

UNISA E-tutors' Perceptions, Experiences and Views of Active Learning

Enid Pitsoane¹, Dikeledi Mahlo² and Patricia Lethole³

^{1,3}Tuition and Facilitation of Learning, ²Department of Inclusive Education, UNISA,
E-mail: ¹<tlhabem@UNISA.ac.za>, ²<mahlofd@UNISA.ac.za>, ³<lethovp@UNISA.ac.za>

KEYWORDS E-Tutoring, Active Learning, Digital, Perceptions, Experience

ABSTRACT This qualitative study was influenced by the changes in UNISA's tutorial system, migrating from face-to-face communication to e-tutoring. It aims to capture the views, perceptions and experiences of ten e-tutors from the College of Education, as they are to implement active learning within their e-tutoring via interviews. Drawing from the Developmental and Behavioural theorists' perspectives and from factors related to perception, the experience and views of e-tutors on active learning were explored. The research is further aligned with the views of constructivists, who put more emphasis on situated learning, chaos and digital factors. The basis of the theory is that learning is developmental, situational and context sensitive, as well as digital. The theory further purports that the tutors' conception of teaching and learning influences their tutoring style. The findings revealed that some tutors are struggling to implement active learning because they are digital migrants or they lack the digital knowledge.

INTRODUCTION

According to Butcher, Baijnath and Ryan (2012:1) University of South Africa (UNISA) had been operating via Open Distance Learning (ODL), which was ineffective in terms of expanding access to affordable quality education. Consequently, the emphasis in relation to teaching and learning was on face-to-face (F2F) tutoring, which was drawing limited participation from students. As a result, UNISA is undergoing a radical shift that might be effective with regard to affordable quality education.

The new UNISA model, Online Distance e-Learning (ODEL), encompasses, *inter alia*, electronic tutoring which, in the context of this study on e-tutoring, will be emphasised. Butcher, Baijnath and Ryan (2012:5) mention that all students are linked to an e-tutor for academic purposes and they also require access to a digital device to interact with UNISA teaching and learning materials. E-tutors are able to monitor students' self-paced learning. Butcher, Baijnath and Ryan (2012:7) emphasise that the final option will be an e-University model, in which all UNISA business will be virtually conducted.

The shift from F2F to e-tutoring compels tutors to gradually transfer skills gained to e-tutoring. Mills (2010) recommends that F2F tutors should become e-tutors and should be trained to conduct online active learning, as active learning is promoted by F2F tutoring. Prince (2004:1) emphasises that active learning requires students to be meaningfully engaged and to be involved in what they are learning. We assume that even e-tutoring must uphold active learning within the context of online learning.

LITERATURE REVIEW

The literature review in this study positions the researchers in relation to a specific theoretical framework, referred to as "constructivist theory". According to Kop (2011:20), constructivist theory comprises a number of categories, namely cognitive constructivism (individual), social constructivism, connectivism, radical constructivism, situated learning, as well as self-directed learning theories. The emphasis of all these theories is on the active construction of knowledge, making sense of the world, contextualisation and reflection in action. Therefore, the emphasis mentioned above, should be reflected in UNISA e-tutors' beliefs, perceptions and views in terms of active learning.

The constructivists base their theories on two categories, namely social and individualism, where social means that a student is a social being and has to relate in order to acquire knowledge. The individualism of students is also upheld as every student learns and progresses at a unique pace. Both these categories emphasise the fact that learning is developmental, hence students must make sense of their world and students must construct new knowledge and attach meaning to it (Vygotsky 1978; Piaget 1964; Orey & Bran 2008; Pritchard 2009).

A person's world view is constructed by individual experiences and schema (Senge 1990; Orey & Bran 2008:4). The emphasis is more on student-centeredness. Vygotsky argues that, for learning to take place, a learner who is unknowledgeable must be assisted by

knowledgeable parents, teachers etc. to succeed in learning. Other cognitive theorists, such as Piaget, explicate that the student's existing knowledge (schema) must link with the new knowledge in order for learning to take place. Vygotsky furthermore believes that learning is socially constructed, while Piaget believes that learning is individually constructed. Finally, it therefore means that learning is developmental, as is reflected by both theories. Furthermore, learning is not static but flexible and continuous.

Definitions of the constructivist learning theory

(Cited by Good and Brophy (1994))

Although there are different definitions of constructivist learning theory, this paper aligns itself with the four generally agreed-upon definitions:

- *Students construct their own meaning.*

Students are not passive receptacles. They do not easily process or transfer that which they passively receive. Students must own, manipulate and discover knowledge to fit their own belief systems.

