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THE USE OF TECHNOLOGY-ENHANCED LEARNING (TEL) TO FACILITATE AUTHENTIC LEARNING: EXPERIENCES OF SOUTH AFRICAN SOCIAL WORK EDUCATORS

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Pedagogies incorporating technology-enhanced learning (TEL) are growing in social work education. However, there have been few explorations of the effectiveness of use of particular pedagogical designs based upon authentic learning principles in social work education. This paper contributes to such scholarship on teaching and learning using technologies through the analysis of five qualitative case studies of South African social work educators in order to ascertain whether and how the principles underpinning authentic learning are present in their teaching practices. The paper concludes by arguing that the use of TEL in combination with the principles of authentic learning have the potential to support social work students become work-ready.

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INTRODUCTION

The profession of social work has been classified by the South African Department of Labour as a "scarce skill" (Earle, 2008), a situation which compels leadership and educators in institutions of higher learning to search for pedagogically effective and economically viable ways to capacitate future professionals, whilst addressing the need to train more students in this field. The use of what has come to be called an authentic learning approach (Herrington, Reeves & Oliver, 2010) is argued to have significant capacity to prepare students for the practising profession of social work. It is argued that social work teaching and learning should ideally be context-based and related to activities that occur in the workplace (Bennett, Harper & Hedberg, 2002; Teater, 2011), hence the need for authentic forms of learning. Authentic learning can be enhanced through pedagogically informed usage of technology-enhanced learning, which offers "cognitive tools for learning" (Herrington *et al.*, 2010:3) and a flexible platform for the social construction of knowledge (Laurillard, 2008; Veletsianos, 2010; Vygotsky, 1978). Furthermore, the use of technology-enhanced learning within social work education is seen to "bridge the current pedagogical expectations sandwiched between contextual constraints and concerns" (Ngambi & Bozalek, 2013:351), a point which is further elaborated in the literature review which follows.

Against this background, the authors of this study set out to explore whether and how a sample of South African social work educators who were using technology-enhanced learning were able to incorporate authentic learning principles in their teaching. This paper, which was funded by the National Research Foundation of South Africa, draws on research focusing on emerging technologies as reported in Bozalek *et al.* (2013). The purpose of this paper is to focus specifically on the findings derived from an analysis of a sub-sample of social work educators through exploring their use of technology in the Bachelor of Social Work (BSW) degree.

Technology-enhanced learning (TEL) is the use of information communication technologies (ICTs) for the improvement of teaching and learning through creating learning opportunities for students whenever and wherever they choose (HEFCE, 2009). Other words used to describe this type of learning include "educational technology", "e-learning", "computer-supported collaborative learning (CSCL)" and "networked learning" (Conole, 2013). This paper locates the elements of authentic learning present in these educators' self-described practice, which are summarised through a table and evidenced by verbatim quotations.

RESEARCH QUESTION

The research questions explored in the study reported in this paper are:

- How do social work educators use technology-enhanced learning to facilitate teaching and learning?
- Do their teaching practices (supported by technology-enhanced learning) incorporate elements of authentic learning (Herrington *et al.*, 2010)?

STUDY SETTING

Apartheid may have been dismantled in 1994, but transformation has been slow in the country as the chasm between rich and poor remains wide (Smith, 2008). A complex range of social factors warrants social work intervention, including labour disputes and their often violent consequences, as observed in the fatal shooting of miners at the Marikana mine (Smith & Alexander, 2013), unemployment at 25.5% (Steyn, 2014), a high prevalence of the human immunodeficiency virus (HIV) of 12.2% in 2011 with the most vulnerable group being black women between the ages of 30 to 34 years (Shisana *et al.*, 2013), rising evidence of substance abuse, high levels of violent crime, xenophobia (Misago, 2011), and widespread child and women abuse (Sewpaul, 2013). Thus, while the country has made progress in granting free access to education and improved infrastructural services such as electricity and telecommunications, there are many serious challenges arising from poverty that will remain in the long term. The intergenerational effects of poverty, inequality and unemployment as noted by Sandeep Mahajan, the task team leader from the World Bank, are a case in point: "*A South African child not only has to work harder to overcome the disadvantages at birth due to circumstances, but having done so finds that these remerge when seeking employment as an adult. These disadvantages get transmitted across generations.*" (World Bank, 2012:1)

