Re-Thinking the Value of Learning Theories to Develop Self-Directedness in Open-Distance Students

Dr Bernadette Geduld

North-West University
Bernadette.geduld@nwu.ac.za

Abstract

Learning is a complex process that has generated numerous interpretations and theories as to how exactly it can be effectively facilitated to ensure that meaningful learning is achieved. This article will examine the value of different learning theories to develop self-directedness in Open distance learning students. While the basic assumptions and principles of social constructivism are not disputed, it is argued that we must be mindful not to replace one learning theory with yet another and promote a 'one size fits all' notion of what good teaching and learning is supposed to be. The concern is raised whether there is a single "best" learning theory and whether one theory is more efficient than the others when it comes to adult learners in ODL.

Keywords: *self-directed learning, behaviourism, constructivism, adult learning theories, teaching implications*

1. Introduction

There has been an increasing number of requests within different sectors of education to educators to make a paradigm shift from the behaviouristic approach to the constructivist approach of teaching and learning. The reason for this is a reaction against teacher-centred teaching approach that has dominated much of education, particularly in adult and higher education, for the past fifty years or more. The selection and application of learning theories is influenced by the fact that lecturers and students differ in terms of preferred teaching and learning strategies. For example, ODL student profiles range from experienced, adult students who were schooled and trained in behaviouristic teaching and learning principles to younger students who are used to teaching and learning in the digital or online learning era. Similar to students, lecturers have studied in different teaching and learning paradigms and have their own strengths and weaknesses with regard to teaching and learning. This situation often results in a mismatch between their expected teaching and learning paradigms. Therefore, lecturers should be able to use theories that are best suited to the needs of ODL students and to their own teaching and management style.

It becomes challenging to address the needs of the majority of ODL students, with a teaching approach based on one theory. Theoreticians might debate about conceptual, theoretical frameworks and the teaching and learning implications of learning theories, but according to Huong (2011) the quality of teaching largely depends on how well lecturers' can identify students' readiness levels and learning styles and match them with relevant choices in instructional design. If the application of a combination of different theories results in motivated students who are eager to learn in a self-directed manner, it would be difficult to argue against an eclectic approach from a pragmatic standpoint to give cognitive support and to improve the pass rate of ODL students.

Against this background two questions arise: (a) Can the traditional learning theories of the past century can still continue to play a role in ODL? (b) How do adult learning theories facilitate the development of the self-directedness of ODL students?

The purpose of this paper is not to deconstruct learning theories, but rather to reflect on the value and shortcomings of traditional learning theories such as behaviourism, social cognitive theory, the information processing theory as well as on other adult learning theories that have emerged and could influence academic success and the development of self-directedness ODL students. Reflection on the value of various learning theories can provide insight as to how lecturers can adapt learning tasks and teaching styles with flexibility and creativity.

In the discussion to follow a brief overview of learning theories, the teaching implications and shortcomings of each theory, after which the merit of each learning theory in ODL will be discussed to substantiate the argument for an eclectic use of learning theories in ODL. Many researchers argue against the use of an eclectic approach, which indicates

designing instruction from multiple theoretical perspectives. An eclectic approach is said to strip concepts, strategies and tools of meaning and usefulness (Bonk & Cunningham, 1998; Sfard ,1988). Bonk and Cunningham, (1998) states that, "Problems arise ... when tools developing in the service of one epistemology are integrated within instructional systems designed to promote learning goals inconsistent with it". In the same vein Sfard (1988) argues that an eclectic use of theories results in "putting too much of a good thing into one pot". The author believes that an eclectic approach based on a pragmatist epistemology is appropriate for the design and delivery of ODL (Surgenor, 2010; Germain-Rutherford & Kerr, 2008).

2. Conceptual - Theoretical Framework

Learning theories inform choices lecturers make concerning methods for their instruction to enhance their students' chances to achieve particular academic goals and they also give an understanding of how learning occurs. Although there is no single theory that fully explains adult learning, there are different theories, models and sets of principles which together provide a knowledge basis for the context in which adults learn (Merriam, 2001). Each learning theory emphasises specific aspects of learning, while down playing others. Students learn different competencies when different learning theories are used.

