

**MANAGING THE QUALITY OF LEARNING IN HIGHER EDUCATION  
THROUGH A HYBRID STUDY APPROACH**

by

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## DECLARATION

I declare that **Managing the quality of learning in higher education through a hybrid study approach** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



2015-07-16

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## SUMMARY

Technology and globalisation has shaped the experiences and expectations of adult learners in the 21<sup>st</sup> century. How adults learn and what they want to learn is highly influenced by the world they live in at any given time. The need for customisation, extending traditional learning experiences into new learning experiences will address the quality and value of higher education learning in South Africa. Restructuring of current programmes to be more flexible, accessible, interactive, that supports collaboration of learning activities and accommodates different learning styles, will enrich the adult learners' learning experience and quality of learning. In suggesting the use of an alternative learning strategy, the use of a hybrid study approach (HSA) has been suggested and investigated. Limited research has been conducted in the use of a hybrid study approach (HSA) and more on what has been said was conducted on pure online learning, therefore this study focused on managing the quality of learning in higher education through a hybrid study approach (HSA).

Since the researcher's interest was to gain insight and understanding of learners', tutors' and institutional managements' perceptions, understanding, concerns and experiences in their real world conditions when using a hybrid study approach (HSA), the qualitative research method was applied. The researcher focused on the micro-level of managing quality of learning by assessing the 'learning' when learning with technology. The study adhered to ethical principles and techniques to enhance the validity of the findings.

The study found that a need for redress and reform of training and education in South Africa, especially with the integration of technology in higher education, extending into a hybrid study approach (HSA), which is in harmony with international standards of academic quality, knowledge, expertise and skills is needed in a changing global economy. A one-for-all learning approach was found not well suited for the needs of society today and does not foster an all-inclusive learning approach. The move to a knowledge society where learners are interconnected and where information circulate around the world faster than ever, it is evident that much learning occurs in a social environment and does not happen in splendid isolation. It was found evident that life demands and other different roles adult learners need to fulfill, adults intentionally search for educational settings that support their way of learning.

## **KEY TERMS**

Education management; Quality learning; Technology learning; Online learning; Blended learning; New learning in the 21<sup>st</sup> century; Higher education; Adult learning; Globalisation; Learning experiences and expectations.

<b>TABLE OF CONTENTS</b>	<b>PAGE</b>
<b>CHAPTER ONE: ORIENTATION OF THE STUDY</b>	
<b>1.1 BACKGROUND TO THE STUDY</b>	<b>1</b>
<b>1.2 LEARNING AND THE HYBRID STUDY APPROACH</b>	<b>6</b>
<b>1.3 MANAGING QUALITY</b>	<b>8</b>
<b>1.4 PROBLEM STATEMENT</b>	<b>9</b>
<b>1.5 AIM OF THE STUDY</b>	<b>10</b>
<b>1.6 RESEARCH DESIGN AND STRATEGY</b>	<b>11</b>
<b>1.6.1 Population and sampling</b>	<b>13</b>
<b>1.6.2 Instrumentation and data collection</b>	<b>13</b>
1.6.2.1 Case study	14
1.6.2.2 Interviews	15
1.6.2.3 Document analysis	15
<b>1.6.3 Data analysis and interpretation</b>	<b>15</b>
<b>1.6.4 Trustworthiness</b>	<b>16</b>
<b>1.6.5 Ethical measures</b>	<b>16</b>
<b>1.7 THEORETICAL FRAMEWORK</b>	<b>17</b>
<b>1.8 DEFINITION OF KEY CONCEPTS</b>	<b>22</b>
<b>1.8.1 Hybrid study approach</b>	<b>22</b>
<b>1.8.2 Learning</b>	<b>22</b>
<b>1.8.3 Management</b>	<b>23</b>
<b>1.8.4 Online learning</b>	<b>23</b>
<b>1.8.5 Quality</b>	<b>23</b>
<b>1.9 STRUCTURE OF THE STUDY</b>	<b>23</b>
<b>1.10 CONCLUSION</b>	<b>24</b>
<b>CHAPTER TWO: TECHNOLOGY INTEGRATION USING A HYBRID STUDY APPROACH (HSA)</b>	
<b>2.1 INTRODUCTION</b>	<b>26</b>
<b>2.2 QUALITY LEARNING</b>	<b>27</b>
<b>2.2.1 Traditional learning versus 21<sup>st</sup> century learning</b>	<b>28</b>
<b>2.2.2 Quality learning in higher education globally</b>	<b>30</b>
<b>2.2.3 Quality learning for higher education in South Africa</b>	<b>30</b>

<b>2.2.4</b>	<b>Managing quality for customer satisfaction</b>	<b>31</b>
<b>2.3</b>	<b>MANAGEMENT FUNCTIONS FOR QUALITY LEARNING</b>	<b>33</b>
<b>2.3.1</b>	<b>Micro-level management of quality learning for higher education</b>	<b>34</b>
2.3.1.1	Institutional issues	35
2.3.1.2	Curriculum management	36
a.	Assessing learning and programme outcomes	37
b.	Tutor participation, support and evaluation	37
c.	Learning styles in technology learning	39
2.3.1.3	Staffing	40
2.3.1.4	Learner support in technology learning	41
<b>2.4</b>	<b>EFFECTIVE COMMUNICATION FOR QUALITY LEARNING</b>	<b>42</b>
<b>2.4.1</b>	<b>Quality assurance</b>	<b>43</b>
<b>2.4.2</b>	<b>Technology decisions</b>	<b>43</b>
<b>2.4.3</b>	<b>Correct technology communication</b>	<b>44</b>
<b>2.5</b>	<b>THE HYBRID STUDY MODEL</b>	<b>45</b>
<b>2.5.1</b>	<b>Orientation phase</b>	<b>46</b>
<b>2.5.2</b>	<b>Using the online platform</b>	<b>47</b>
2.5.2.1	‘Go To’	47
2.5.2.2	‘Announcement’	47
2.5.2.3	‘Textbook’	48
2.5.2.4	‘Gradebook’	48
2.5.2.5	‘Personal Journal’ and ‘Submit Assignment’	48
2.5.2.6	‘Calendar’	49
2.5.2.7	‘My Group’	49
2.5.2.8	‘Discussion Board’	49
<b>2.6</b>	<b>CONCLUSION</b>	<b>50</b>
<b>CHAPTER THREE: LITERATURE REVIEW: LEARNING AND NEW LEARNING IN ADULTHOOD</b>		
<b>3.1</b>	<b>INTRODUCTION</b>	<b>51</b>
<b>3.2</b>	<b>THE NATURE OF LEARNING</b>	<b>51</b>
<b>3.3</b>	<b>THEORIES OF LEARNING</b>	<b>54</b>
<b>3.3.1</b>	<b>Adult learning</b>	<b>55</b>
3.3.1.1	Behaviourism: The modern past	56