Not only does this situation demand the training of more work-ready social workers, but many of those who apply for social work courses are affected by some of these socio-economic problems themselves. Some South African black students are underprepared to enter university as a result of various factors such as: the poor quality of primary and secondary education these students have access to; and many are the first in their generation to attend higher education and they belong to previously disadvantaged under-represented communities (Spaull, 2013). A report by the Council for Higher Education (2013) found that only one in four students graduate from a contact institution within the minimum prescribed time, while there is a 50% higher completion rate for white students compared to black students. Race, gender and poverty are some of the socioeconomic factors that contribute to these high drop-out rates (Murray, 2010).

Given these social conditions, the need to train more social workers is evident, as well as the imperative to adopt innovative, pedagogically sound, and radical and emancipatory approaches in education, research and practice (Ferguson & Smith, 2012). This is reinforced by the declaration of social work as a "scarce skill" in South Africa in August 2003, resulting in bursaries being offered for this degree by the Department of Social

Development (Earle, 2008). Earle's findings indicate that in 1999 there were 1,829 students registered for the four-year social work degree and that this figure rose to 4,085 students in 2005, suggesting an increase of about 123%.

There has not, however, been a concomitant increase in the number of social work educators at higher education institutions (HEIs). Educators are therefore challenged to teach larger numbers of students from diverse backgrounds with the same resources. In addition, concerns are being raised about the quality and outcomes of programmes and the throughput of students (Council for Higher Education, 2012). Undoubtedly, the process of transformation in higher education has been fraught with a multiplicity of challenges from the apartheid era, including a low participation rate in HEIs: only 18% of 18-24 year olds were enrolled in 2011 and these students remain unequally resourced (Bozalek & Boughey, 2012; Council for Higher Education, 2012; Leibowitz & Bozalek, 2014).

Notwithstanding these challenges, social work educators must ensure the optimal management of scarce resources – time, money and equipment – whilst developing skills in future professionals that are relevant for the profession. To rise to these challenges, educators must craft imaginative and creative curriculum designs, including the meaningful use of technology-enhanced learning, so that their impact in the workplace addresses some of these social concerns (Barnett, 2004; Treleaven & Voola, 2008). We therefore saw it as an opportunity to reflect on the practices of a small sample of social work educators who use technology-enhanced learning, and to analyse these practices using a framework derived from the authentic learning principles formulated by Herrington *et al.* (2010). Authentic learning opportunities in social work education – such as reflection, the use of an authentic task and collaboration – make this kind of teaching relevant to the society in which students will eventually practise, and is seen to hold significant potential for developing competent professionals.

LITERATURE REVIEW

Technology-enhanced learning and authentic learning

There is not strong empirical evidence demonstrating the efficacy of technology-enhanced learning environments on their own, in the absence of pedagogical input, to transform teaching and learning (Ross, Morrison & Lowther, 2010; Siemens & Tittenberger, 2009; Veletsianos, 2010). Two meta-analysis studies conducted to investigate the value of technology for promoting learning have found only small differences from blended learning and face-to-face instruction. These studies suggest that the students who were exposed to technology-enhanced learning performed only marginally better than those taught using only face-to-face methods. But these results need to viewed with caution as blended conditions often included additional learning time and instructional elements (Tamim, Bernard, Borokhovski, Abrami & Schmid, 2011; US Department of Education, 2009). It is important to note that one of the studies found that technology used to support cognition had a greater effect on learning and academic success than technology used for the presentation of content (Tamim *et al.*, 2011). Thus, while the evidence is not yet strong, the findings to date suggest that there

is potential for technology-enhanced learning to support the achievement of quality learning outcomes, providing the course design process is informed by learning theories and sound pedagogical practice (Ballantyne, 2008; Herrington & Oliver, 2000).