The evolution of learning theories and their use for effective teaching and learning have been researched and documented (Pritchard, 2009; Conlan *et al.*, 2008). Researchers are concerned with questions such as: How does learning occur? What factors influence learning? What is effective learning? The answers to these questions depend on the definer's own orientation towards learning as well as the nature of learning in a specific context (Brown, 2004).

Learning is a complex process that has generated several interpretations and theories regarding how it is effectively accomplished, which makes the task of translating learning theories into practical applications not a simple task.

2.1 Different views on adult learning

Adult learning theorists distinguish between three philosophical orientations namely, behavioral, developmental and humanitarian philosophies. Amstutz (1999) adds three philosophies namely cognitive, a situated cognitive and liberal philosophy of adult learning.

2.2 Behavioural view of adult learning

Behaviorism is a theory of animal and human learning that focuses on environmental influences, objectively, observable behaviours and discounts mental activities. Learning is seen as a permanent change in abilities, skill or attitude caused by experience and which can not only be ascribed to a process of physical growth, but it is caused by the relation between stimuli and response (Hoy Woolfolk, 2010).

The behaviorist learning theory espouses teaching strategies that are most useful for instructional cues, practice and reinforcement (Ormrod, 2008). These strategies have been proven effective for facilitating learning that involves recalling facts, defining and illustrating concepts, associations or applying explanations and automatically performing a specified procedure, computer-assisted instruction, and mastery learning.

It is generally agreed that behavioural principles cannot adequately explain the acquisition of higher level skills or those that require a greater depth of processing for example problem solving and critical thinking skills. Cognitive factors like insufficient prior knowledge, poor reading abilities and ineffective learning strategies can influence students' abilities to learn, but these factors are underemphasised in the behaviouristic learning theory (Ormrod, 2008). This theory is viewed as mechanistic and deterministic and as a way to condition and control people by means of punishment or reinforcement (McInerey, 2005). Free choice, self-directedness or an own value system in the learning process is not emphasised. Pritchard (2009) argues that the reinforcement diminishes students' intrinsic interest because the focus is on completion of a quantity of learning tasks and not on the development of higher thinking processes during the volition of learning tasks. When behaviouristic approaches are used as the only pedagogical approach learning can become problematic (Dyke et al., 2007).

Despite the shortcomings, some of the principles can still be applied to meet the specific professional development or improvement of work-related skills and training with ODL students. Knowledge of behaviouristic principles such as association, discrimination, generalisation and distinction can help lecturers amongst other things, to understand how

and why students' emotional and psychological reactions influence their learning. Behaviouristic principles are still used by many ODL students who completed their primary, secondary and initial teacher training during a period where the emphasis was on teacher-centred traditional approaches and not on self-directed learning in constructivist approaches. Personal experience has revealed that many of these students have a limited use of self-directed learning skills, experience stress because of low self-efficacy and feelings of inadequacy to master content in the programme. ODL students with these characteristics need constant positive reinforcement to build their confidence. Behaviouristic approaches could work best for these students' while their self-directedness is gradually developed. Association and positive reinforcement has a role, such as drill and practice scenarios and revision. In addition memory recall is an essential building block to any higher-level learning (Horn, 2009).

For students who have not yet meet the requirements to work confidently, independently and self-regulated with well structured learning material and less support from lecturers, behaviouristic learning principals can be utilised. For example, self-activities where tasks require a low degree of processing, basic paired associations, discriminations and rote memorization behaviouristic principles work better. With introductory learning behaviourist approaches are useful where students have very little directly transferable prior knowledge about a skill or content area. In such cases the student can develop some anchors for further exploration (Ertmer & Newby, 2013).

Lecturers can emphasise observable and measurable outcomes in study material. Students can be pre-assessed to determine where instruction should start, and emphasis can be placed on mastering early steps before progressing to more complex levels of performance. Furthermore practice situations can be arranged and positive reinforcement offered in feedback to impact on performance (Ozuah, 2005).

2.3 Cognitive conceptions of adult learning

The social cognitive theory is a mixture of the behaviouristic and cognitive views of learning (Ormrod, 2008). This theory focuses on four basic variables namely, observable and non observable behaviour, expectation and reinforcement. Students can learn by observing models which results in enactive and vicarious learning. Their learning behaviour can be directed toward setting particular goals so that they can eventually become self-directed (Schunk et al., 2014).