3.3.1.2	Developmentalism and constructivism: More recent times	56
3.3.1.3	Social cognitivism: Towards new learning	57
<b>3.3.2</b>	<b>Adult learning approach</b>	<b>58</b>
3.3.2.1	Experiential learning	58
3.3.2.2	Collaborative learning	59
3.3.2.3	Cooperative learning	59
3.3.2.4	Constructivist learning	60
3.3.2.5	Transformative learning	60
3.3.2.6	Lifelong learning	61
3.3.2.7	Self-Directed learning	62
3.3.2.8	Ubiquitous learning	62
<b>3.4</b>	<b>NEW LEARNING</b>	<b>63</b>
<b>3.4.1</b>	<b>Social significance</b>	<b>64</b>
<b>3.4.2</b>	<b>Institutional locations of learning</b>	<b>64</b>
<b>3.4.3</b>	<b>Tools of learning</b>	<b>64</b>
<b>3.4.4</b>	<b>Outcomes of learning</b>	<b>66</b>
<b>3.4.5</b>	<b>Balance of learner-centred and tutor directed learning</b>	<b>67</b>
<b>3.4.6</b>	<b>Learner differences</b>	<b>68</b>
<b>3.4.7</b>	<b>Relation of the new to the old</b>	<b>68</b>
<b>3.4.8</b>	<b>Professional role of the tutor</b>	<b>69</b>
<b>3.5</b>	<b>LEARNING PROCESS</b>	<b>69</b>
<b>3.6</b>	<b>MEANINGFUL LEARNING</b>	<b>73</b>
<b>3.7</b>	<b>LEARNING ENVIRONMENT AND MOTIVATION</b>	<b>75</b>
<b>3.8</b>	<b>LEARNING STYLES</b>	<b>77</b>
<b>3.8.1</b>	<b>Essence of learning styles</b>	<b>78</b>
<b>3.8.2</b>	<b>Learning style preferences</b>	<b>79</b>
<b>3.8.3</b>	<b>Individual learner differences</b>	<b>80</b>
3.8.3.1	Cognitive	80
3.8.3.2	Personality	81
3.8.3.3	Prior knowledge	81
<b>3.8.4</b>	<b>Theories and models of learning styles</b>	<b>82</b>
<b>3.8.5</b>	<b>Educational importance of learning styles</b>	<b>85</b>
<b>3.8.6</b>	<b>Learning styles and teaching styles</b>	<b>86</b>
<b>3.8.7</b>	<b>Learning styles and academic achievement</b>	<b>87</b>



<b>3.8.8</b>	<b>Learning styles and technology</b>	<b>87</b>
<b>3.9</b>	<b>NEW PERSPECTIVES ON LEARNING</b>	<b>88</b>
<b>3.10</b>	<b>CONCLUSION</b>	<b>90</b>

## **CHAPTER FOUR: RESEARCH DESIGN**

<b>4.1</b>	<b>INTRODUCTION</b>	<b>91</b>
<b>4.2</b>	<b>RESEARCH QUESTIONS AND AIM</b>	<b>91</b>
<b>4.3</b>	<b>RESEARCH DESIGN AND STRATEGY</b>	<b>92</b>
<b>4.3.1</b>	<b>Population and sampling</b>	<b>93</b>
<b>4.3.2</b>	<b>The researcher's role</b>	<b>95</b>
<b>4.3.3</b>	<b>Ethical measures</b>	<b>95</b>
4.3.3.1	Informed consent	96
4.3.3.2	Anonymity and confidentiality	96
4.3.3.3	Maintaining honesty and openness	97
<b>4.3.4</b>	<b>Instrumentation and data collection</b>	<b>97</b>
4.3.4.1	Case study	97
4.3.4.2	Interviews	98
4.3.4.3	Document analysis	98
<b>4.3.5</b>	<b>Data analysis</b>	<b>98</b>
<b>4.3.6</b>	<b>Trustworthiness</b>	<b>100</b>
<b>4.4</b>	<b>CONCLUSION</b>	<b>101</b>

## **CHAPTER FIVE: ANALYSIS OF DATA AND DISCUSSION OF FINDINGS**

<b>5.1</b>	<b>INTRODUCTION</b>	<b>102</b>
<b>5.2</b>	<b>DATA PRESENTATION</b>	<b>102</b>
<b>5.3</b>	<b>DEVELOPMENT OF THEMES AND CATEGORIES</b>	<b>103</b>
<b>5.4</b>	<b>FINDINGS OF THE STUDY</b>	<b>105</b>
<b>5.4.1</b>	<b>21<sup>st</sup> Century learning experiences and expectations</b>	<b>105</b>
5.4.1.1	Technology integration in everyday life: <i>'It's natural – like a signature'</i> .	106
5.4.1.2	Experiences and expectations: <i>'Technology stretches the boundaries of teaching to a lot of lengths'</i> .	107
5.4.1.3	Learning styles and personality types: <i>'In class you will just be quiet...but on technology you can say it'</i> .	113

<b>5.4.2</b>	<b>Creating a technology learning platform</b>	<b>114</b>
5.4.2.1	Traditional versus technology learning: <i>‘I don’t have to be in a classroom for hours...My schedule is now very flexible’.</i>	116
5.4.2.2	Hybrid learning versus pure online learning: <i>‘You have the real place and the online to get together and gather’.</i>	117
5.4.2.3	The promotion of interaction and feedback: <i>‘We can post comments, questions, concerns...to other students and staff members’.</i>	118
5.4.2.4	Social equity through global interaction: <i>‘They [international learners] always ask me about South Africa...it’s quite cool’.</i>	120
5.4.2.5	Challenges using technology for learning: <i>‘Sometimes, because technology is not 100% you don’t have access’.</i>	121
	a. Adjusting to changes in technology	122
	b. Practical application of learned theory	122
	c. Netiquette	123
	d. Assessment without direct supervision	124
	e. Technology learning not fit for all	124
	f. Inferior or superior qualification	125
<b>5.5</b>	<b>SUMMARY OF RESEARCH FINDINGS</b>	<b>126</b>
<b>5.6</b>	<b>CONCLUSION</b>	<b>128</b>
<b>CHAPTER 6: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</b>		
<b>6.1</b>	<b>INTRODUCTION</b>	<b>130</b>
<b>6.2</b>	<b>SUMMARY OF THE LITERATURE STUDY AND RESEARCH METHODOLOGY</b>	<b>130</b>
<b>6.3</b>	<b>SUMMARY OF THE EMPIRICAL INVESTIGATION</b>	<b>132</b>
<b>6.4</b>	<b>CONCLUSIONS OF THE STUDY</b>	<b>134</b>
<b>6.4.1</b>	<b>Conclusions from the literature study</b>	<b>134</b>
6.4.1.1	Technology learning in South Africa	134
6.4.1.2	Manage quality learning on the micro-level	134
6.4.1.3	Effective communication for quality learning	135
6.4.1.4	An adult learning approach	135
6.4.1.5	A vision for new learning	136
<b>6.4.2</b>	<b>Conclusions from the findings of the study</b>	<b>137</b>
6.4.2.1	21 <sup>st</sup> Century learning experiences and expectations	137