Technologies can, however, support authentic "real-world" tasks through facilitating collaboration, reflection, engagement with experts, coaching, integrated assessments and opportunities for students to articulate their learning. On the one hand, Herrington and Parker (2013) contend that disregard among educators of the use of technology in learning may result in alienating a large segment of the student body, who use various forms of technology in their daily lives. However, on the other hand, using technology for the wrong reasons, such as convenience or succumbing to pressure from institutional management, will detract from its pedagogical value, instructional design and teacher effectiveness, which are of greater importance (Clark, 1983). The value of technology lies more in the way that it assists educators to support students "to solve complex and authentic problems" (Herrington & Kervin, 2007:219) than simply using technology to deliver content.

Through technology-enhanced learning, elements of authentic learning – such as collaboration across space and time, cooperation, co-construction of knowledge and the creation of a community of practice – can be achieved (Bozalek *et al.*, 2013; Herrington *et al*., 2010; Lave & Wenger, 2003). With reference to the literature, this paper proceeds from the assumption that the nine elements of authentic learning (outlined below) provide a valuable guide for using technologies in teaching and learning in disciplines such as social work.

Authentic learning

Authentic learning was developed from the situated learning theory postulated by Brown, Collins and Duguid (1989) and the cognitive apprenticeship model of learning (Collins, Brown & Newman, 1989), in which learning is seen as experiential, with the role of the educator described as being that of a facilitator, responsible for overseeing the students' learning. An authentic learning approach suggests that knowledge is best acquired if the following nine elements are present: an authentic context; an authentic task*;* expert performance; multiple perspectives; collaboration; reflection; articulation of acquired competencies in the public domain; coaching and scaffolding; and discussion of assessment by the educator and the students (Herrington *et al*., 2010).

Authentic learning activities are grounded in "real-world" tasks which a social worker might perform in the work environment, which contains the messiness found in life; this is why the learning activities are ill-defined. To address such problems students are unlikely to find a single solution to the task in a single textbook or resource. In addition, authentic tasks are conducted over an extended time period and examined from multiple perspectives, using many different resources. It is also assumed that students and educators engage in collaboration and reflection throughout the learning process. Other features of an authentic task are that seeking solutions requires the integration of learning from different fields of study, and assessment methods need to be carefully incorporated into the course design. The final product of an authentic learning

experience should be suitable to be presented or articulated in, for example, a public forum and have recognisable value to the world. Amongst the limitations of designing authentic learning activities is that institutional assessment policies may make it difficult to implement authentic tasks in the curriculum, as such processes are time intensive. Therefore, educators working in a resource-constrained environment may find it challenging to conduct multiple assessments, provide regular feedback and assist students in creating high-quality artefacts that can be showcased in public. However, technologies can be used to support student collaboration and reflection, and to give students access to a multitude of resources and expertise.

METHODOLOGY

This study was qualitative in nature and employed a comparative case study design (Rubin & Babbie, 2011) to understand the "meaning subjects give to their life experiences" (De Vos, Strydom, Fouché & Delport, 2012:320). A qualitative design focuses on phenomena that occur in the real world and studies the phenomena in all their complexity and detail (Leedy & Ormrod, 2013). The sample was derived from a survey with 262 respondents, and sought to map the use of technology-enhanced learning across South African higher education (Bozalek *et al*., 2013). Ethical clearance for this study was obtained from the University of the Western Cape. From the 262 respondents, in-depth interviews were conducted with twenty of the respondents, on the basis of the richness of their responses in the survey. The interviews were conducted by a team of five researchers, two of whom are authors of this paper. From these interviews, a subset of five social work educators were focused upon as "early adopters" of technology-enhanced learning. This group self-identified as using technology in their teaching, but did not claim to use authentic learning in their practice. Our interest was to conduct an examination of their practices, and to assess whether and how they were achieving any authentic learning principles.