- *Knowledge building on prior knowledge*

In making an effort to make sense of information, students must make connections between old knowledge and new information. They must be able to compare and question, challenge and investigate, accept or discard old information and beliefs in order to progress.

- *Learning is enhanced by social interaction*

The constructivist learning theory works best in social settings, as students have the opportunity to compare and share their ideas with others. Learning takes place as students attempt to resolve conflicting ideas.

Learning development in individual and social constructivism

The developmental processes of individual constructivism comprise assimilation, accommodation and equilibration. According to Nguyen, Williams and Nguyen (2012:5-6), assimilation is the use of schemata to transform new information, whereas accommodation is to adapt a new way of thinking to a new way of experiencing. Lastly, in relation to equilibration or self-regulation, students are in a satisfaction mode of thoughts and become aware of their shortcomings pertaining to existing thoughts.

Boom, Paas Jeroen and Merienboer (2007:532) aver that, in self-regulation, students should learn to regulate their own learning processes. Boom et al (2007:534) suggest that reflective thinking is a tool that could assist students to be aware of what they are supposed to do or what they are not supposed to do and what to do next. In the end, the student develops a

mode of thinking that alienates the shortcomings of the old mode (Pritchard 2009). In terms of individual constructivism, students' engagement is situational and it arises from the interplay between context and individual.

Vygotsky, a social theorist, explains that a student needs to be assisted by a knowledgeable person in order to gain higher knowledge. He outlines the concept of "zone of proximal development" as a distance between the actual (what the student can do unassisted) and the potential development of the student (for which the student needs assistance), in order for such a student to reach his or her potential (Vygotsky 1996). The implication of this is that cooperative learning, peer learning and teacher presence provide students with different perspectives, which assist such students to move from an actual level of development to a higher level of development. The whole process reflects active learning as opposed to passive learning.

CONNECTIVISM

Siemens, a proponent of connectivism, recommends the connectivity theory, which does not eliminate constructivism which, in turn, affirms the construction of knowledge by students. Connectivism cannot be considered a new theory, but merely as a category of constructivism (Kerr 2007; Kop & Hill 2008).

Woo and Reeves (2007:16) argue that web-based learning (based on connectivism) should be reconceptualised, based on social constructivism. In addition, Brown (2006:108) defines "connectivism as a term to describe a connected learning environment in which connectivist learning strategies, learning skills and activities are required to learn effectively".

Siemens (2012:2) argues that learning may also reside in non-human appliances, which are outside the individual and he acknowledges learning as a community of practice, being mediated by using web-based discussion forums and twitter communities, while the personal knowledge network can improvise access to new ideas, innovations and successful experiments. It therefore means that connectivism emphasis is on resources and how these resources can be used in a digitised environment.

In addition, Jarcho, cited in Stranack (2012:12), suggests the use of technology for learning purposes as an on-going process in which the student seeks new developments and connections. The student then makes sense of the new information via integration with the schemata; reflection; enhancing new knowledge; sharing the findings of research; and making sense to others in the network.

The level of teacher presence and student presence is essential for connectivism (Siemens, 2012). Learning must take place via the integration of pedagogy and technology (Woo and Reeves 2007:15-16). The challenge embodied in this context is the absence of the human element and refraining from downgrading the teaching and learning environment. Connection in terms of technology is essential in the online environment, and so are group discussions, peer communication and the facilitation of learning by an e-tutor.

The use of technology in a teaching and learning context is vital. Specific skills and competencies are required to cope in this environment and to support active learning. The basic latest skills required are information and communication technology (ICT) skills, visual media literacy and e-competence. (Brown 2006).

In line with e-tutoring in terms of active learning, there are specific skills that are essential in the online environment. E-tutors and students must know how to search for information electronically, which contributes to knowledge production. They also need to master networking skills within a community of practice and learning. Even in e-tutoring, students must be developed to become multi-skilled. For example, they must be able to work in groups and be context sensitive.

However, although constructivism and connectivism reflect the learning process, there is a lack of learning context. It is important to contextualise learning for the benefit of the learning process. Kop, cited in Stranack (2012:4), identifies the limitations of connectivism as a lack of explanations as to how critical thinking will be encouraged, an unequal power imbalance, student autonomy and self-directed learning. It is also argued that knowledge is constructed by students themselves, shared and accepted, and that both scientific knowledge (epistemology) and the world are socially constructed. Students belong to a community of practice because they have a common goal and they must build a common understanding.