The social cognitive theory fails to explain why students would not imitate all modelled behaviour that is valuable for them. This theory does not explain how complex tasks like learning to write academically is learned and what the role of context in social interaction is. Furthermore the roles of social learning in different cultures and social contexts are deemphasised by social cognitive theorists. Another shortcoming is an explanation of how observational learning in a small interactive group differs from observational learning in general (Eggen & Kauchak, 2004).

The teaching implications are that lecturers should emphasize active involvement of students in the learning process by teaching and modelling self-directedness in the learning process. Environment conditions such as instructional explanations, demonstrations, illustrative examples are all important in guiding student learning and relating new information to existing knowledge. Emphasis should be placed on practice with corrective feedback. These teaching implications are exceptionally valuable in ODL, as many ODL students utilize few learning strategies and have a limited awareness of their thinking processes. Students become more metacognitively aware when lecturers model their own thinking processes as they solve problems, develop an argument or analyse written work in front of the class. Lecturers can also teach metacognitive strategies indirectly by focusing on setting goals, making predictions and checking for consistencies in their own teaching. Attention can be focused on metacognition by having students write in a learning journal or develop explanations of their problem-solving processes (Okoro & Chukwudi, 2011).

The information processing theory focuses on how the memory functions, the use of appropriate learning strategies in learning and emphasises the thinking processes, for example, schematic organization, analogical reasoning and algorithmic problem solving. It is considered more appropriate for explaining complex forms of learning like reasoning, problem-solving and information-processing (Driscoll, 2005). Attainment of knowledge and internal mental structures such as how students receive information, organize, store and retrieve it from their minds is emphasised. The learner is viewed as an active participant.

This theory is useful when lecturers have to create learning environments that encourage students to make connections with their prior knowledge by recalling of prerequisite skills, use of relevant examples, metaphors, and analogies. Information processing also aids lecturers to understand processes students need to apply when they must learn factual information, understand facts and ideas in context, and organize knowledge in ways that facilitate retrieval and application in order to develop competence in a new topic. Concept maps, flowcharts, outlines, comparison tables, analogies and hierarchical relationships in ODL study guides can help students to relate new information to prior

ISSN 2239-978X
ISSN 2240-0524

Journal of Educational and Social Research
MCSER Publishing, Rome-Italy

Vol. 4 No.6
September 2014

knowledge and make the structure of the knowledge clear (Ertmer & Newby, 2013).

Stoll et al., (2003) argues that the information processing theory's description of learning is insufficient to describe learning because it focuses mainly on the role of memory in learning, though individuals can store, gain and retrieve information not only from their memories, but also from other sources like models, videos and Internet. This theory also fails to explain the role of personal factors like emotions, individual construction of knowledge and the social contexts of learning, and only focuses on the cognitive levels of students (Eggen & Kauchak, 2004).

Lecturers can still apply cognitive learning theory strategies by simplifying and organising information to make it meaningful, organised and easier to store and retrieve. Students should be taught processing strategies, for example, how to eliminate irrelevant information or to chunk new information in a way that it can be assimilated and accommodated. Feedback should be utilised to guide and support accurate mental connections and the use of different learning strategies like outlining, summaries and synthesizers (Ertmer & Newby, 2013).

2.4 Social-Constructivist approaches to learning

Constructivism refers to a cluster of related views (radical constructivism, social constructivism, socio-cultural approaches that all rest on the assumption that learning is an social, personal, active process of constructing meaning and transforming understandings (Schulze 2003). Knowledge is constructed from real life experiences, prior knowledge and the activities students engage in as they learn (Bartos, 2007). Learning is also seen as a process where conceptual growth comes from the negotiation of meaning, the sharing of multiple perspectives, reflection and the changing of internal representations through collaborative learning (Kiely, 2004; Lewis, 2009). Jonassen (1991) described three stages of knowledge acquisition (introductory, advanced and expert) and argues that constructive learning environments are most effective for the stage of advanced knowledge acquisition, after initial misconceptions and biases acquired during the introductory stage have been removed.