Data collection

Data were collected either through face-to-face or telephonic interviews, using a semi-structured interview schedule which gave consideration to educator practices and the use of technologies in relation to the elements of authentic learning. The questions that guided the interviews were suggested by Herrington in a personal communication (with a co-author of this paper) and were aimed at understanding whether and how educators engaged with any of the nine authentic learning elements in their use of technology-enhanced learning. Some of the questions included were:

Does the course you teach include aspects of reflection?

Do students work in groups around a project?

Can you describe your teaching and assessment practices?

Interviews were audio recorded and transcribed verbatim. Transcripts were analysed by the three researchers and authors of this paper. The process of data analysis included each researcher reading through all the transcripts a number of times to immerse themselves in the data (De Vos *et al*., 2012). Next the data were analysed using thematic

content analysis; quotations from the transcripts were selected to indicate instances where elements of authentic learning and the use of technology-enhanced leanings were evident. Instances addressing any of the authentic learning principles were captured in an Excel spreadsheet with columns for each element and rows for the educators. The matrix was shared between the researchers via Google Docs and a consensual composite spreadsheet was created and used to populate Table 1.

Ethical considerations

The sample of educators gave informed consent for the interviews and were assured that they could withdraw at any point. No incentives were provided for participation and ethical clearance for the study was obtained from the University of the Western Cape Research Ethics Committee, where a co-author on this paper is based.

LIMITATIONS OF THE STUDY

It is acknowledged that the risk of rater bias is a potential limitation of this study, since the thematic analysis of the educators' responses was undertaken by the authors, and therefore subject to possible differences in our individual understandings of the elements of authentic learning. In addition, data were collected by different interviewers and some interviews were conducted in person, while others were held telephonically. This could also potentially account for variations of depth of response.

FINDINGS

The participants

The participants comprised one black[1] woman, one white woman and three white men, who were based in three different provinces (Gauteng, the Western Cape and the Eastern Cape). The educators taught class sizes ranging from 30 to 200 students, depending on the year of study and the institution. A short description of the educators and their practices has been provided by way of context.

Educator One

This male educator is a professor who describes his teaching approach as including knowledge, graduate attributes and skills, which he terms "head, hands and heart" respectively. He works in a historically advantaged university.[2] The institution has a well-developed online environment that uses the Blackboard learning management system (LMS). It provides well-equipped computer laboratories and classrooms, and

[1] In apartheid South Africa the population was statutorily divided into white, African, coloured and Indian; when African, coloured and Indian people are referred to as a group here, the term used is black. These are socially and politically constructed apartheid terms which, despite being highly contested, are commonly used throughout the country.

[2] Prior to 1994 South African universities were differentiated according to race, with white institutions receiving far greater funding and opportunities compared to black institutions, so as to reproduce the social order of apartheid.

promotes creative use of technology for teaching and learning. The institution has seen an influx of students from resource-scarce communities who are dependent on bursaries, and in many instances they are the first in their family to attend university, which makes these students vulnerable. A task that he gives to a cohort of 150-200 first-year students that involves the use of technology is the submission of a bi-weekly 150-word eJournal post on a real-world incident that depicts a value which is important in social work. These posts are sent directly to him on Blackboard. In addition, he has created videos on interviewing skills which are lodged on YouTube and which are also used by other institutions. There was, however, evidence that he used multiple methods of assessment, including reflection tasks, which provided students with expert performances, engaged them in multiple roles, and provided coaching and scaffolding. Aspects of authentic learning that were not identified in the interview were online collaboration, group work tasks and articulation of learning.

Educator Two

A woman professor at a historically disadvantaged university took part in developing and teaching a course with an international university on women's health and wellbeing, which was taught across five higher education institutions in five different countries. The course was conducted using technology and distance-learning methods exclusively. Groups were comprised of five students from different parts of the world, with two facilitators. WebCT was used as a communication platform and the tasks included interviews, research and sharing of experiences from the different contexts. The facilitators assisted in scaffolding information and there were multiple methods of assessment with clear rubrics. The final output was a wiki in the public domain, a clear example of public articulation. This course was the only one in this study that contained all the elements of authentic learning.