6.4.2.2	Creating a technology learning platform	138
<b>6.5</b>	<b>RECOMMENDATIONS</b>	<b>138</b>
<b>6.5.1</b>	<b>The need to expand higher education opportunities</b>	<b>139</b>
<b>6.5.2</b>	<b>Growing areas in the hybrid study approach</b>	<b>140</b>
6.5.2.1	How to address technology challenges	140
6.5.2.2	Establish practical laboratories	140
6.5.2.3	Implement netiquette	140
6.5.2.4	Interaction on discussion forums	141
6.5.2.5	A final assessment at a local centre with direct supervision	141
6.5.2.6	Early development with technology	142
<b>6.6</b>	<b>RECOMMENDATIONS FOR FURTHER STUDY</b>	<b>142</b>
<b>6.7</b>	<b>LIMITATIONS OF THE STUDY</b>	<b>143</b>
<b>6.8</b>	<b>CONCLUSION</b>	<b>144</b>
	<b>REFERENCES</b>	<b>145</b>
	<b>APPENDIX A</b>	<b>165</b>
	<b>APPENDIX B</b>	<b>166</b>
	<b>APPENDIX C</b>	<b>167</b>
	<b>APPENDIX D</b>	<b>169</b>
	<b>APPENDIX E</b>	<b>170</b>
	<b>APPENDIX F</b>	<b>171</b>
	<b>APPENDIX G</b>	<b>172</b>
	<b>APPENDIX H</b>	<b>176</b>
	<b>LIST OF TABLES</b>	
	<b>Table 2.1: Establishing new learning environments by incorporating new strategies</b>	<b>28</b>
	<b>Table 4.1: Number of participants indicated on two research sites</b>	<b>93</b>
	<b>Table 4.2: Profile of participants</b>	<b>94</b>
	<b>Table 5.1: Themes, categories and sub-categories</b>	<b>104</b>
	<b>LIST OF FIGURES</b>	
	<b>Figure 2.1: Three-legged chair of total quality</b>	<b>33</b>
	<b>Figure 2.2: Four management functions</b>	<b>34</b>
	<b>Figure 5.1: Representation of research results impacting on managing the quality of learning in higher education through a hybrid study approach</b>	<b>126</b>

## **ACRONYMS**

<b>AVU</b>	African Virtual University
<b>BBC</b>	British Broadcasting Corporation
<b>CHE</b>	Council on Higher Education
<b>HE</b>	Higher Education
<b>HSA</b>	Hybrid Study Approach
<b>HSM</b>	Hybrid Study Model
<b>ICT</b>	Information and Communication Technology
<b>ICT's</b>	Information Communication Technologies
<b>IP</b>	Internet Provider
<b>IT</b>	Information Technology
<b>LMS</b>	Learning Management System
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PDF</b>	Portable Document Format
<b>SADC</b>	South African Development Community

## **CHAPTER ONE: ORIENTATION OF THE STUDY**

### **MANAGING THE QUALITY OF LEARNING IN HIGHER EDUCATION THROUGH A HYBRID STUDY APPROACH**

*'Ensuring quality in a fast-growing enterprise like online learning is like upgrading the engine on a jetliner while it is in flight'. (Revenaugh as cited in Watson & Gemin, 2009:23).*

#### **1.1 BACKGROUND TO THE STUDY**

Despite the global revolution in the use of technology learning in higher education, there has been no directive leading the development and application of technology learning in higher education in South Africa. The key role of information communication technologies (ITCs) to promote learning in South Africa has been acknowledged repeatedly, as is evident from *The White Paper* published in 1997, the *National Plan for Higher Education* published in 2001, the *Higher Education Monitor* published 2006 (The Council on Higher Education, 2006:iv) and the *Budget Vote Speech 2011* (Department of Higher Education and Training, 2011). The Deputy Minister of Higher Education and Training once more announced the vision for post-school education in South Africa. This vision accentuates the dominant role of technology in education, emphasising an intensified consultative process on an e-education policy that focuses on promoting lifelong learning through Information and Communication Technologies (ICT's) (Department of Higher Education and Training, 2011:13).

Teaching with technology is an increasingly common occurrence for the higher education (HE) system in developed countries. Technology learning for both learners and tutors is one of the fastest growing trends (U.S. Department of Education, 2010:xi). Many online educational institutions, particularly in the United States, have developed revised and successfully implemented technology in education with highly effective management and operation structures, as is evident from the different higher education institutions listed in Mossavar-Rahmani and Larson-Daugherty (2007:67). In Africa, technology education is not unfamiliar as is apparent from the different SADC (South African Development Community) Countries that participated in the 6<sup>th</sup> International e-Learning Africa Conference on Information Communication Technology (ICT) for Development, Education and Training, held in Tanzania (*eLearning Africa News Portal*, 2011).

The African Virtual University (AVU), headquartered in Nairobi, Kenya and founded in 1997, has some 40 000 graduated learners across 30 countries in sub-Saharan Africa. Started in 2001, 205 of 343 programmes offered at the University of Botswana were developed as online courses (eLearning Arica, 2008). In a survey study done by Hollow and ICWE on the ‘challenges, priorities and future direction’ of e-learning in Africa (Hollow & ICWE, 2009:1) some 147 e-learning facilitators in Africa were surveyed. The survey targeted universities, non-government organisations, governments and the private sector. It revealed that 51% e-learning facilitators use online learning and 36% reported virtual learning environments as the main use for programme delivery. However, the data collected is not representative of the wider education community in Africa. The insights they found include that:

- online education is good for development;
- online education increases educational opportunities;
- online education promotes 21<sup>st</sup> century skills;
- there are changing approaches to teaching and learning using online education;
- online education is accessible and flexible.

