

Oral Sessions

Education II

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Session Chair: *Prof. Chris Baumann*

ACMASS 5725

Competitiveness in education – interaction effect with ethnicity

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ACMASS 5555

e-Learning Portfolios: Adapting Web 2.0 for Deeper, Meaningful, Lifelong Learning

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Parenting Styles and Students' Achievement in Science

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Competitiveness in Education – Interaction Effect with Ethnicity

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Abstract

Education is increasingly cross-cultural with large international student cohorts studying at universities. Research has established an association between competitiveness and academic performance at the macro level, but this link needs exploration at the micro level. This study links the Big Five personality traits to individual competitiveness, explaining 39% of competitiveness. Importantly, an interaction effect between competitiveness and a student's ethnicity was proven, explaining 15% of individual performance. Implications for education are discussed.

Keywords: Competitiveness, Education, Ethnicity, Personality

ACMASS 5555

e-Learning Portfolios: Adapting Web 2.0 for Deeper, Meaningful, Lifelong Learning

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Abstract

Modern world eLearning environment is transforming educational settings, yet learning remains the overarching element. eLearning is more than a mode of delivery or functionality of technology . It is rather a conscious choice of the best and most appropriate ways of promoting effective learning. The concept of portfolios has been utilized widely in education for an extensive period of time and with the emergence of eLearning this traditional educational approach has now transitioned to a digital setting. Web 2.0 technologies are a platform for digitalizing portfolios. ePortfolios were trialled as a learning and assessment medium in an Applied Technology final year undergraduate course in a New Zealand technical institute. This case study presents student perceptions on ePortfolios, its application and challenges as well as its validity as an assessment medium. The themes that emerged authenticate that ePortfolios are indeed an effective tool for tracking deep learning progression both for the facilitator and the learner.

Keywords: ePortfolios, deep learning, Web 2.0 technologies, assessment tool.

1. Introduction

The eLearning environment continues to enhance the learning experiences of today's digital natives. eLearning can be defined as learning and teaching that is enabled by or enhanced through the appropriate use of information and communication technologies (ICTs). The cyber generation envisages an education system that is technologically and intellectually challenging which demands a diverse learning environment. With the upcoming technological changes, the role of learners and educators has evolved to a cyber dimension and new approaches to delivery continue to be added to learning and teaching. The emphasis on student centred, collaborative learning is the impetus to this emerging eLearning environment. The dynamic interactive space created by the web and emerging uses of Web 2.0 technologies support social networking and collaborative learning and is driving this

new learning setting. Learning activity has changed as technology has reorganized how we live, how we communicate and how we learn (Siemens, 2005).

Mainstream learning systems are undergoing dynamic and rapid transformation, evolving to keep pace with the technological advances. Portfolios have been used as an assessment medium in education for an extensive period of time. The gradual move towards electronic portfolios (ePortfolios) supports integration of emerging technology into the overall curriculum to increase learning (Anderson, Krathwohl, & Bloom, 2001). Jones (2011) emphasised that an ePortfolio employs 21st century skills such as learning and innovation skills of creativity, critical thinking, problem solving, communication, and collaboration hence promoting lifelong learning.

An ePortfolio is defined by Lorenzo and Ittleson (2005) as a “digitized collection of artefacts including demonstrations, resources, and accomplishments that represent an individual, group or institution” (p. 1). These artefacts can either be text-based, pictures or photos, graphics, videos and links to resources that are used to present information and document one’s learning journey. Artefacts, not only support curriculum validity but also represent the experienced or lived curriculum perceived by each individual learner (Chen & Light, 2010). There are many ePortfolio platforms available on the internet such as Mahara, Pebblepad, Folioscapes and Google’s Blogger. In addition, Google docs can also be customized to represent an ePortfolio.

ePortfolios provide a learner-centric knowledge environment where through the “use of electronic portfolios, the responsibility of learning is transferred to the students. It allows them to be involved and engaged in the learning process and therefore keeps the focus on the learner-centred environment” (Wickersham and Chamber, 2002, p. 739). In addition, ePortfolio’s also assist the learners to develop and sharpen their technology skills (Bolliger & Shepherd, 2010). Batson (2010) further elaborates that an ePortfolio transforms students learning from episodic to longitudinal and increases student engagement. “Embracing ePortfolios and using the online media environment that is intimately familiar to students is a disruptive change for higher education institutions but definitely a beneficial change for students” (Jones, 2011, 84).