Educator Three

This educator and Educators Two and Four were based at the same university, which had been established under apartheid for people from the coloured community, but it later became inclusive and known as "the intellectual home of the left". This female educator has more than 22 years of experience as a social worker. She describes herself as a "facilitator rather than a teacher" (Educator Two, 2013). The institution uses an LMS and offers wifi to students on campus. This educator tasks approximately 100 second-year students with the creation of a podcast of an interview with a pseudo client, using their mobile phones. Podcasts allow assessment and reflection by students, enabling them to "hear where they went wrong and need improving" (Educator Two, 2013). Three elements of authentic learning that were not evident in this case were collaboration (since students worked individually), articulation and integrated assessment.

Educator Four

This educator enjoys using a blended learning approach which is not didactic and which showcases the use of podcasts in a course on social justice and ethics. He used an LMS as a repository for information, for discussion groups and for students to chat to one

another. His course on ethics provides evidence of a number of authentic learning principles. He makes use of real-world examples of ethical dilemmas and he ensures that students work in groups and articulate their learning by presenting their work in the classroom, although not in a public space. Learning tasks are assessed individually using multiple methods. The only element that was absent in this case was articulation in a public space, although students debated in class. The educator in the interview raised concerns regarding the ethical dilemmas that could arise from using technology in relation to respecting confidentiality, which is most important in social work.

Educator Five

Educator Five works at a historically disadvantaged university that is poorly equipped to use technology. The educator is, however, described by his colleagues as "a computer power user" (Educator Five, 2013). In order to use technology in his teaching, he often has to bring his personal devices (including speakers and a data projector) into the classroom. Using technologies for teaching requires energy and persistence in this context, where most other educators use "chalk and talk" practices. He describes one experience:

> *"One of our challenges is our network administrator, I call them network Nazis – [they] are very guarded in terms of what access we can have to certain things – so until very recently Skype was blocked and I had to get special permission to have Skype unblocked.* (Educator Five, 2013) *"*

In the interview this educator discusses a fourth-year group research project which contains many aspects of authentic learning. Students worked in groups, but also produced an independent research project. His group had 11 students with whom he conducted assessments and supervision. The group shared information on a virtual drive to which all students and educators have access. Articulation and integrated assessment were not evident in this case.

In general these descriptions highlight the influence of institutional and contextual differences. The only case that contained all the elements of authentic learning was made up of a small group of students with two facilitators, and relied exclusively on online methods. Despite substantial challenges faced by some educators, their persistence, passion and endurance are evident, as is expressed here:

> *"Even if it [the technology] doesn't work perfectly, that's actually fine …* (Educator Five, 2013).*"*

The participants displayed their enthusiasm for using technologies for teaching. In addition, the types of technologies used and the elements of authentic learning they addressed were context dependent. In these cases the use of technologies was driven by the educators, as there was no requirement to use technology-mediated learning at the institutions where they taught, as is borne out by the following comment:

> *"It's still down to the individual, so there's no institutional requirement that you use eLearning as part of your teaching philosophy or practice.* (Educator Five, 2013) *"*

ANALYSIS OF DATA

An analysis of the data was undertaken in which any occurrence of any element of authentic learning was captured and coded (1) as evidence of authentic learning in the educator's practice. Where an element was not present, a 0 was captured and coded as shown in Table 1. These elements are elucidated in the section that follows.

TABLE 1
EDUCATOR USE OF AUTHENTIC LEARNING

Elements of Authentic Learning	Educator One	Educator Two	Educator Three	Educator Four	Educator Five
Context	1	1	1	1	1
Task	0	1	1	1	1
Expert Thinking	1	1	1	1	1
Multiple Roles	0	1	1	1	1
Collaboration	0	1	0	1	1
Reflection	1	1	1	1	1
Articulation	0	1	0	0	0
Coaching	1	1	1	1	1
Assessment	0	1	0	1	0
TOTAL	**4**	**9**	**6**	**8**	**7**

1 = evident
0 = not evident

Table 1 shows that only Educator Two engaged all nine elements of authentic learning. The elements that were evident in all five cases were context, expert thinking and reflection. The element least evident was articulation, which was only found in the case study for Educator Two.

