Development of Lifelong Learners through E-Communication Tools

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Abstract—*Computer mediated communication (CMC) skills are essential in today's rapidly changing, technologically focused environment. This study reports student perceptions towards using CMC to improve learning. Twenty-two Tertiary and Further Education students participated in a pilot study that measured student preferences and perceptions of e-communication tools via a combination of qualitative and quantitative methods. Three units of varying levels and complexities of e-communication tools were used in the study, which provided perceptions influenced through varying levels of exposure and usage. The research indicated that students perceived most tools as being useful, but not all preferred to use them. A most important finding was students indicated a shared perception and preference for combinations of e-communication tools, and that by promoting the use of these tools, teachers help encourage students to develop as lifelong learners.*

Keywords: *Lifelong learning, computer-mediated communication, student motivation*

1. INTRODUCTION

The technological advancements in computers provide a new era for communication. These advancements bring with them the need to understand and harness the technology. To enable learners and teachers to make the best use of these communication technologies in an educational context, there is a need to better understand how students perceive the use of these tools.

The purpose of this study was to ascertain Tertiary and Further Education (TAFE) student perceptions and preferences concerning the use of computer mediated communication (CMC) for learning. CMC is an acronym used by many academic writers to refer to all situations where computers are used to facilitate human communication when using the Internet (Ellsworth, 1994). For the purposes of this study, the term e-communication is used to represent CMC. The e-communication tools examined in this study included the World Wide Web (WWW), Electronic Mail (e-mail), and electronic bulletin boards. The background factors examined included; age, prior education, gender, motivation for employment, and goal for undertaking course. This study helped clarify the connection between the use of e-communication tools and the development of lifelong learners in further education. This understanding can lead to a more effective use of these e-communication tools to encourage learners to succeed.

2. LIFELONG LEARNING AND ELECTRONIC LEARNING

Adults enter study with more experiences and knowledge of the world and their place in it, compared to younger students. Despite this experience, mature-aged students often lack self-assurance when they return to learning. Recent participation research has found the typical TAFE learner is better educated, predominantly female, more likely to be employed, than their counterparts in previous times. Lifelong learning is a continual process providing stimulation to empower individuals. Lifelong learners acquire the knowledge, values, skills, and understandings required in life and apply these skills to give them confidence, creativity, and enjoyment in all roles, circumstances, and environments (Kearns, McDonald, Candy, Knights, & Papadopoulos, 1999). De La Harpe and Radloff (2000) found that students entering or re-entering formal education possessed a number of characteristics, including self-knowledge, self-confidence, persistence and a value for learning. Students are motivated to learn through a positive attitude, confidence in themselves and the ability to manage negative feelings effectively. Pierce and Stacey (2003) reported that when students with a positive attitude valued the accessibility of Computer Algebra Systems (CAS), as a means for practicing and learning mathematics, they were more likely to persevere with the use of CAS. Ruge (1999) found that students with positive attitudes towards learning are capable of attaining higher standards and are more likely to learn than other students. Characteristics of students studying an online course were distinct from those taking a lecture format (Dutton, Dutton, & Perry, 2002). Students choosing to study online were older and less likely to be enrolled in traditional undergraduate programs. In addition they were more likely to be employed and/or have childcare responsibilities and a longer than average travel time to university. They also were typically more experienced with

computers. Littlefield (2004), found key characteristics in successful and happy e-learners such as self-motivation, lack of procrastination, good reading and comprehension skills, a resistance to constant distractions, and a comfort level with social situations. These students explore issues with peers through e-mail, bulletin boards, or discuss what they are learning with spouses and co-workers. Advantages of e learning reported by Felix (2001) include time flexibility, a wealth of information, and reinforcement of learning, improved privacy, the ability to repeat exercises, and gaining computer literacy.