Literature verifies that ePortfolios provide a flexible learning environment and act as an effective learning platform for students, digital natives of today. As educators embracing and embedding eLearning portfolios in delivery and evaluation, several challenges have been encountered. To address these challenges research was conducted to evaluate student perceptions on ePortfolios with the view to continually improve learning and teaching practices. Learner feedback was sought to assess the usefulness of ePortfolios as a learning tool. This feedback forms the basis of this research and the findings are presented in this paper.

2. Case Study

ePortfolios were introduced as a core method of assessment for a course in an Applied Technology degree in a technical institute in New Zealand. The course entitled “Societal Context” is an elective paper offered in the final semester of the degree programme to students specialising in automotive technology, marine technology and electro technology. The course worked on the principle of module based learning. Every fortnight students participated in interactive class activities focusing on different learning outcomes for the course. After each session the students were given a specific module designed to demonstrate their individual perception of the learning outcomes in their ePortfolios. Their response is entirely subjective and unrestricted. Learners are given free choice but of course need to keep within the boundaries of the learning objectives.

There were a total of 5 learning modules to be covered over a period of 12 weeks. Prior to 2012 students were expected to submit two summative essays as part of the assessment. However with the growing emphasis on eLearning, ePortfolios were substituted for the summative essays in the course in Semester two of 2012. To examine the value of this intervention it was crucial to establish students’ perception of ePortfolios as a learning tool. This paper presents research findings on the effectiveness of this intervention through student responses on ePortfolios.

3. Methodology

The research followed a qualitative approach with questionnaires used as the principal source for data collection. Cohen, Manion and Morrison (2007) denote that “qualitative, less structured, word based and open-ended questionnaires may be more appropriate as they can capture the specificity of a particular situation” (p. 247-248). The questionnaire design followed a semi-structured format with a combination of closed and open questions. The questionnaire produced not only numerical data for comparison purposes but also presented an insightful range of student opinions.

4. Data Analysis

The student sample consisted of forty two (42), Semester Two, 2012 final year undergraduates. A total of thirty students participated in the research generating a 72 per cent response rate. The participants were all males (this was the composition of the cohort) between the ages of 20 to 65. Seventy (70) per cent of the participants’ were unfamiliar with the concept of ePortfolios prior to the course whereas 30 per cent were accustomed to this assessment tool in other technical courses. All the 30% of respondents that had used ePortfolios previously, did so during the second year of the Bachelor’s programme. Student feedback on ePortfolios suggests that 86 per cent viewed it positively with no votes scored for the ‘poor’ or ‘very poor’ category on the 5 point Likert scale. Fourteen percent of the

students considered ePortfolios as an average assessment tool as highlighted below in Figure 1.

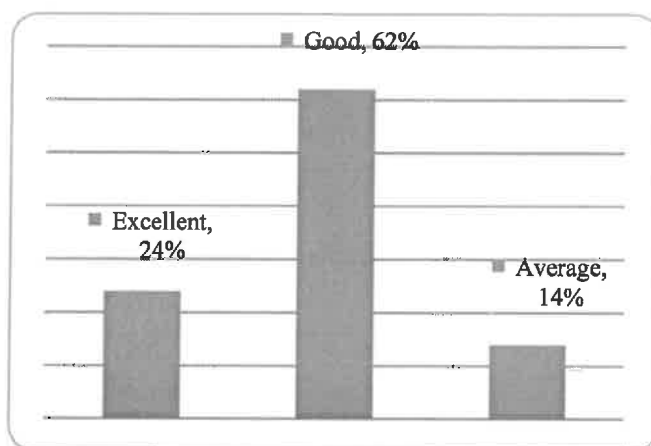


Fig. 1. Student evaluation of ePortfolios as an assessment tool.

5. DISCUSSION

Learner perception of ePortfolios as a learning platform revealed several insightful observations. Three major themes emerged from this research.