EVIDENCE OF EACH ELEMENT OF AUTHENTIC LEARNING IN THE EDUCATORS' PRACTICES

Findings are discussed further in terms of each of the authentic learning elements, with evidence in the form of quotations cited from the educators. "Providing authentic contexts that reflect the way knowledge will be used in real life" and "providing an authentic task" (elements 1 and 2) (Herrington *et al*., 2010:18) ensure that the task is as similar as possible to how this activity would be conducted in the workplace. Herrington *et al*. (2010) advocate that authentic tasks should be ill-defined, comprehensive, complex and completed over a sustained period of time. The use of real-world examples and tasks is borne out by the following quotation, describing how a task was designed to replicate activities in the workplace:

> *"Real-life situation was that they [the students] were interviewing people, transcribing and posting transcriptions using a wiki to co-develop a research project in a real life.* (Educator Two, 2013)*."*

Many of the tasks described by the educators were complex, as students had to engage in a series of activities such as creating podcasts, and researching and reporting on the activities conducted. All the educators were experienced social workers and teachers which enabled them to draw on their own experiences to provide a real life rich context for devising the tasks. The design of real world tasks required careful consideration since developing such student learning activities can be resource intensive (time, equipment and people) and social work departments are understaffed with educators having competing demands on their time (Collins & Van Breda, 2010).

The third and fourth elements described by Herrington *et al*. (2010:18), namely "Provide access to expert performances and modelling of process" and "Provide multiple roles and perspectives", are evident in descriptions of how students and educators shared knowledge and expertise, which allowed for an examination of the issues within multiple roles and from diverse perspectives. Educator One described how a professional nurse was invited to the class where he allowed an HIV test to be conducted on him. Here the educator role modelled health-seeking behaviour and made use of medical experts. In another course on women's health and wellbeing, the online discussion forum and Facebook group exposed students to information and opinions from a team of international educators and students. In addition, the use of the Internet allowed students to carefully select information from a wide range of sources and make use of many learning-support activities such as watching YouTube clips by international experts in the field (Herrington & Oliver, 2000). Exposure to these different perspectives provides rich information for collaboration and debate, which is the next element considered.

The authentic learning element "Support collaboration and construction of knowledge" (Herrington *et al*., 2010:27) suggests that students need to work in teams and that they should be assessed for their teamwork and collaboration. Lou, Abrami and d'Apollonia (2001) found that students working in small groups with computers performed better than individual students working on computers. In those cases analysed which used group work, students were expected to share information in class and online, conduct group presentations and engage in sub-tasks, building up to a project. This process is described in the next comment:

> *"Student[s] would interview women in their own context, and then they would [work] collaboratively across contexts, look, share the data and then develop themes and look at things.* (Educator Two, 2013)*."*

Collaboration, working in teams and conducting meso practice is an essential skill and intervention in the Bachelor of Social Work degree and provides clear alignment with the exit-level outcomes that have to be attained (Bozalek, 2007; Collins, 2012; Sewpaul, 2013).

"Promoting reflection to enable abstractions to be formed" (Herrington *et al.*, 2010:18) coheres closely with professional identity development in social work. This element was present in all of the cases. To promote reflection, an educator needs to build the use of reflection into the course at various stages while the students are working in groups. This should occur both during the project and on completion. In authentic learning, reflection is considered to be a social and interdependent activity, rather than an individual process. Methods used to encourage reflection included: getting students to think about the meanings of events and actions, keeping an eJournal, and replaying and reflecting on podcasts. These methods allowed students to reflect on their own strengths and weaknesses, the group process and the final product. The effective use of an eJournal is captured in this quotation:

> *"Students keep reflective e-journals. … So I really push the students, they don't have to share profoundly traumatic life experiences, but they do need to share stuff that's authentic…. So they write something that happened – personal, immediate, authentic.* (Educator One, 2013)*."*

In other courses students were encouraged to engage in reflection in action (Schön, 1983) by commenting on the task of developing a podcast. The educator reports:

> *"So I think the recordings [podcasts] really helped with reflection. I think [through] the recordings themselves and [that] they play it back to themselves, they can actually hear where they went wrong or where they need improving on their interviewing skills.* (Educator Three, 2013)*."*

Collaborative reflection is important as it creates opportunities for students to compare themselves with each other and experts, and also allows space to think about the meaning they make from the activities they engage in (Collins, Brown & Holum, 1991).