Social constructivism has challenges for lecturers and students who are not familiar with its theoretical and philosophical foundations. Lecturers have to learn about students' experiences, preconceptions or misconceptions by using pre-tests, background knowledge probes and written or oral activities designed to reveal students' thinking about the topic. They also have to provide opportunities for students to connect with content in meaningful ways by using cooperative learning, interactive lectures, engaging assignments, hands-on field experiences, real life problem-based activities, and other active learning strategies. According to this theory, students learn with greater understanding when they share ideas through conversation, debate and negotiation. Furthermore, the theory espoused that learning should be situated in realistic settings; testing should be integrated with the task and not be a separate activity; and sometimes peer reviews can be set up to encourage further thinking (Bartos, 2007).

Besides its strengths mentioned, this theory poses the following weaknesses. It has been critised for being subjective because social interaction and collaborative learning is overemphasised while the role of the individual student is deemphasised. When students cannot relate new material to what they already know, they tend to memorise rather than develop any real understanding of the content (Liu & Matthews, 2005). It requires well equipped and expansive infrastructure like libraries, Internet and other resources that are not easily accessible to all ODL students in South Africa (Scheepers, 2000). Social constructivist theorists make the assumption that all students are evenly responsible, self-directed and possesses the skills to control their own learning. Less self-regulated students do not have the ability to determine the learning needs and strategies that are required for their academic progress. When students have to complete tasks that require various resources, such as direct experience, secondary sources, research and interviews, the overload of information can confuse them when they have to distinguish between relevant and irrelevant information (Venter, 2001). In situations where students need to reach consensus, reaching consensus can be difficult because each student brings his or her own unique reality, especially in a multi-cultural country like South Africa. Critics warn that the application of this theory's teaching principles may put too much emphasis on active and self-directed learning, at the expense of guidance and scaffolding that many students need (Liu & Matthews, 2005; Driscoll, 2005).

Educators themselves struggle with various problems with the implementation of social-constructivist teaching and learning principles (Woolfolk, 2007). Kumar (2006) and Hyslop-Marigison and Stoibel (2008, quoted in Tuckman and Monetti 2011) came to the conclusion that educators' inability to apply social constructivist teaching and learning principles, in itself, is a shortcoming. To be able to effectively apply social constructivist principles educators must first understand the theory as a basis for teaching and classrooms must be rearranged to fit in with the theory's philosophy.

The following questions highlight some of the conceptual and pedagogical problems that arise when lecturers are applying the social-constructivist theory: Do all activities give rise to the construction of knowledge for all students?

Should students study facts and ideas which are seen as correct by experts, or should they always construct their own ideas? Should teaching be based on student's previous experiences rather than on learning outcomes that should be attained? Can students be trusted to take responsibility for their own learning? How should contact sessions be managed and controlled when students talk more to each other than with the lecturer? How can problem based learning tasks help students to comply with and attain specific higher education pass requirements?

Although the social constructivist theory lends itself to self-directedness the physical and psychological bridge experienced by ODL students studying in a second generation model ODL remains a stumbling block.

2.5 Liberal conceptions of adult learning

Merriam (2001) describes adult learning as a complex phenomenon that cannot be reduced to a single, simple explanation, but rather a changing mosaic where old pieces are rearranged and new pieces are added. Old pieces refer to, in Merriam's (2001) description of adult learning to andragogics, self-directed learning and transformative learning. The new pieces relate to recent models of adult learning from critical theory, multicultural and feministic perspectives on how context influences learning (Merriam, 2008). In the next paragraphs a few liberal conceptions of adult learning will be discussed.

The purpose of education according to the liberal view is the promotion of emancipatory learning and social action to make students aware of values, beliefs and assumptions they have uncritically assimilated from a dominant culture. Brookfield and Mezirow, influenced by Freire and Horton, are some of the key researchers in the liberal view of adult learning (Wickette, 2005). The core of Freire's educational ideas lies in a political and humanitarian view of people as students who should not remain passive in the learning process, but should become active, reflexive participants to free themselves and their socio-cultural environments from political and social oppression. According to Freire, education is not a neutral process, but a process that should facilitate freedom (Jarvis, 1995).