Despite a variety of on-going research on technology education in Africa, there is limited data available on e-learning facilitation in higher education (HE) across the continent (Van der Westhuizen & Henning as cited in the *Higher Education Monitor* report, Council on Higher Education, 2006:57). The reluctance to develop policies and to implement information communication technologies (ITC’s) as an alternative pedagogic approach to learning in higher education is a pressing issue (Council on Higher Education, 2006:7-8). Compared with developed countries, the technological inequalities contribute to the exclusion of Africa from the global economy (Hollow & ICWE, 2009:3). This research subsequently investigates an alternative learning approach to higher education through a hybrid study approach (HSA).

Given the three million youths between the ages of 18 and 24 neither studying nor working, an alternative education *modus operandi* has to be applied quickly and effectively to address the employability needs in Africa. This necessitates involvement to expand educational opportunities to adults outside the current formal training institutions (Department of Higher Education and Training, 2011:9). However, the vision of building additional higher

education institutions, better utilisation of existing education facilities and various other possibilities (Department of Higher Education and Training, 2011:10), with the limited number of post-school academic institutions makes it almost impossible for any country to address skills needs successfully. In a technology rich global environment, with particularly difficult economic times, the need to incorporate a cost-effective solution for higher education and to adopt a quality system to fulfil the changing expectations in education, society and industry is inevitable (Herrington, Reeves & Oliver, 2010:3). The *British Broadcasting Corporation News* (BBC) (Anon, 2010:1) speaks of the internet as a 'fundamental human right to all people'. A global telephone and personal interview poll conducted (November 2009 – February 2010) by the GlobeScan for *British Broadcasting Corporation* (BBC) World Service revealed, 4/5 adults from almost 28 000 people in 26 countries, felt access to the internet is a fundamental human right. 87% of internet users felt the internet should be a fundamental right of all people. Ninety percent felt the internet is a good source for learning and education. In this study the researcher explores the necessity of building training facilities as opposed to the implementation of an alternative learning approach to address both the unemployment rate and shortage of physical facilities. With technology constantly accessible through computers, mobile devices connected to the internet or a private intranet, online education can be delivered wherever and whenever without a person leaving the workplace, home or spending time and cost on transport and/or accommodation (Martyn, 2003:23; Dzvimbo, 2006:1). This solves the problem of often inadequate physical facilities, limited space, textbook costs and availability, printing and the environmental impact associated with it, the availability of other related study materials, restructuring, current and relevant subject matter, learner absenteeism, diversity of learners, library facilities, flexibility of training hours and more. The argument holds for an adapted learning approach in higher education to address these limitations through a research study exploring how the use of a hybrid study approach (HSA) as an alternative to traditional brick and mortar environments may influence the quality of learning.

The South African *Council on Higher Education* (CHE) annual report 2009/2010 reported a research study investigating learner engagement and success, defined as 'the amount of time and effort students spend on academic activities and other activities that lead to ... student success' (Council on Higher Education, 2010:8). The report addresses the manner in which educational institutions allocate resources and organise learning opportunities to encourage learner participation and how learners can benefit from these activities. In a video survey

conducted by Michael Wesch, 'A vision of students today', 200 learners at the Kansas State University revealed their experiences on quality of learning (Wesch, 2007). It is evident that supplementary methods, ways and means to make higher education more accessible, enhance positive learning experiences and improve academic success. The delay in reaching consensus in higher education environments on the role information communication technologies (ICT's) should play does not contribute to the already explosive shortcomings in the educational system. In this study the researcher investigates if active engagement using an alternative approach, affects successful learning outcomes.

Meeting the needs and expectations of today's millennial learners that grew up with technology is no easy task for higher education institutions. Darlaston-Jones, Pike, Cohen, Young, Haunold and Drew (2003:31-52) comment on learner expectations and the inconsistencies in their expectations as customers and the expected delivery, particularly in adult higher education where learners are often responsible for their own study fees. However, Dr. Paul Greatrix claims 'Universities isn't just a business – and the student isn't always right' (Littlemore, 2011:1). Opposing this message is the sharp increase (37% over two years) of learners' expectations in higher education (Littlemore, 2011:1). Active and personal engagement in learning content and environment has been expressed as a learner expectation. Strong, Harvey and Robinson (1995:9) imply that learners who actively engage in learning and are attracted to their work, take 'visible delight' in executing tasks. Supposing that the learner is a working adult, active engagement might have an immediate motivational effect by allowing the learner to identify and draw connections between existing knowledge and working knowledge. This can produce authentic results in the immediate workplace or it can be utilised as future ideas (Mossavar-Rahmani & Larson-Daugherty, 2007:69; Coogan, 2009:320; Martyn, 2003:21). The 'satisfaction gap' (Tricker, 2003:6) between what learners experience and what learners expect in adult higher education can be seen as an important dimension of how the quality of learning through a hybrid study approach (HSA) influence learners' learning experience and expectations.

Articulation between post-school education institutions and employment in the workplace has been a focus of government initiatives in many countries. In employability cross-country comparisons done in the United Kingdom, Harvey and Bowers-Brown report on how to reach a situation where global economic factors do not restrict graduates in search of employment and suggest an internationally recognised skills model should be investigated. Research was



done in countries outside the United Kingdom that have adopted employability development in higher education. Evidence shows that the expected skills of graduates are comparable globally, however, there are different methods of ensuring achievement. Some countries have taken finer steps towards incorporating employability development within their higher education system than others. In certain parts of the world a post-school qualification is seen as sufficient for employability. Other countries have developed extensive measures such as work-integrated learning and graduate attributes into their curriculums (Harvey & Bowers-Brown, 2003:107-119). Employers in South Africa voice their concern over the quality of graduates who may have achieved academically, but have not yet achieved employability. In 'Converge', an online academic magazine, Napier (2009) reports that industry's concern is focused on graduates who often do not lack career specific skills, but lack deal making skills. Outlined in the Organisation for Economic Cooperation and Development's (OECD) 2011 *Skills Strategy*, young adults entering the job market require career-related skills, general skills, including enthusiasm, ability and opportunity to retrain throughout their adult lives' (OECD, 2011:14-15). However, frustration is experienced in higher education institutions as these institutions feel they are not 'human resources development factories' (Griesel & Parker, 2009:3). Lanning, Martin and Villeneuve-Smith (2008:2) message a conceptual shift towards skills development, knowledge and attitudes that enhance employability. If learners, instructors, institutions and industry all believe in a high skills solution - with government support, there is potential for successful partnerships on employability. However, if this is not the case, there are real limitations to what institutions can do to make a real difference. The growing demand for highly qualified and skilled employees has increased (Materu, 2007:7). However, the inconsistency of increase in the output number of graduates from the higher education system versus the increase in graduate unemployment should be investigated (Moleke, 2010:87). The mismatch between output from the higher education system and the types of skills needed in the labour market are pressing issues. The pressure on higher education institutional management from both government and employers to produce graduates who are employable should also be investigated. The challenge in this study was to research if managing the quality of learning through an alternative study approach will equip learners with appropriate skills needed to be employed across the country in appropriate careers for which they are qualified.