Another of the elements of authentic learning recommends that students are given the opportunity to make their tacit knowledge explicit, a process described as "articulation". This is so that students can speak, debate and write about their growing understanding within communities of practice, and in public, or develop an artefact which is sufficiently polished to be of use in the work environment, e.g. a client report. As previously indicated, one educator focused on this element where students presented their work at a video conference and published a public wiki. It seems that opportunities to support articulation are limited, as most of the educators had classes of 100 students and substantial support may be needed. In this regard Herrington *et al*. (2010) comment on the amount of work it takes to polish a piece of work to a point where it is ready for articulation, which may be why this element was not found in these case studies.

"Providing coaching and scaffolding" (Herrington *et al*., 2010:35) at critical times is an element best achieved when the role of the educator is supportive and guiding, rather than transmitting knowledge. Educator Three noted that:

> [She shies away from being a "teacher"] *"in the traditional sense, where the teacher is the expert and the students learn. For myself, I think in the 22 years that I've been doing social work and facilitating groups in communities, and so*

> *on, my philosophy was always using experiential learning.* (Educator Three, 2013).*"*

An important aspect often overlooked is the role played by more knowledgeable students in providing scaffolding and coaching in group activities, where role play and information sharing is encouraged (Herrington, *et al*., 2010).

The view expressed by Educator Three suggests sensitivity about collaborative partnerships in the teaching and learning journey by allowing students to make meaning, discover information and engage in activities similar to real-world practice. In like manner, being a guide in the education process encourages an integration of theory with field practice, as reflection on experiences in a safe space is fostered (Carelse & Dykes, 2013). Thus in authentic learning the educator does not exercise control, but is rather seen as the coach "that provides coaching and scaffolding" at critical times (Herrington *et al*., 2010). This element was evident in all the cases.

"Providing for authentic assessment of learning within the tasks" (Herrington *et al*., 2010:37) suggests that the assessed task is a final polished product that has undergone several iterations and has been assessed throughout the course. The data indicated that the courses and the artefacts were assessed at various stages and not only at the end of the course. One interviewee describes the use of multiple assessments as follows:

> *"So I have a lot more assessments than most of my colleagues because I'm always looking for different angles. And I think each assessment should do something different and not just be more of the same. But it's heavy, the students complain because they say but we have to do four things for you and we only have to do one test for so-and-so. And I'm thinking like I'm really sorry, but I think this is good education [chuckles]*. (Educator One, 2013)*."*

Integrated assessment approaches require students to engage with each other often outside of classroom time and have multiple methods of learning with suitable and reliable criteria for scoring such as rubrics. This type of assessment is a time-intensive activity for the educator and the students, which could explain why only two of the five educators used this type of assessment. On the other hand, technology is a powerful tool for assessment, as a video shows the educator the way in which the various social work skills could be used.

> "*It was visible how he was actually using the techniques of group work.* (Educator Four, 2013)."

The findings of the study indicate that respondents applied the nine elements of authentic learning to varying degrees in their teaching practices. The elements of authentic context and task, and of reflection were the most commonly used, with articulation being the least evident, confirming findings from previous studies (Amory, 2014).