Mezirow (1991) describes his transformative learning theory as a liberating process in which adult learners become critically aware of their own assumptions and how the assumptions limit them in terms of what they see, understand and experience of the world (Jarvis, 1995; McGonical, 2005). The transformative learning theory requires a paradigm shift that Mezirow calls perspective transformation. Perspective transformation is not just a rational process, but also an emotional experience as a result of the paradigm shift caused by various conditions and processes as such as: activating events which forces students to reconsider their existing ways of thinking and possible limitations in their thinking. With perspective transformation lecturers should force students to reconsider the creation of contrasting views or dilemmas, critical self-reflection where students can reflect on their assumptions, critical dialogue where learners are exposed to alternative ideas and approaches and events such as debates and role plays to test their new perspectives and apply them (Barkhuizen & Gravett, 2001; McGonical, 2005).

Both Mezirow and Freire focus on the education of adults, the development of critical thinking and reflection in students so that they can improve their social environments and free themselves from discriminatory, social or political agendas. Both regarded education as a liberating force. Mezirow differs from Freire's views in the sense that he views freedom more from a personal, psychological perspective in which adult students become critically aware as to how and why their own assumptions are restrictive before they themselves can liberate from it and develop new perspectives (Jarvis, 1995; McGonical, 2005). Wickett (2005) and (Cretchley & Castle, 2001) criticize the liberal conceptions of adult learning as politically left minded, because it focuses on the social history, actions and context of the students' political order. Jarvis (1995) criticizes the understatement of the cognitive dimensions of learning in liberal learning theories as a shortcoming.

The conditions and processes of transformative learning should be created for ODL students to lead them to a paradigm shift on their assumptions regarding what they see, and how the understand and experience the world. The self-knowledge that students develop through reflection in the above mentioned conditions and processes is a prerequisite for self-directed learning (McGonical, 2005). ODL students should also be developed so that they as role players can bring about change in social and political issues of their daily lives.

2.6 The humanitarian conceptions of adult learning

The humanitarian view of learning is consistent with the social constructivist learning theory about effective learning where the goal of adult education is the development of an individual's full potential (Schunk et al., 2014). Theorists with this view assume that students have a natural potential to learn in welcoming, resourced, learning environments where

learning opportunities are established and students are led to reflect on what, how and why they learn (Amstutz, 1999). The learning process is seen as deliberate and individual ways of learning, cultural influences on learning, and self-directed learning is recognized (Merriam, 2008).

2.7 Experiential Learning

Experiential learning, andragogics and self-directed learning are examples of humanitarian conceptions of adult learning (Osman & Castle, 2006). Experiential Learning focuses on the ways in which learners' knowledge, skills and experience developed through direct experience with a phenomenon (Flax-Archer, 2009). Learners use previous experiences to solve problems when they learn and find new ways to gain more experience. Experiential learning is also used effectively with discussions when students learn from others' failures and successes (Conlan et al., 2008; Amstutz 1999).

2.8 Self-directed learning

Self-directed learning appeared, in the mid seventies, after andragogics as a model that helped to define how adult learning differ from children (Merriam, 2001:8). The concept of self- directedness is culture-bound. In the Western culture the self is often presented as a type of container with human characteristics and strengths that occur within a person. This view differs from a rural African view where the self of an individual and is concerned with interdependence with others, as well as with their own understanding of the meaning of being human, having shared values on African identity, community and culture (Nafukho et al., 2005). In the past decades definitions of self-directed learning have expanded because researchers consider adults' daily, informal learning with work, family life and community life and their life experiences as potential learning experiences which all falls within self-directed learning (Merriam, 2001). Self-directed learning has at least four major characteristics: autonomy in learning, the ability to manage own learning, independent learning outside a formal institution and lifelong learning. Self-directed learning holds the assumptions that students have independent self-concepts which implies they can make their own life and career choices, can identify their own learning needs, have life experiences that serves as a key resource to learn, their learning needs are in close connection with their changing occupational and social roles and they are motivated by internal factors (such as their own learning needs and interests) rather than external factors. However Rachel (2002), McGivney (2004), Flax-Archer (2009) Merriam (2001) and Brown (2004) argues that adult learners are often more externally motivated by job security, status or personal advancement as higher occupational status, the opportunity to form new social relationships (Osman & Castle, 2006), escape from boring routine work and family life, external expectations from employers that employees have to improve their qualifications and skills and social responsibilities to uplift their communities.