In similar studies done using technology in education, the focus is technology-inspired and driven as 'transforming learning and teaching through information communication

technologies (ITC's)' (Department of Education, 2003; Council on Higher Education, 2006), the development and integration of hybrid models and courses (Coogan, 2009; Doering & Veletsianos, 2008; Martyn, 2003; Hijón-Neira, Velázquez-Iturbinde & Rodríguez-Martin, 2010; Akin & Neal, 2007; Mossavar-Rahmani & Larson-Daugherty, 2007) and online learning comparison processes (Ernst, 2008; Heckman & Annabi, 2005). Valuable insight was found in a survey done by Hollow and ICWE (2009) on 'e-Learning in Africa: Challenges, priorities and future direction', however, it still does not focus on a hybrid study approach *per se*. With limited information available from previous research, this study aimed to explore managing the quality of learning through a hybrid study approach (HSA) by both quality assessment and 'quality enhancement' (Middleton as cited in Mayes, Morrison, Mellar, Bullen & Oliver, 2009:21) within the current structure that might lead to an improved learning experience.

## **1.2 LEARNING AND THE HYBRID STUDY APPROACH (HSA)**

The development of hybrid courses has become a growing trend in the higher education system (US Department of Education, 2010:xiv; D'Onofrio & Bowes, 2007:1500-1506) and is less researched than full online learning (Smith & Kurthen, 2004). Suggesting the use of a hybrid study approach (HSA) for learning, Largo (as cited in Martyn, 2003:19) describes hybrid study as the multiplicity of online options that include face-to-face delivery using technology to enhance teaching, or online classes without face-to-face delivery, and delivery 'that meets somewhere in the middle'. Explaining the hybrid study approach (HSA) according to Martyn (2003:19),

The challenge is to find the optimal mix of online and face-to-face instruction that will leverage the major advantage of asynchronous learning (any time, any place), while still maintaining quality faculty-student interaction.

Hybrid study can be seen as an educational approach where a web-based technology platform using a Learning Management System (LMS) with curriculum and course materials, are blended with the traditional classroom (classroom + online = hybrid). The constructivist learning theory encourages self-directed learning where learners take ownership of studies and decides when to study, where and how to study (Tough 1967, 1971, 1979; Knowles 1975; Spear 1988; Brockett & Hiemstra 1991; Garrison 1997, all cited by Merriman, Caffarella & Baumgartner, 2007:110-116). Any educational environment, including hybrid

learning or face-to-face learning, which allows for interactive instruction and learning, and is enhanced with practical hands-on application, 'provides a framework for successful acquisition of knowledge' (Ernst, 2008:47).

In the *United States Department of Education* report, learners in blended learning conditions performed better than those in pure online or exclusively face-to-face instruction (US Department of Education, 2010:xiv). The hybrid study approach (HSA) using asynchronous learning has proven highly successful in increasing knowledge retention, graduation rates and overall performance on learning objectives and continual intellectual curiosity (Martyn, 2003:21; US Department of Education, 2010:17; Hijón-Neira *et al.*, 2010:463; Mossavar-Rahmani & Larson-Daugherty, 2007:68; Gallagher, Dobrosielski-Vergona, Wingard & Silliams as cited in Coogan, 2009:317; Herrington, Reeves & Oliver, 2010:10). Active learning in Jacobs, Vakalisa and Gawe (2011:11) and Vygotsky's 'active theory' (Merriam *et al.*, 2007:292) is the interrelationship of the 'who' 'what' and 'how' to encourage independent thinking, formulate opinions, express ideas, evaluate concepts, develop curiosity and to enable reasoning. Supporting active learning is Doering and Veletsianos' (2008:103) adventure learning - a 'hybrid distance education approach...to explore real-world issues through authentic learning experiences within collaborative learning environments through experiential learning and inquiry-based learning'. In addition, authentic learning refers to 'real life' complex problems and solutions using emerging technologies as 'cognitive tools', where 'learning with' the technology rather than 'learning from' technology is used to experiment, explore and expand on a virtual learning environment similar to the real world by using problem-based activities, role play, case studies and participation in a multidisciplinary environment (Herrington *et al.*, 2010:2-14). A deeper level of thinking, more time for reflection, time to review answers before submission with a richer learning experience becomes evident as learners are drawn into subject matter while participating in online discussions (Martyn, 2003:22). The asynchronous discussion platform allows the tutor to post intricate or challenging concepts to be analysed and discussed. Examples for clarity are provided and learners are requested to provide their own examples. The tutor is able to determine the level of understanding and the quality of discussions. Content is structured to interrelate and progress from undemanding to more demanding content (Jacobs *et al.*, 2011:128) and can be identified as Vygotsky's scaffolding method of learning. This learner-centred model highlights the fundamental importance of collaborative and cooperative learning through tutor-learner, learner-learner and learner-institution interaction where active

engagement in the learning environment is a key construct in learning success for both tutor and learner (Huba & Freed, 2000:8; Mc Cown, Driscoll, Roop, Saklofske, Schwean, Kely & Haines, 1999:402-403; Hammond, 2005; Johnson, Aragon, Shaik & Palmas-Rivas, 2000; Berge & Collins, 1996; Tu, 2000; Muirhead, 2001; Blignaut & Trollip, 2003; Vonderwell as cited in Akin & Neal, 2007:191). However, a large degree of responsibility for learning is placed on the learner, who has to be autonomous, which in return might have a long lasting impact of success on the learner outside the educational environment through reflection, and by constructing new knowledge through experiential learning (Merriam *et al.*, 2007:160; Tapscott & Williams, 2010:20).