Active learning

The key issue in using technology is to promote active learning. According to a study conducted by the University of North Carolina (2009:10), the core element of active learning comprises students' activity and engagement. The study also mentions that active learning includes activities that are introduced into the lesson. Active learning therefore means that students should be able to construct their own knowledge while the tutor facilitates the knowledge and students are actively involved in the lesson.

Bromi (2001) stipulates that active learning takes place when students are interacting with material and influenced by motivational cognitive processes. Active learning places the

emphasis on positive interdependence and individual accountability as a means to promote peer interaction. For the purpose of this study, active learning will be assessed in the light of technology as a vehicle to facilitate knowledge. E-tutors are expected to play a vital role in assisting students with constructing knowledge via the use of technology.

In an online distance learning context, dialogue is considered an essential element of the process of learning in both synchronous (in real time) and asynchronous (exchange takes place over an extended time period) discussions. In order for active learning to take place, in group discussion questions need to be asked by the group, as well as the individual. Most of the work should be done by students themselves.

E-tutors should ensure that the quality of teaching and learning is not compromised by technology. Bernard (2012:40) argues that quality assurance has always been an academic ethos – since the Middle Ages, in fact. Bernard (2012:44) also mentions that philosophers' work, like *Aristotle's ontology, defines quality as the essential feature of a matter that makes it to what it is and differentiates it from others*. He furthermore mentions that the term, quality, dates back to the 16th century, when it was used in the field of medicine with the connotation of feature or character. According to UNISA's Directorate of Curriculum Development (2011:1), quality assurance refers to fitness for purpose, transformation and value for money. With regard to fitness of purpose, the directorate undertakes to ensure that the quality of the directorate's functioning is embedded in legislative imperatives (UNISA 2011:1).

Harvey, cited in Bernard (2012:47), indicates that *fitness of purpose evaluates whether the quality-related intentions are adequate. It provides a check on fitness for purpose*. According to UNISA's draft on monitoring the activities of e-tutors, the responsibility of e-tutors is to give support and motivate students, as well as tracking students' activities in an online and virtual environment. The monitoring team comprises subject lecturers, who ensure that e-tutors are trained in and mentored on capacity-building.

The Administrative Student Coordinator (ASC) ensures that tutors attend to students questions timeously and that their responses are in line with UNISA's quality standards. The ASC also generates reports on tutor evaluation by students. In terms of students and the Integrated Tutor System, the ICT system must be able to track tutors' activities and the participation rate in *my UNISA* and do an automated report-back to the ASC. Fitness of purpose is reflected in the views mentioned above. The draft on the monitoring of e-tutors' activities indicates that monitoring safeguards quality standards. The view mentioned above

is that it is important to safeguard teaching and learning standards that contribute to the topic, *UNISA e-tutors' perceptions, beliefs and views in terms of active learning.*

FITNESS FOR PURPOSE

According to Bernard (2012:47), the above judges *quality by the extent to which a product or service meets its stated purpose. The purpose may be customer-defined to meet requirements or (in education) institution-defined to reflect the institutional mission or course.* UNISA's Directorate for Curriculum Learning and Development explicates that its *vision and mission are aligned to the UNISA 2015 agenda for transformation, and that it implements UNISA tuition policies to ensure effective distance learning that will optimise student engagement in the learning process.* UNISA's vision and mission state that, to be authentic and realistic, problems are being examined from multiple perspectives, which requires collaboration and reflection; tutoring integrated with assessment; and supported by scaffolding.

METHODOLOGY

This qualitative study employed semi-structured interviews as a method of collecting data. Qualitative research constitutes an enquiring approach, which is useful for understanding and exploring a central phenomenon (Creswell 2012:626). Qualitative research was applied in this study, as it attempts to ascertain how people make sense out of their own lives. The personal perspectives and experiences of the participants were explored and reported on by using this method. The interviews were conducted with e-tutors at the UNISA campus in the Ekurhuleni area. The interview comprised five questions, which the e-tutors had to respond to. The questions were open-ended and allowed the e-tutors to talk more about their experiences and views and to reflect on any information that they deemed fit for the researchers' benefit. The study adopted the phenomenological approach of interviewing respondents in their natural settings, so as to capture their experiences, perceptions and views, as required by qualitative research (Cresswell 2012; Babbie 2007; Omrod & Leedy 2005).

