities: students with visual impairments and the ICT system, respectively. On the one hand, it is not only the visual impairment that determines the character of the subject. More importantly, what defines its collective nature is a shared concern for dealing with the transition process in order to achieve inclusion in the university environment. On the other hand, the ICT system acts as a mediating tool that supports communication and interaction among visually impaired students. The use of the ICT system is not simply technical and directed to the completion of homework or assignments. The significance of the ICT system for visually impaired students in the conceptual model is that it mediates, through the sharing of information and knowledge, each one of the three activities (separation, transition and incorporation) encompassing the longitudinal process of transition.
In the conceptual model, the selection of a particular ICT platform will depend on the needs of the visually impaired students during each activity. The range of choices of available platforms is vast and flexible. For instance, a mailing list could be a starting point for those visually impaired students in the stage of separation willing to only share their experiences. Things could be different for those in the stage of incorporation as their need for social integration could become a priority. In this case, a platform offering synchronous interaction such as chat rooms could be more useful to their ends.

What makes a crucial difference between each activity is the nature of the object. Each activity points to the attainment of determined goals or motives, thus, there is an implicit set of needs that have to be satisfied for each of these activities. For instance, it could happen that in the separation activity, visually impaired students face particular challenges that need to be overcome in order to reach the transition activity. Although each stage implies an activity, the boundaries between them are blurred and non-excluding because the experiences of the transition process differ among visually impaired students. In fact, it could be the case that activities coexist. For instance, it is possible that a student with a visual impairment experiencing the transition activity could still be struggling with the effects of the activity of separation.

The alternative model includes Engestrom’s (1999) contribution to the activity theory approach by adding the community component in the subject-object interaction. In the context of the alternative model, the community component could be represented by lectures, tutors and those who are related to the academic integration of visually impaired students. Relatives and friends and other students who are non-visually impaired but share an interest in disability issues are also part of the community domain of the activity. The levels of participation of those who form the community vary from one activity to another. Additionally, the interaction between visually impaired students (subject) and lectures, relatives, friends (community) is mediated by rules. Similarly, the interaction between the community domain and the object is mediated by the division of labour.

6 RESEARCH METHODOLOGY

Because of the lack of understanding about the phenomenon of transition to tertiary education among visually impaired students, this research project will follow a qualitative approach. This is the most convenient way to deal with the research question of this project as I seek to find out “the meaning of the problem from the views of participants” (Creswell, 2003, p. 16).

As a research method I have chosen, action research (AR). AR not only merges synergistically research and praxis (Baskerville & Wood-Harper, 1996) but is also strongly oriented towards collaboration and participation among researcher(s) and participants. Together researcher and participants take part in an iterative process which encompasses a particular cycle of activities such as problem diagnosis, action intervention, and reflective learning (Avison, Lau, Myers, & Nielsen, 1999). Researcher(s) and participants work together in order to find practical solutions to concerning issues that interest or affect them and which will result in mutual learning (Reason & Bradbury, 2001).

As the first step for action research data collection, I have decided to conduct focus groups with first-year visually impaired students in Wellington and Auckland. The purpose of conducting focus groups is to identify the needs of visually impaired students during the transition process and how online CoPs support them in that respect. Focus groups represent a well-established research technique in the social sciences (Morgan, 1996). Focus groups are group discussions organised to explore a specific set of issues through participants’ discussions of particular questions (Kitzinger, 1994). This research technique differentiates from other group interview techniques in regards to the explicit use of the group interaction as research data (Kitzinger, 1994).

During the PACIS Doctoral Consortium, I expect to present more details about my research design including the use of action research. I am currently in the last stages of the development of my research proposal. I expect to present my research proposal to the School of Information Management in May 2011. In the subsequent months, June or July, I expect to obtain HEC approval to conduct my research. I have also considered conducting a pilot research previous to data gathering in August. Data
collection will start in October and will finish in April 2012, including the stage of data analysis. The subsequent months will be spent in the final thesis writing and the submission.

7 ISSUES AND CHALLENGES

I am aware of some issues and challenges that could arise during the development of this research project. For example, participants will not be selected randomly but will be chosen taking into account their student enrolment status and their disability services registration at universities in Wellington and Auckland. For this reason, it would be inadequate to generalize the results of this research to a larger population as participants are not a representative sample. Another issue is related to research timing. As the transition to tertiary education is a longitudinal process, time to cover the three stages could be insufficient for data collection and analysis considering the terms of three-year PhD research project. Finally, in seeking to create a collaborative environment on equal terms between the researcher and the participants, some conflicts could appear regarding roles and identification of the research problem. Thus, as Avison, et al. (1999) suggest, it is important to establish and share a mutually acceptable ethical framework to clarify these possible conflicts.
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