5.1 Connectivity and Sharing

ePortfolios establish a culture of collaboration which is essential for real world learning. According to research conducted by Khoo (2012), ePortfolio's "improve interpersonal communication, reflection, and collaboration with peers. They learn from reflecting on their artefacts, collaborating, and interacting with their peers" (para 4). Connectivity is also highlighted as a strong point in this research. Blogger's ability to provide connection with peers and the facilitator as well as the tool for sharing their ePortfolios with their friends was proven to be popular with students. Students commented that the ePortfolio platform provided "*easy link to other sources especially to classmates*" and "*ability to share info to the rest of the world*".

The interaction between students and their peers and between tutors and students created a positive learning environment. Participation and continuous updates in the ePortfolios was encouraging, engaging and motivating for all learners as confirmed by the following student comment "*Easy to set up and also allows friends and your lecturer to view where comments can be made*". The ability to share your ePortfolios with others makes it such a powerful tool in personal and professional development (McIntyre, 2010). The validity of connectivity and sharing is further emphasised by LaGuardia Community College (2013) that ePortfolios allow students to share their academic work with friends and family, connect with faculty, with employers and work together with other students, inside and outside of

classroom. Avenues for potential employability are opened, further developed and enhanced through this process. Tosh, Werdmuller, Chen, Haywood (2004) also emphasised that ePortfolios affect learning in the “real world”; through social networking enabling constructive communication between like-minded individuals. The repository of knowledge construction continues to accumulate for learners and peers.

5.2 Deep Learning

ePortfolios create a sense of deep engagement and therefore often appear to be a challenging learning platform for students. Deep learning is defined by Tosh, Werdmuller, Chen, Haywood (2004) as “...learning that promotes the development of conditionalized knowledge and metacognition through communities of inquiry (p. 7). The individual module for each learning outcome gave students an opportunity to explore the content in greater depth and research about topics that were outside their comfort zones. One student commented that “*It gets students out of their comfort zones*” and “*It will increase the learning of the students as students will be able to not only done their own understanding towards their assessment but also understanding other assessment as well*”. Therefore the format of the module concept for the ePortfolio appeared to be increasingly popular with students who ranked the system very highly. Ninety per cent (90%) of the students considered the system favourable as indicated in Figure 2.

Bowden and Marton (1998) explain that 'learning' entails moving away from superficial learning to deeper levels of understanding. They elaborated that deep learning is the ability to organize information in a hierarchical order with supporting evidence and examples. This form of deep learning is encouraged with the flexibility provided by ePortfolios which presented opportunities for students to challenge their own level of thinking through research and then applying information in a new context. Prior learning experience and knowledge is integrated with new learning thus enhancing the overall learning through assimilation and critical thinking.

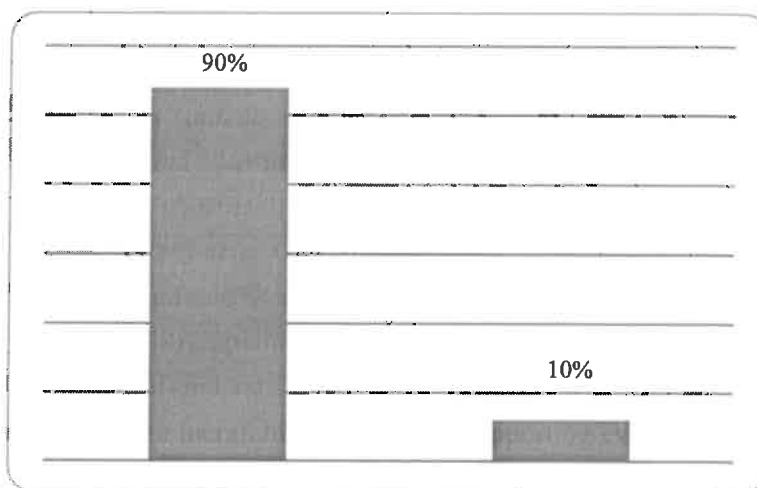


Fig. 2. Students Evaluation of the Module Concept for the ePortfolio.

Tosh, Wermuller, Chen, Haywood (2004) elaborate that ePortfolios present a learning landscape where learner engagement increases with an opportunity to build one’s learning instead of simply being passive recipients of information. Ability to “engage with other learners, pull in information from various resource sources, share thoughts and feelings, form communities of learning or social activity, interact with peers and tutors within one or more institutions, would create a milieu promoting user engagement and we feel, in turn, a level of deeper learning” (Tosh et.al., 2004, p. 7).