These advantages can benefit students in various ways such as; the development of student centred learning, personalization, flexibility, enhanced discussion, confidence, and interactivity. Developing students who are capable and comfortable with e learning will assist learners to be prepared for further education as well as careers that include the use of technology. Disadvantages such as technology problems and learner frustration can discourage the use of e-learning (Felix, 2001). These issues need to be addressed early in programs if e-communication is to be successful. Motivating students can be a challenge when moving from traditional classrooms to Web Based Training (WBT). WBT demands high levels of motivation, from learners. Jonassen et al. (2003) reported that motivation is a key ingredient to the success of online learning communities. WBT is difficult for students. It raises technical hurdles. The rules for social interaction are uncertain, and the immediate camaraderie of classroom training is missing (Horton, 2000). Beffa-Negrini et al. (2002) found that online student motivation could vary depending on; content complexity, and a lack of a union between content and student needs. Strong motivation is important at the start of the learning process when students often have to respond to technical glitches (Salmon, 2000).

The encouragement of a culture of lifelong learning is beneficial to both the student and the community because of the high probability of these students to succeed. Lifelong learners embrace technological developments and can respond to the needs of a rapidly changing workplace. A positive attitude towards learning is critical to the retention and success of students in further education.

E-learning is an important aspect of further education because of enhancement of learning and its applicability to the workplace. It is critical for students to recognise the benefits of e-learning early in the process in order to motivate students to continue with it. If students are to gain benefit from e-communication tools, it is important that they have positive perceptions of its potential use.

It is clear from the literature on lifelong learning and e-learning that many of the characteristics of these learners overlap. This leads to a question regarding the applicability and advantages of e-communication tools for lifelong learners of which TAFE students are a part.

3. THE STUDY

The data sources in this study included: survey responses, academic transcripts, e-mails, bulletin board postings, and unit evaluations. Students were selected as a sample of convenience, due to availability, access, and a lack of funding and time. Participation in the survey was voluntary, and students were given the option of completing the survey in class or on a take home basis. Paper surveys were distributed at the beginning of the class, and took five minutes to complete. The cohort who participated in this study was 36 TAFE students. The age range of the students was 15 to 65 years. The educational backgrounds of the students varied from year seven to Bachelor degree qualifications. Of the 36 surveys distributed, 22 (61%) were returned. Firmin and Miller 217

The survey instrument included thirty questions. The survey had two parts; demographic background data, and information regarding students, perceptions, and beliefs of the value of e-communication tools for learning. Students used and evaluated e-communication tools as part of the assessment process. Assessment activities varied between units. The first unit included; participating in e-mail, and bulletin boards posting sessions and evaluating the experience. The second unit included assessment activities that surveyed preparation and presentation of an e-communication lesson and evaluation of the experience. The final unit used e-mail as a communication and assessment submission tool. This mixed method approach is well suited for many reasons including its support for diversity. Diversity leads to much more credible and accurate results; creativity, e communication tools, are considered relatively new learning technologies, and flexibility, the mixed method approach, is a reasonably accommodating method of scientific research. Descriptive statistics in the form of frequency tables, and cross tabulations were performed on the data.

4. STUDY OUTCOMES

The following background characteristics of respondents were requested as a part of this survey research: age; education level; gender; goal for undertaking the course, and perception of difficulty of the course. It was anticipated that one or several of these variables would have an impact on the way that respondents answered the survey questions. Analysis revealed that no single background variable impacted the answers. This study explored respondent perceptions and preferences about e-communication tools and the match with the observed learning experience in an e-communication environment. Student respondents were questioned about their perceptions of the usefulness of electronic resources available on the WWW, electronic mail (e-mail), and electronic bulletin boards. Student respondents were also questioned about their preferences for use of the same three electronic communication tools in a learning environment. These perceptions and preferences were then compared to qualitative

feedback obtained from an e-communications environment. Most respondents perceived the WWW to be a useful tool (91%). However, only 72% of respondents reported a preference for use of the WWW as an e-communication tool. This 19% becomes clearer when examining the qualitative feedback, which indicated that the gap might have been primarily financial in nature, with some students expressing concern with the cost of printing web pages versus receiving printed notes in class. Respondents were asked their perceptions of the usefulness of e-mail as well as their preference for the use of e-mail in the learning environment. Many respondents (68%) perceived that e-mail is a useful tool within the learning environment, however less than half of respondents (46%) preferred this method of communication. Qualitative feedback indicates that the gap may be over concern with the reliability of e-mail systems as well as the strong use of other technologies such as SMS messaging.