According to McMillian and Schumacher (2011:401), qualitative research uses small samples of people, nested in a context and studied in-depth. To this effect, Neuman (2009:376) maintains that, since researchers are privileged to access information from subjects, they therefore have a moral obligation to uphold the confidentiality of the information by various methods, such as disguising subjects' names and/or their place of residence.

Sampling

Wiersma and Jurs (2009:479) provide a general definition of a sample and regard it as a subset of the population being studied. On the other hand, White (2005:115) regards sampling as making a selection from the sampling frame in order to identify the people or issues to be included in the actual research study. Purposeful sampling was employed in this study which, according to Patton (2002:169), is a process of selecting information-rich cases for the purpose of an in-depth study of the topic under investigation. The e-tutors were sourced from the UNISA database with the assistance of the tutorial officers who work directly with e-tutors. A total of ten e-tutors, who were already active in the system, were selected, but only five responded positively to the interview. When a follow-up was done, the other e-tutors indicated that they had signed the contracts but have never engaged in e-tutoring. They stated that they were still waiting for students to be routed to them so that they will be in the position to start.

The participants in the study were selected on the basis of their previous knowledge of F2F tutoring, since they have migrated to e-tutoring. Consent forms were obtained from all the participants involved in the study before they could become part of the sampled population.

Data analysis

The collected data was first transcribed and saved. In order to understand the experiences, views and perceptions of participants, the data was systematically examined. Transcripts from interview sessions were analysed and the codes and categories were determined and formulated into themes. A more in-depth analysis was done of the latest questionnaire on the subject of online and e-Learning, which provided interesting knowledge on how students and their lecturers approach the process of online tutoring. The questionnaire focused mainly on the tutors' experiences, views and perceptions pertaining to the way in which their students used online tutoring to develop skills.

Data gathered from the respondents was collated, using thematic analysis, which is a systematic process of organising and describing data in detail (Braun & Clarke 2006). The main reason for selecting this technique was its flexibility, as it allowed the development of a coding frame that fitted the explorative approach of this study.

A combination of literature resources (Boyatzis 1998; Attride-Stirling 2001; Braun & Clarke 2006) was used as a guideline in developing the coding frame. The construction of the coding frame was "data-driven" (Boyatzis 1998). It sought codes that followed a pattern and each

pattern was encompassed by a category. Categories that were interrelated were then labelled in accordance with global themes. The coding frame was organised and each global theme, category and code were summarised and defined. Finally, representative quotes were added to the coding frame. The experiences of participants and their comments were regarded as experiential learning for participants.

The participants responded to the following questions:

The first question:

What are e-tutors' views on working on-line?

The participants indicated that they felt that their students were not computer literate. A problem that was often highlighted was the fact that most students were not used to a computer setting. Students were labelled as “shy, reserved and not confident enough to appear publicly on-line.” In addition, another problem raised by these tutors was the lack of actual physical contact that these students experienced when working on-line. Most importantly, a highly prevalent theme raised by these tutors was that students failed to work together during group tasks. As it was so eloquently put by one of the lecturers: *“Most of these students are not used to working together on-line”*.

The participants' view is that some students prefer to have group discussions within their area. It appears as though many of these students are still not used to expressing themselves freely on-line.

How can students link pre-knowledge with new information?

A number of e-tutors responded that students first needed to be given a clear awareness of what e-Learning actually constitutes. This was emphasised by an e-Learning tutor who stated that “... some students still do not understand what e-tutoring is”.

The participants felt that they did not have the knowledge of how to assist students to connect and use on-line as a mode of learning. They indicated that the issue of student accessibility constituted a challenge for students with regard to connecting on-line. Another concern was that the material covered by e-Learning tutors was too advanced for most students. The participants highlighted the fact that students were lacking the prerequisite skills and

knowledge. Students should be forewarned that they need to develop proficiency in areas of their own if they were to succeed in the course.

What was the tutors' experience regarding a community of learning?

When discussing their feelings towards students actively participating in their on-line community sites, a large number of e-tutors felt that students shared a limited interest in these sites. A mediocre response was experienced by most e-tutors. As one disappointed lecturer remarked: "There is limited interaction between the students."

The e-tutors felt frustrated because they were unable to reach out to their students on-line. Hence, there is no cooperative learning taking place when students form platforms to connect and share experiences. Participants also stated that students mostly read what was beneficial to them on-line and then they left. In terms of the reasons as to why these students did not take an engaged approach to interacting on-line, a general response was that this was due to a lack of access to a computer and/or the internet.