Self-directed learning has the following teaching implications. The autonomy of the adult student requires the teacher as a facilitator, because the adult students want to take responsibility for their own learning and do not want be told how and when to learn (Cretchley & Castle, 2001. In addition to the lecturer's role change, self-directed learning requires the active engagement characterized by interaction between lecturers and other students, talks and discussions where students can come up with new ideas and test out new ideas in the workplace to bring about personal growth (Amstutz, 2009).

Adult learners consider pragmatic reasons for their learning and want to determine their own educational pathways, such as choices in topics and subjects to ensure applicability in practice (Bihall & Miletti, 199;1 Huang, 2002) because they find it frustrating if knowledge and skills have no application value (Trotter, 2006). This implies that lecturers should relate new information and skills to students' experience and not only focus on the prescribed study material and secondary texts as support resources (Trotter, 2006). Lecturers should make use of case studies, reflection, journal entries, conversations, and problem solving activities where adult students can share their experiences with others and learn from others' experience and knowledge (Ozuah, 2005). Modules offered in formal programs at universities should therefore be relevant and appropriate to students' life and career situations.

According to Gravett (2004) adult learning requires the use of concrete experience, discussion and reflection. In ODL students can therefore, based on their experiences, make hypotheses, such as predictions or suggest possible solutions to a problem that is grounded on evidence from their experiences.

Like all other theories, adult learning theories have shortcomings. Merriam (2001) and Brown (2004) argue that assumptions about adult learning do not only characterize how adults learn, but also how children and adolescents learn. Many adults, for example, are dependent on the lecturers for structure, whereas children sometimes reveal more independence and self– directedness when learning. Adult students' self-directedness in fact varies from student to

student and from situation to situation on a continuum. On the continuum, adult students differ in their willingness and ability to accept personal responsibility for their own learning choices, goals, and the ways in which they participate in the learning process (Cretchley & Castle, 2001; Conlan et al., 2008). Not all adult learners are fully self-directed; some may need a lot of support. Andragogics as a philosophy about adult learning do not place enough emphasis on critical reflection, social interaction of learners and political, social and economic transformation in education. O'Shea (2003), Merriam (2001), and Cretchely and Castle (2001) noted, that adult learning theorists put too much focus on the importance of experience to learn and do not to keep in mind that the quantity of experience is not necessarily equal to the depth, richness and intensity of experience. Individuals can, for example, have many experiences some of which may not necessarily be good and relevant to knowledge and skills (Brookfield, 1995). Experience can also be an obstacle if adult learners' previous teaching and learning experiences are characterized by passive learning as is the case with many ODL students. Such students prefer and expect the traditional teacher-centered teaching approach. If they are not taught according to the traditional teacher-centered approach, they become frustrated and negative, especially students who have not been involved with formal studies for a long time (Gravett, 2004). Many adult learners are unstructured, need much advice and guidance because they are easily distracted by their own needs, assumptions, values and misconceptions when they must work independently, have little self confidence and do not have the necessary resources to learn independently (Conlan et al., 2008). The first models of adult learning have shortcomings due to one-sided emphasis on empowerment, liberation and information processing of individual learners (Merriam, 2008). The flaws with the linear design are caused when students' emotions, aspirations, social and career worlds, the formal and informal ways in which they learn and the context in which they teach and the learning process were ignored (Merriam, 2008).

3. Conclusion

In sum, I do not advocate one theory over the others, but I want to stress the significance being knowledgeable about different theories. I therefore propose an eclectic approach to the use of learning theories based on an intelligent choice informed by ODL students' level of self-directedness and competence, types of learning tasks and optimal academic achievement.

Ertmer and Newby (2013) warn that to be an eclectic, one must know a lot, not a little, about theories being combined. It is imperative that educators in higher education take a proactive stand in understanding how the application of learning theories challenge the design and delivery of programs in ODL to aid students in the cognitive, motivational, and psychological aspects of their learning processes. Knowledge of different theories can provide ODL lecturers with a better understanding about why a particular theory works for some students and learning contexts and not for other students. This can help to explain and predicts students' learning behaviour.