### **1.3 MANAGING QUALITY**

Assessing the quality of learning is vital to the success of a hybrid study approach (HSA) in use. In managing the quality of learning, institutional management, tutor and learner feedback on academic delivery should be used to identify imbalances in the hybrid study approach (HSA). The use of a hybrid study approach (HSA) for learning necessitates continuous learner assessment to ensure quality learning outcomes, learner engagement and the ability to communicate effectively. Both institutional management and external assessors have access to registered learners' and tutors' online platforms to determine quality delivery and quality learning. Learner platforms can be accessed to determine the time spent on a particular unit, the content accessed, how often the platform is accessed and the duration on the platform, which can add valuable information to determine quality of learning. Progress reports with findings and recommendations are forwarded to institutional management, learners, parents and donors for review. Frequent weekly management meetings to discuss emerging issues using the hybrid study approach (HSA) with both academic staff and technology administration are scheduled. With the flexibility and accessibility of sources refinement and modifications in the hybrid study approach (HSA), whether academic or technological, online learning can be implemented with immediate effect.

Martyn (2003:19), Watson and Gemin (2009:3), Hijón-Neira, Velázquez-Iturbinde and Rodríguez-Martin (2010:451) and Hollow and ICWE (2009) emphasise the challenges in managing the quality of online education through all aspects of management and operations, which includes learning experience and support, learning content, programme assessment and evaluation, tutor management, physical and IT infrastructure. Included in the hybrid study

approach (HSA) used in the United States, Asia and the Western Cape institutions, an international learner and tutor exchange programme is initiated for cross country experiences using the hybrid study approach (HSA). Work-integrated learning is scheduled, included in the quality management plan for final year learners not full-time employed. Inclusive on the technology platform are non-formal credit bearing subjects which include critical thinking skills, problem solving skills, career development, information literacy, strategies for university success, environmental science, nutrition and mathematics. These are skills outlined in the Organisation for Economic Co-operation and Development (OECD) *2011 Skills Strategy*.

#### **1.4 PROBLEM STATEMENT**

There is no need quantifying technology integration in learning, it is inevitable, however investigation in the ways technology should be integrated, and extending it into hybrid online education environments needs exploration. A call on transforming traditional pedagogy into new learning strategies, with an explicit focus on quality assurance need to be implemented (Materu, 2007:10). Active and personal engagement in learning content and environment needs attention as learners, who actively engage in learning and are attracted to their work, take ‘visible delight’ in executing tasks (Strong *et al.*, 1995:9). Stansbury’s report on the *eSchoolNews* portal entitled ‘Five things students say they want from education’, decision making and choosing the method of delivery was expressed, including the drive towards interpersonal involvement and access to a mentor is a high expectation in learning quality (Stansbury, 2011). The awareness of innovative and flexible learning methods to enhance quality learning is a desperate matter in question (Mossavar-Rahmani & Larson-Daugherty, 2007:73; Coogan, 2009:317; Martyn, 2003:22). There are substantial uncertainty presented relating to quality, learner responsiveness and engagement with online learning (Yang & Cornelius as cited in Ernst, 2008:40). Little is known on how assessment is used in online classrooms to manage performance and progress. Due to the unavailability of a framework and policy guidelines for technology facilitation in South African higher education (Materu, 2007:55; Council on Higher Education, 2006:iv), minimal knowledge and feedback is available on how quality of learning should be managed using technology facilitation.

Only insubstantial research is available on higher education regarding technology facilitation, reported success rates using technology, interaction and experiences by learners, institutions

and tutors in using technology. Evidence that South African higher education is not globally inclusive in the online higher education arena due to technological inequalities is a reality and calls for expeditious action (The Council on Higher Education, 2010:2). The shortage in educational and physical facilities to accommodate large numbers of potential learners not currently studying is a concern. Learners already in the system have a negative perception, as is evident in the high absenteeism rate, learner retention, transport expenses, accommodation cost, textbook cost and availability and more. A concern is the amount of time learners spend on academic activities as a result of their experiences in learning (Wesch, 2007). Being paying customers expecting service delivery, investigation into the needs and expectations of learners attending higher education institutions, necessitates research. Calls to expand learning to include the value of studies related to possible employability is inevitable. The increased number of graduates versus the increased number of graduate unemployment (Moleke, 2010:87) justifies employability development included in the higher education curriculum.

Emanating from the core problem statement, namely that technology integration with a change in pedagogical approach in higher education is inevitable, the main research question that emerged was: How should the hybrid study approach (HSA) be used in higher education to manage the quality of learning?

The following sub-questions emerge from the main research question:

- What are the experiences and expectations of learners, tutors and institutional management using a hybrid study approach (HSA)?

## **1.5 AIM OF THE STUDY**

The aim of this study was to explore how the quality of learning in higher education should be managed through a hybrid study approach (HSA) and to provide research-based evidence, with specific objectives being:

- to explore the experience of learners, tutors and institutional management using the hybrid study approach (HSA); and
- determining if using the hybrid study approach (HSA) will possibly address the needs and expectations learners, tutors and institutional management have.

## 1.6 RESEARCH DESIGN AND STRATEGY

In this study the research focuses on the micro-level of managing quality of learning through a hybrid study approach (HSA). Hew, Liu, Martinez, Bonk and Lee (as cited in Ernst, 2008:40), describe the evaluation of online education at three levels. The macro-level assesses an entire online program. The meso-level evaluation assesses individual online courses and the micro-level assesses the learning of online learners. In following a structured and logical process to identify, enquire and evaluate empirical data to link research questions to answers, supported by a strategy and conceptual framework, a qualitative research design is proposed (Punch, 2011:112-113). Since the researcher's interest was to gain insight and understanding learners', tutors' and institutional management's perceptions, opinions, concerns and experiences in their real-world conditions using a hybrid study approach (HSA), the qualitative design appeared appropriate. Using a 'wide- and deep-angle lens (Johnson & Christensen, 2012:35), to examine learners', tutors' and institutional management's viewpoints, social interaction, meaning and experiences as it occurs naturally in all of its detail, the researcher aimed to constantly understand the participants' viewpoints to 'verstehen' (Weber as cited in Johnson & Christensen, 2012:36). The aim was to make sense of their perspectives through direct personal and participatory contact. This was the motivation for proposing a qualitative research approach that distinguishes humans from the natural world based on 'our ability to talk' (Johnson & Christensen, 2012:36). The researcher acted as the instrument of data collection through questions asked and interpretations made, instead of using standardised instruments or measuring devices. The researcher's interest was to explore the 'why' and 'how' of individuals' experiences rather than the 'how many' as portrayed in quantitative research relying on statistics and numbers. A qualitative approach was proposed to holistically study the diverse perspectives of individuals in their real-life settings, identifying its intricacies and its context (Creswell, 2012:207; Punch, 2011:118-121). The qualitative approach was best suited to address the research problem where the variables were unknown and needed exploration (Creswell, 2012:16). A literature review might have validated the research problem, but did not adequately address the central phenomenon and this probed the researcher to learn more from the participants through exploration (Creswell, 2012:16). In contrast to quantitative research, findings in qualitative research are not determined in advance, however, can produce results applicable beyond the immediate boundaries of the study (Zaidah, 2007:1).