However, some students expressed difficulty in compiling content in the ePortfolio stating that “*building and collection of data to appear on ePortfolio made my job difficult*” and “*it is very difficult as you are using future trends to accomplish assignments*”. These students were challenged to be active learners and pursue further deep learning which was new to them. Rather than being recipients of information given to them they had to become creators of new knowledge.

5.3 Digital Skills Development

Technological challenges with ePortfolios presented some barriers for those students who were relatively unfamiliar with the new learning system. Approximately 73 per cent students were either confident or very confident in the new eLearning environment as evident in Figure 3.

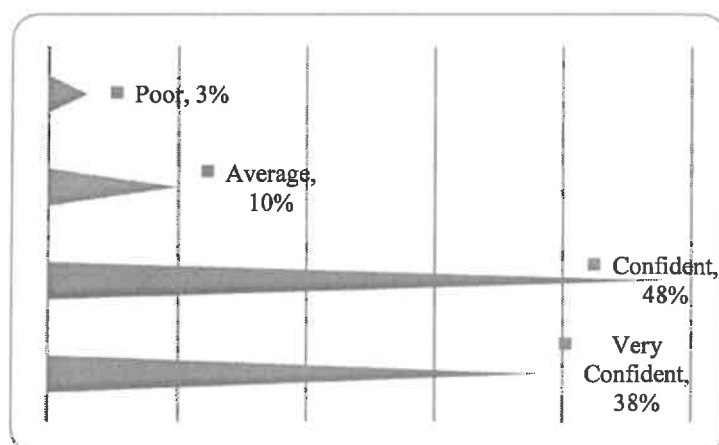


Fig. 3. Student’s reflection on their familiarity with the on-line environment.

It emerged that some mature students were reluctant to engage with ePortfolios as they were diffident in ICT when compared to those students who were digital natives. This is an obvious consequence of the digital divide. The digital natives, showed more confidence in using ePortfolios and were keen to take up the challenge even though it was a new learning

environment for them as well. A mature student commented *“I did not know how to use the ePortfolio I did not know how to set the blogger due to lack of understanding in blogs”*. JISC (2009) states that “age is not the main determining factor in technology confidence and capability: a supportive context is far more significant” (p.1). Therefore, for successful use of e-portfolios the “flexibility and customisability to meet the diverse requirements of learners in a range of life circumstances and careers” (Owen, 2009, p. 731) is needed. Soyoz (2010) also suggested that the lack of ongoing support for new technology adoption might become a barrier especially if education strategies are not designed to tailor technology to the needs of the learners. Successful development of ePortfolios is essentially reliant on ongoing support, supervision and organised workshops. This aspect of support is imperative to assist in the success of learners diffident in ICT.

ePortfolios served as a medium for improving and enhancing digital skills of most learners. Lorenzo and Ittleston (2005) suggested that ePortfolios can help students learn information and technology literacy skills as well as digital media skills. Many students commended the effectiveness of ePortfolios in improving their technological skills in computing. In addition, their organizational skills were honed and advanced. One student commented *“I manage to do online and get more time for me to use the computer and get familiar with the technology”*. ePortfolios were a different practice in learning for many students and they were content with their ability to rise up to the challenge with comments such as *“very effective if I look back in the past because now I am getting better at using this learning tool. I also get to know and learn more things about this learning tool”*.

Furthermore, moving away from conventional forms of assessments was viewed positively by some students who stated that *“Learnt a new way to do assignments and don't always have to follow the traditional way”*. This attribute of under-estimating one's potential of exploring new learning spaces has been highlighted by JISC (2009) who stated that “learners' ... rarely push for use of particular technologies and may be quite conservative in their willingness to change habits. Web 2.0 tools for knowledge building ... immersive environments ... and e-portfolios offer learning benefits that learners rarely discover for themselves” (p.4).

6 Conclusion

It is evident from this research that e-Learning has the potential to transform the way teaching and learning takes place. From the learner viewpoint eLearning presents accessible, appropriate, and superior learning possibilities that deepen student engagement and achievement. ePortfolios enhance the learner potential encouraging connectivity and sharing, augmenting digital and critical thinking skills. These skills contribute to deeper learning so essential for the acquisition of lifelong capabilities in readiness to address future uncertainty in the rapidly changing global environment.

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