How do students take charge of their learning?

Participants were asked to share their views on how readily students take charge of their e-learning. The common response of most e-tutors was that it was "poor and fruitless". Participants, *inter alia*, made the following comments:

- "My students check my posts very often, although the majority is not commenting much,"
- "A few students were fully committed."

From the responses and comments by e-tutors, it appears as though the students are still unfamiliar with e-learning. Students lack the urge and commitment to explore the means of on-line learning. However, one of the participants made the following statement: "If the facilitator assists one student having a problem, the student may share this with other students who may have a similar problem". One of the participants felt that e-learning was beneficial to students, since information shared with one student could be posted on-line and, in so doing, it benefited all students who were connected and therefore reduced the gap and time between the tutor and the students.

How is critical thinking promoted on-line?

With regard to the critical skills and competencies acquired via the new e-learning system, a unanimous response was given to the positive benefits of e-learning: "Critical thinking is promoted because it allows students to debate issues, using on-line discussion forums".

The participants argued that, during on-line discussions, critical thinking was promoted, as they shared different world-views on different issues. Participants furthermore highlighted the fact that potential knowledge and expertise were in high demand in the job market, via the promising feature of e-Learning tuition.

DISCUSSION

Literature states that students may benefit from e-learning by reflecting on their previous learning experiences and by being able to develop meta-cognitive skills (Kolb & Kolb 2005). E-tutors' experiences and their exposure to on-line tutoring may assist the student to gain confidence with regard to learning and promoting an understanding of searching for knowledge/information on-line. Such skills should be instilled in all first-year students so that they do not remain dependent on tutors to provide them with knowledge, but learn to access information themselves on-line.

In this study, cooperative learning was a preferred mode of learning. During the research, e-tutors made an input by revealing that students lacked access to technology devices to log onto the internet. Hence, the constructivist approach to learning actively was not being promoted. The e-tutors believe that they are still far from perceiving learning within a social constructivist framework, in which a student is an active participant and where the emphasis is placed on social participation and independent study (Kyriaki 2009: 13). Kyriaki further avers that a lack of on-line participation is called "lurking". Lurking in this study is similar to the e-tutors' comments that most students go on line and check their mail but fail to contribute to on-line community forums. Hence, they are invisible to their tutors.

Although e-tutors are aware of the challenges faced by their students with regard to e-learning, it was interesting to note that they have a similar naïve view of learning via technology. The researchers found that technology is not integral to students' learning experience, but it is useful for accessing resources, surfing and social networking. All the participants shared a common understanding that students are aware of technology, but that

they do not have sufficient access to it and are still naïve when it comes to using on-line learning to their advantage. E-tutors also highlighted their frustrations regarding the fact that they had been contracted to do e-learning but it has never realised, as students do not use the service. Although UNISA emphasises e-learning, it appears as though technology is not regarded as an integral part of students' learning.

CONCLUSION

In conclusion, e-Learning and on-line tutoring present some interesting and fascinating ideas with regard to the future goals of learning and teaching. One could say the system is innovative in terms of providing students with a platform to explore new ideas that are constantly shaping the world. The information and technology that students are exposed to via on-line modules are sufficiently educational to encourage them to be proactive and independent students. However, due to the unfortunate socioeconomic inadequacies experienced by many students, the accessibility of on-line tutoring still remains ineffective for the majority of students. Furthermore, the active learning approach, promoted by e-tutors, is rendered unavailing, because most students are still not computer literate.

RECOMMENDATIONS

- The tutors should conduct workshops to inform students about on-line learning, and information on on-line learning should be disseminated during student orientation programmes to inform students in this regard.
- E-tutors should be empowered and trained how to use technology to enhance students' learning experience. This will address the issue of on-line tutors being employed solely on the information that they provided on the application form.
- Students should be supported in learning to use technology for skills development and more interaction should take place to ensure that students and tutors are well-capacitated.
- On-line activities should be developed in such a way that they promote self-participation by students.
- The relationship between students and e-tutors should be permeable, in order to facilitate ease of communication.
- On-line topics should promote continuous engagement and finally life-long learning.

REFERENCES

Atride-Stirling, J. 2001. Thematic networks: an analytic tool for qualitative research 1: 385-405.

Boyatzis, RR. 1998. *Transforming qualitative information: thematic analysis and code development*. Thousand Oaks: CA Sage.