‘Strategy is important because it drives the design’ (Punch, 2011:113). The researcher proposed to conduct an exploratory study for gaining insight and familiarity with the research problem at hand, rather than testing or confirming a hypothesis with a predetermined set of variables. Exploratory research is a preliminary study in which the researcher tries to discover new ideas by systematically exploring social groups, processes, and activities and construct theories about its operation (Creswell, 2012:543; Stebbins, 2001:5; Johnson & Christensen, 2012:18). Drawing on Collis and Hussey (2009:5), ‘an exploratory study is conducted when there are very few studies to which we can refer for information about the research problem’ and where the researcher’s exploratory study focus is ‘gaining insight for more rigorous research at a later stage’ (Collis & Hussey, 2009:5). This preliminary research to increase understanding of a concept, discover new ideas, to clarify the exact nature of a problem to be solved, or to identify important variables to be studied, is best defined by Vogt (as cited in Stebbins 2001:4) as:

...exploration is a broad-ranging, purposive, systematic, prearranged undertaking designed to maximize the discovery of generalizations leading to description and understanding... Such exploration is, depending on the standpoint taken, a distinctive way of conducting science – a scientific process – a special methodological approach (as contrasted with confirmation), and a pervasive personal orientation of the explorer. The emergent generalizations are many and varied; they include the descriptive facts, ...structural arrangements, social processes, and beliefs and belief systems normally found there.

Based on concepts generated from the development of an understanding, data collected from learners, tutors and institutional management exploring the how and why of the research problem, exploration can be thought of as a ‘bottom-up approach’ or ‘inductive method’ as its emphasis starts with particular data and discovering what is occurring more generally, focusing on theory discovery, generation, and construction (Johnson & Christensen, 2012:17-18). As the researcher came to a clearer understanding of the research problem, reliability was less and less on exploration and more and more on prediction and confirmation’ (Stebbins, 2001:7). In this qualitative study generalisable results were not the purpose of the research, but rather to richly describe a group of people in a specific context (Johnson & Christensen, 2012:270). The risk of introducing a new unconventional pedagogic approach in managing the quality of learning substantiates a proposal of guidelines for future research, rather than findings from research. Triangulating the research, using document analysis, case study and individual interviews, the researcher envisaged the external validity of the study addressing the research problem (Zaidah, 2007:2). The researcher suggested an interpretive



research approach through social constructivism, exploring the dynamics of interaction between learners, tutors and management, involving knowledge and meaning aimed to understand the research phenomenon (Terre Blance, Durrheim & Painter, 2006:278).

### **1.6.1 Population and Sampling**

The researcher envisaged purposive sampling for the study to best learn, explore and understand the central phenomenon. With the provision of a detailed discussion in chapter four, a specific group of individuals with experience in either studying, tutoring or managing learning in higher education using a hybrid study approach (HSA) was selected to provide information rich data answering the research questions (Creswell, 2012:206). Following a theory sampling strategy assisted the researcher with generating, exploring and discovering an understanding (Creswell, 2012:208) of learners, tutors and institutional management's experiences using a hybrid study approach (HSA). Due to a small number of learners being enrolled in using the hybrid learning programme, only eight learners, three instructors and one management staff member were identified on a research site based in the Western Cape of South Africa. Four additional learners, two tutors and two institutional management members were identified on a research site in the United States of America where the hybrid study model (HSM) was developed and is managed. However, according to Marshall (1996:523), when undertaking a qualitative research study, the appropriate sampling size 'is one that adequately answers the research question' and is not determined by a specific number of participants. The researcher approached the research phenomena through interpretative theories and social constructivism (Punch, 2011:162). A confirming sampling strategy was followed after data collection had commenced to explore further specific findings and to verify the accuracy of the findings throughout the study (Creswell, 2012:209).

### **1.6.2 Instrumentation and data collection**

A multiple data source was proposed for data collection (Creswell, 2012:212). Data collection through literature study, locally and internationally, was proposed to enlighten the study with similar research already undertaken. Individual interviews were conducted with participants in the identified two sites to ensure external validity and for the intention of triangulation (Creswell, 2012:259). As the study drew on multiple sources of information from learners, tutors and institutional management, collecting rich evidence through

replication to verify the accuracy and credibility of the findings was anticipated (Creswell, 2012:259).

In order to ensure ‘a high level of participant disclosure’ (Creswell, 2012:230) following a holistic approach in obtaining qualitative data, the researcher needed to gain participants’ trust and confidence and in return show respect towards participants expressing their perceptions, personal experiences and possible uncertainties (Bogdan & Biklen, 2007:50) in using the hybrid study approach (HSA). In order to adhere to ethical issues, the treatment of research participants was considered an important and fundamental issue while the research was conducted (Johnson & Christensen, 2012:103).

### **1.6.2.1 Case study**

The study presents a case study at the micro level, assessing the learning of online learners (Hew *et al.*, as cited in Ernst, 2008:40). It investigates how the quality of learning within a bounded context, involving a group of learners, tutors and institutional management is managed using the hybrid study approach (HSA) in their natural settings (Creswell, 2012:465). In the case study, the researcher had access to coordinate data from different sources through entry onto learners’ and tutors’ online platforms, peer group discussion forums, e-mail communications, institutional records, asynchronous discussions, journal entries, assignment postings, evaluation records and feedback available from learners, tutors and management. The hybrid study approach (HSA) is flexible enough to include topic driven responses in real-time, should the need exist. Company policy authorises institutional management access to intellectual property issued and assigned to users, including the use of internet provider (IP) addresses. A consent form was designed to request permission from the sampling population to access their internet provider (IP) addresses. Permission and consent were needed from the institution in the United States of America as the development and design of the hybrid study model (HSM) is managed there. Since participants participated by answering the ‘how’ and ‘why’ questions, it was natural to follow this with face-to-face interaction with all participants. The confidentiality and anonymity of participants interviewed, including documentation reviewed, were respected and ethical codes were adhered to (Vithal & Jansen, 2010:26).