DISCUSSION

The usefulness of technology-enhanced learning is evident, but it has been slow to be adopted in social work education in South Africa. Its potential is illustrated in some of the cases examined in this study, which are innovative primarily in the ways in which they are engaged to achieve appropriate learning strategies for future social workers. Interviewees cited different reasons for choosing to use technology as part of their teaching, which included: to get students to keep diaries and to reflect; to integrate theory with practice; to allow students to cooperate and collaborate on tasks and projects; to encourage learning in large diverse classrooms; and to create discipline-specific, indigenous programmes, since there is a lack of such material. These reasons clearly demonstrate technology being used as a driver to promote pedagogically informed social work education, rather than because of its newness, motivational appeal or contemporary acceptability within a competitive higher education context. Further development of technology-enhanced learning for social work education in South Africa is in the hands of the educators themselves, but what is evident is that context, the types of technologies, the size of classes, teaching philosophy and resource allocation are factors that also need consideration for these opportunities to be realised.

The use of technology-enhanced learning and the principles of authentic learning have been shown to offer opportunities for interaction, immediacy of experience, networked learning and communication across borders (McLoughlin, 2001). These affordances were strongly evident within these educators' practices. Furthermore, since English is an additional language for many students in these case studies, engaging in asynchronous online communication may provide an added advantage, as students are better able to formulate their thoughts in writing, compared to speaking in the classroom (Bozalek, 2007; Gilbert & Dabbagh, 2005). Indeed, an advantage of using authentic learning evident from these cases was that students were exposed to a far wider variety of resources than they would have been in face-to-face teaching.

Some consideration, however, needs to be given to the social context and the challenges experienced by these respondents if the affordances of technology are to be optimised for effective learning. The educators in this study used technologies to add value to the students' learning and to offer students from resource-scarce backgrounds an additional flexible learning experience. Learning that results in extending students' knowledge can be achieved if educators use frameworks such as authentic learning to ensure that their teaching practices are meaningful, effective and student-centred within a social constructivist learning environment (Vygotsky, 1978). These educators can be commended for developing courses with significant potential to strengthen social work professional education, many engaging all the elements of authentic learning in their use of technologies, despite the limitations imposed by the environment. The educators see themselves as confident "power users" of technology, but could develop further to extend their teaching practice by creating authentic learning tasks. The significant time investment required to use technology-enhanced learning should not be underestimated, and the findings show that most of these educators worked from home or during their free time to respond to students, as the use of technology-enhanced learning is time

consuming. Features such as chat rooms and discussion forums create new spaces that have not yet been fully explored by most of the educators: should they do so, these technology-enhanced learning facilities could lead to greater collaboration, sharing of resources and allowing students to part of the process ensuring access to multiple resources; this is an area for future development.

CONCLUSION

This study has illustrated how five educators, striving to be innovative and inculcate a spirit of experimentation into their teaching practices, as suggested by Siemens and Tittenberg (2009), used certain elements of authentic learning in their application of technology-enhanced learning. Through the literature and through examination of these cases, it is suggested that greater awareness of the principles of authentic learning among social work educators could further enhance effective social worker education.

Further research is required in a multitude of settings with similar and new tools, and could include the views of students, field instruction supervisors and knowledge experts. In addition, research should consider a greater focus on course content, educator philosophy, and the relationship between educator and student. The considered use of authentic learning and technology-enhanced learning can, however, contribute to situating social work education in the real-world context, so as to be more relevant, innovative and responsive to institutional, national and international social imperatives.

Other possible recommendations for professional practice include:

- The development of best-practice guidelines for South African social work educators using technology-enhanced learning, thereby creating greater awareness around the affordances and constraints of using technology-enhanced learning;
- The provision of greater support and training so that more social work educators can make better use of technology-enhanced learning to improve their pedagogical practices, technological competence and confidence in using technology;
- The development of a community of practice for social work educators using technology-enhanced learning;
- Reward and recognition by management of educators who effectively use technology enhanced learning and authentic learning in teaching through performance evaluation;
- The need to consider further research on and awareness of the ethics that surround technology use for education and practice;
- Given this potential, it must be noted that the use of authentic learning and technology-enhanced learning is resource intensive; thus greater provision of time, money and equipment is required to support educators to maximise the opportunities afforded by technology-enhanced learning to facilitate authentic learning experiences.

These case studies in themselves offer recommendations to other social work educators who may wish to consider the use of technology-enhanced learning and authentic learning.

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