References

Amstutz, D.D.(1999). Adult learning: Moving toward more inclusive theories and practices. New Directions in Adult and Continuing Education, 82: 19-32.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Barkhuizen, J. Gravett, S.(2001). Transformatoriese leer by skoolhoofde. South African Journal of education. 21(4):264-267.

Bartos, K. (2007). Constructivism in action. Retrieved from http://kathleenbartos.blogspot.com/2007/04/introduction-in-completing-kam-ii-goal.html.

Bhalalusesa, E. (2001). Supporting women distance learners in Tanzania. Open learning, 16(2):155-168.

Bonk, C., & Cunningham, D. (1998). Searching for learner-centered, constructivist, and sociocultural components of collaborative educational learning tools. In C. Bonk & K. King (Eds.), Electronic collaborators (p. 25-50). Mahwah, NJ: Lawrence Erlbaum.

Brookfield, S. (1995). Adult learning An overview. In Tuinjman, A.C., ed. International Encyclopedia of adult Education and training. 2nd ed.New York: Pergamon. P375-379.

Brown,G.B. (2004). How students learn. A supplement to the RoutledgeFalmer key guides for effective teaching in higher education series. Routledge.

Conlan, J,. Grabowski,S,. Smith. K. (2003). Adult learning- Emerging perspectives on learning, teaching and technology. Adult department of educational psychology and industrial technology. University of Georgia. Retrieved from http://projects.coe.uga.edu/epltt/index.php?title=adultlearning.

Cretchley, G. & Castle, J. (2001). OBE, RPL and adult education: good bedfellows in higher education in South Africa? International journal of lifelong education, 20(6):487-501.

Driscoll, M.P.(2005). Psychology of learning for instruction. 3rd ed. Boston, USA: Pearson Education.

Dyke, M., Conole,G., Ravenscroft, A & de Freitas, S. (2007). In G. Conole and M. Oliver,(Eds.) Learning theory and its application to e-learning. Contemporary Perspectives in E-learning Research Themes, methods and impact on practice London: Routledge.

Eggen, P., Kauchak, D.(2004). Educational Psychology: Window on Classrooms (6th edition). New Jersey: Pearson Education.

Ertmer, P. A., Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective.

Performance improvement, Quarterly, 26(2): 43–71

Flax-Archer, A. C. (2009). Distance education among adult learners in the British Virgin Islands: a Phenomenological study. Capella University. (Dissertation- DEd.).

Gravett, S. (2004). Adult learning. Designing and implementing learning events: a dialogic approach. 2nd ed Pretoria: VanSchaik Publishers.

Germain-Rutherford, A., & Kerr, B. (2008). An inclusive approach to online learning environments: models and resources.Turkish online journal of distance education , 9 (2), 64-85.

Hiemstra, R. (1994). Self-directed learning. In Husen, T. Postlethwaite, T.N. (Eds). The International Enclyclopedia of Education. 2nd ed. Oxford: Pergamon Press.

Higher education and training.(2012). Department Higher Education and Training Republic of South Africa. Draft policy framework for the provision of distance education in South African Universities.Pretoria:Department of Higher Education and Training.

Horn, I. (2009). Learner-centerdness: an analytical critique. South African Journal of Education. 29:511-525

Hoy Woolfolk, A. E. (2010). Educational Psychology. 10th ed. Upper Saddle River, N.J.:Merill.

Huong, P.(2011). Theory-Based Instructional Models Applied in Classroom Contexts, Literacy Information and Computer Education Journal (LICEJ), 2(2): 406 -415

Jarvis, P. (1995) Adult and continuing education. 2nd ed. Routledge London and New York.

Jonassen, D.H. (1991). Evaluating constructivistic learning. Educational Technology, 31(9), 28–33.

Kiely, R. Sandman, L. R. & Turluck, J. (2004). Adult learning theory and the pursuit of adult degrees. New directions for adult and continuing education. 103, Fall. p17-30.

Lapadat, J.C. (2002). Written interaction: a key component in online learning. Journal of computer mediated communications, 7(4).

Lewis, E. (2009). An examination of perceptions, attitudes, and levels of job satisfaction of faculty teaching in a distance education environment. 5th ed. Publication manual of the American Psychological Association.