Babbie, E. 2007. *The practice of Social Research* (11th edition). USA: Thomson Learning. Bernard, 2012.

Braun, V & Clarke, V. 2006. Using thematic analysis in Psychology. *Qualitative research in Psychology*. Vol. 3: 77-101.

Brown, TH. Beyond Constructivism: Navigationism in the knowledge era. *On the Horizon*. Vol. 14 (3): 108-120. Emerald Group Publishing Limited.

Butcher, N, Baijnath, N & Ryan, P. 2012. *UNISA: Selecting a Future Business Model for UNISA*. Pretoria: UNISA Press.

Cresswell, JW. 2012. Educational research: Planning, Conducting and Evaluating Quantitative and Qualitative Research. (fourth edition). Boston: Pearson.

Kerr, B. 2007. *A challenge to connectivism*. Transcript of keynote speech, online connectivism conference. University of Manitoba. Retrieved from [http://Itc.umanitoba.ca/wiki/index.php?title= Presentation](http://Itc.umanitoba.ca/wiki/index.php?title=Presentation). (Retrived 18 October 2013)

Kolb, AY & Kolb, DA. 2005. Learning styles and learning space. Enhancing Experiential Learning in Higher Education. *Academy of management, Learning and Education*. Vol. 4. No. 2: 193-212.

Kop, R. 2011. *The Challenges to Connectivist Learning on Open Online Networks*. Learning experiences during a massive open on-line course.

Kop, R & Hill, A. 2008. *Connectivism: Learning theory of the future or vestige of the past?* *The International Review in Open and Distance Learning*. 9(3). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/523/1137>. (Retrieved 17 November 2013)

- Kyriaki, A. 2009. Promoting good practice in learning, teaching and assessment in higher education. *A Journal of e-learning and teaching*. Vol. 2: 1-13.
- Leedy, PD & Omrod, JE. 2005 *Practice research planning design* (third edition). Upper Saddle: Merrill.
- McMillian, JH & Schumacher, S. 2011. *Research in education. A conceptual introduction* (fifth edition). New York: HarperCollins.
- Mills, R. 2010. *Regional Model Implementation Plan Report*. Pretoria: UNISA Press.
- Neuman, WL. 2009. *Social research methods, Qualitative and Quantitative approach* (seventh edition). Boston: Allyn and Bacon.
- Nguyen, N, Williams, J & Nguyen, T. 2012. The use of ICT in teaching tertiary physics: Technology and pedagogy. *Asia-Pacific Forum on Science Learning and Teaching*. Vol. 13, Issue 2: Article 6: 1.
- Orey, M & Bran, M.R. 2008. Technology yearbook. Vol 33
- Patton, .M. 2002. *Qualitative evaluation and research methods* (third edition). Newbury Park: Sage Publications.
- Piaget, J. 1964. Development and learning. *Journal of Research in Science Teaching*. Vol. 2: 176-186. Geneva: Centre of Genetic Epistemology.
- Prince, INITIALS...2004. Journal of Engineering. Does Active Learning Work? A review of research. Vol. 93, Issue 3:223-231.
- Pritchard, A. 2009. *Ways of learning: Learning theories and learning styles in the classroom*. USA: Routledge.
- Senge, PM 1990. *The Fifth Discipline: The Art And Practice of The Learning Organization*. New York: Double Day Currency.
- Siemens, G. 2012. Massive on line courses as a new educative practice.
- Stranack, K. 2012. *Critical Review of Connectivisim: A learning Theory for The Digital Age*. E-portfolio.
- UNISA Curriculum Policy. 2011 Pretoria: UNISA Press.
- UNISA. 2011. *Towards an ODL pedagogy: Guiding principles and framework for an ODL pedagogy*. Pretoria: UNISA Press.

- Van den Boom G, Paas, F & Merienboer, JG. 2007. Effects of elicited reflections combined with tutor or peer feedback on self-regulated learning and learning outcomes. *Learning and Instruction*. Vol. 17: 532-548.
- White, CJ. 2005. *Research: A practical guide*. Pretoria. Ithuthuko Investments Publishing.
- Wiersma, W & Jurs, SG. 2009. *Research methods in Education: An Introduction* (ninth edition). Boston: Pearson
- Woo, Y & Reeves, TC. 2007. Meaningful interaction in web-based learning: A social constructivist interpretation. *Internet and Higher Education* 10: 15-25.