Respondents were questioned about their perceptions of the usefulness of bulletin boards and their preference for using this e-communication tool. Responses were less positive about this use than they had been with the other tools, with both questions showing positive response rates of 36%. Feedback indicated that the low positive responses were more indicative of the lack of familiarity with this tool than a negative perception of bulletin boards. Qualitative feedback indicated that more exposure to this e-communication tool would result in higher positive responses. Survey participants were asked to provide feedback on the perceived benefit that might be gained by people using e-communication tools in their learning, and whether they personally saw a benefit from using the tools. A large number of the respondents (87%) perceived that benefits are gained from the use of e-communication tools generally, and nearly all survey respondents (95%) agreed that these tools were beneficial personally. In qualitative feedback, respondents used positive language when speaking about e-communication tools.

Respondents were asked a series of questions regarding their preference to use the WWW, electronic mail and bulletin boards. The positive responses for these questions closely followed earlier questions about perceptions of usefulness and preference. The WWW was the most popular e-communication tool, with 72% positive responses. Respondents were nearly split on attitudes about electronic mail, with 46% positive responses. Finally, respondents were less positive about discussion boards, with 37% responding positively. A final question about using a combination of e-communication tools produced one of the most positive responses in the survey, with 90% of participants agreeing that they preferred using a combination of e-communication tools in their learning. Most respondents showed positive perceptions of the usefulness of e communication tools in the learning environment. Preferences for e-communication tools varied depending upon prior knowledge, familiarity, trust, and training in the use of these tools. Importantly as students became more familiar and comfortable in the use of these e-

communication tools qualitative feedback indicated an increase in their confidence, creativity, enjoyment, perseverance and application of the skills in real life situations. These characteristics are those shared by lifelong learners, and are supported Kearns et al. (1999), and Pierce and Stacey.s (2003) research, and provide a connection to the development of lifelong learners through the use of e-communication tools. Students exhibited an obvious preference for using combinations of e-communication tools for learning. The WWW, e-mail and bulletin boards all received mixed reactions. Analysis of the data indicates that although learners approach the use of e-communication tools with some reluctance, they acknowledge that there are benefits both for themselves personally as well as others.

5. CONCLUSION

From this study, we see that these TAFE students expected the WWW and e-mail to be useful tools for learning however, their perceptions of the usefulness of these tools did not match their own preferences.

Findings indicate that the blend of e communication tools and traditional approaches may improve teaching and learning when a variety of communication tools are adopted, both synchronous and asynchronously. Students require clear instructions on effective use of tools in different situations and that the use of the tool is for a genuine purpose in the course, which is sufficient to motivate students to become familiar with the rules for its use. Appropriate IT infrastructure, hardware and software resources need to be available.

This pilot study has been suitable for developing and trialing various levels of use of e-communication tools in teaching and learning, and new data collection instruments. Information could be gathered in further studies such as; teaching practice of a range of different educators and their use of new technologies to measure the effect on students, engagement in learning, the effectiveness of e-communication tools to develop lifelong learning and collaborative learning.

A most important outcome of this study was that students showed a preference for the WWW, and e-mail, but more importantly, it seems they preferred a combination rather than be reliant on one e-communication tool, making them confident e-learners with lifelong learning skills. Secondly, teachers can motivate students to use e-communication tools as their use can lead to the development of lifelong learning.

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