Liu, C.H & Matthews, R. 2005 Vygotsky's philosophy: Constructivism and its criticisms examined. 2005. International Educational Journal. 6(3): 386-399.

Makoe, M.E. (2012) Teaching digital natives: Identifying competencies for mobile learning facilitators, South African Journal for Higher Education 26 (1): 91-104.

Mcgonigal, K.(2005). Speaking of teaching for transformation: from learning theory to teaching strategy. Centre for Teaching and Learning (CTL), Stanford University. Newsletter on teaching, 14(2), Spring.

McInerney, D.M.(2005). Educational psychology: theory, research and teaching: a 25-year retrospective. Educational psychology, 25(6):585-600.

Merriam, S.B. (2001). Andragogy and self-directed learning: pillars of adult learning theory. New directions for adult and continuing education, 89:3-13. 328

Merriam, S.B. (2008). Adult learning theory for the twenty-first century. New directions for adult and continuing education, 119:93-98.

Merriam, S.B. Caffarella, R.S. 1991. Learning in Adulthood: A Comprehensive Guide. San Francisco. California: Jossey-Bass Publishers.

Mezirow, J. Transformative Learning. Retrieved from http://tip.psychology.org/mezirow.html.

Mihall, J., Belletti, H. (1991). Adult learning styles and training methods. FDIC ADR Presentation Handouts.

Nafukho, F., Amutabi, M. & Onunga, R. (2005). Foundations of adult education in Africa. Cape Town: UNESCO and Pearson Education.

Nye, R.D. (2000). Three psychologies: perspectives form Freud, Skinner & Rogers. Belmont, Calif.: Wadsworth.

O'Shea,E. (2003). Issues and innovations in nursing education. Self-directed learning in nurse education: a review of the literature. Journal of advanced nursing 43(1), 62-70.

Okoro, C.O., Chukwudi, E.K. (2011). Metacognitive Strategies: A Viable Tool for Self –Directed Learning. Journal of Educational and Social Research 1 (4): 71-76

Ormrod, J.E. 2008. Educational Psychology: Developing Learners.6th edition. New Jersey: Pearson Merrill Prentice Hall.

Osman, R,. Castle. J.(2006). Making space for adult learners in higher education. South African journal for higher education. 20(4): 515-527.

Ozuah, P.O. 2005. First, there was pedagogy and then came andragogy. Einstein journal of Biology and Medicine. 21: 83-87.

Pratt, D.D. (2005). Good teaching: one size fits all? In An Up-date on Teaching Theory, Jovita Ross-Gordon (Ed.), San Francisco: Jossey-Bass, Publishers.

Pritchard, A. 2009. Ways of Learning: Learning Theories and Learning Styles in the Classroom. (2nd edition). New York: David Fulton.

Rachal, J.R. 2002. Andragogy's detectives: a critique of the present and a proposal for the future. Adult education quarterly, 52(3):210-227.

Scheepers, M.D. 2000. Learning theories: Constuctivism. Retrieved from http://hagar.up.ac.za/catts/learner/2000scheepers-md/projects /loo/theory/construct.html.

Schunk, D.H., Pintrich, P.R.& Meece, J.L. (2014). Motivation in education: theory, research and applications. 3rd ed. Upper Saddle River, N.J: Pearson/Merrill Hall.

Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. Educational Researcher, March. 4-13.

Stoll, L., Fink, D., Earl, L. (2003). It's about learning: and it's about time. London, New York: Routledge Falmer.

Surgenor, P. (2010, January). www.ucd.ie/teaching. Retrieved April 04 , 2014, from UCD teaching and learning Resources: http://www.ucd.ie/t4cms/ucdtlt0016.pdf

Trotter,Y,. D.(2006). Adult learning theories: Impacting professional development programs. The Delta Kappa Gamma Bulletin. Winter. p9-13.

Tuckman, B.W. & Monetti, D.M. (2011). Educational psychology. Belmont, Calif.: Wadsworth.

Venter, E. (2001). A constructivist approach to learning and teaching. South African journal of higher education, 15(2):86-92.

Wickett, R. (2005). Adult learning theories and theological education. Journal of adult theological education. October 2(2).

Woolfolk, A. E.(2007). Educational Psychology. 10th ed. USA: Pearson.