### **1.6.2.2 Interviews**

Due to the flexibility of interviews as a data collection tool (Punch, 2011:146) and to ‘understand the language and culture’ and ‘establish rapport’ (Punch, 2011:148), face-to-face semi-structured individual interviews were conducted using open-ended questions, and following a ‘broad-to-narrow’ approach when the response communication deepens (Creswell, 2012:216). Questions were prepared and voice recordings were transcribed to explore the different learning perceptions, personal experiences, and possible uncertainties using the hybrid study approach (HSA).

### **1.6.2.3 Document analysis**

Media reports, government journals, educational forums, newspapers, visual evidence and other related information available in print and electronically were collected and integrated with the data obtained in an attempt to add a finer distinction of what might reside in these resources. Documents were evaluated according to reliability, integrity and ‘representativeness’ (Punch, 2011:160).

### **1.6.3 Data analysis and interpretation**

The voice recordings were transcribed to text data electronically in an effort to organise the qualitative data. A preliminary analysis guided the researcher in redesigning questions to focus on central themes as the study progressed. This process is described by Vithal and Jansen (2010:29) when they say ‘... the researcher moves repeatedly back and forth through the data’. The researcher does this to determine the kind of data to be collected and what aspects of already collected data are the most important for making sense from it (Corbin & Strauss, 2008:66; Johnson & Christensen, 2012:403). The coding of concepts, which involved labelling concepts, important words and phrases to distinguish between usable and non-usable data, started after the first interview (Corbin & Strauss, 2008:163; Johnson & Christensen, 2012:403). These concepts were condensed into themes, categories and sub-categories to identify related themes that appeared throughout the data (Corbin & Strauss, 2008:195; Johnson & Christensen, 2012:403). Being ‘theoretically sensitive’ (Johnson & Christensen, 2012:403), the researcher continuously asked questions, used analytical thinking and reflected on the data collected to develop a deeper understanding of the phenomenon.

The findings were compared with the research questions to determine the reliability and trustworthiness of the study, which was the final stage of the data analysis process. The researcher checked and rechecked the theory with the data to eliminate any mistakes, to ensure that all themes and categories were well developed and that further analysis could add no new information or new concepts from the collected data (Johnson & Christensen, 2012:404; Corbin & Strauss, 2008:163).

#### **1.6.4 Trustworthiness**

Reliability and validity are important aspects to determine the accuracy and trustworthiness of any research (Creswell, 2012:259; Johnson & Christensen, 2012:245). Reliability refers to the measurement of consistency, in other words that different researchers would arrive at the same outcome when the results of a study are replicated if they use similar methodologies. Participant consistency should also prevail in that certain questions should be answered in one way, so that closely related questions are consistently answered in the same way (Creswell, 2012:159).

Validity is the ‘development of sound evidence’ and refers to the valid findings and interpretations of the researcher (Creswell, 2012:159, 259). In order to maximise validity, eliminate researcher bias and for research findings to be accurate and credible when conducting exploratory research, different strategies for research validation were implemented to rule out selective recording of information, researcher subjectivity and personal views that may affect data interpretation (Johnson & Christensen, 2012:264-265). Method triangulation was attained with the use of different approaches of data collection by means of interviews, a case study and document analysis for research validity (Johnson & Christensen, 2012:269). For justification, member checking of participants’ feedback followed the study, taking findings back to participants (Creswell, 2012:26). Participant consistency, when certain interview questions were answered one way and closely related questions were consistently answered in the same way, prevailed (Creswell, 2012:159).

#### **1.6.5 Ethical measures**

Participation in this study was voluntary and written permission from the institutions and all participants were obtained by means of a signed consent form prior to the study. This matter

is discussed in more detail and supported with documented evidence in chapter four. The consent form includes a description and the most pertinent information pertaining to the research, also indicating participants' involvement in the study (Bogdan & Biklen, 2007:48). Participants' privacy and anonymity were ensured by assigning a number to each individual (Johnson & Christensen, 2012:104; Creswell, 2012:230). A predetermined time was negotiated with each participant for conducting interviews. Both the character and integrity of the researcher will manifest in the honest and ethical reporting of research results (Creswell, 2012:279; Bogdan & Biklen, 2007:50). Discretion and confidentiality was essential due to the researcher's personal involvement in both the Western Cape and the American institutions, and for ethical reasons the identities of the institutions are withheld.

## **1.7 THEORETICAL FRAMEWORK**

The hybrid study approach (HSA) is a collaborative and social constructivist learning technique that draws on the theories of Dewey (1938), Vygotsky (1999) and Piaget (1971) (Jacobs *et al.*, 2011:4; Tapscott & Williams, 2010:21), emphasising the need of active involvement, reflective thought and the understanding of previous experience connected to new information. According to Senge's seven organizational learning disabilities, 'the core learning dilemma...we learn best from experience but we never directly experience the consequences of many of our most important decisions' (Smit, Cronje, Brevis & Vrba, 2007:47). The use of technology in learning is not about technology *per se*, but the collaborative interaction between tutor-learner, learner-learner and learner-institution. Brown and Adler (as cited in Tapscott & Williams, 2010:20) report on the social constructivist learning approach with the emphasis on 'how' learners acquire knowledge and not 'what' knowledge learners acquire, which opposes the Cartesian approach: 'I think, therefore I am...' in favour of the social approach in learning: 'We participate, therefore we are'.

Different learning styles are applicable to different learners. Learning for the purposes of this study refers to an activity which in all its definitions implies change in some form. It can be seen as a lifelong journey encountering different experiences *en route*, or alternatively the journey is the activity and the destination is change. Referring to Fleming and Mills (1992) kinaesthetic learners prefer to experience and practice, using videos, case studies and simulations. Visual learners prefer graphs, flowcharts and hierarchy models. Auditory learners perform best with lectures, reading, e-mail and group discussions, others learn by

reading/writing written material such as books, PowerPoint presentations and lists (Akin & Neal, 2007:193). All these styles are included in hybrid study learning.

Merriam *et al.*, (2007:83) proclaim that there is ‘no single theory of adult learning’. Each of the available frameworks contributes to understanding adults as learners. However, the social constructivist theory is an important step in understanding adult learning. Learning involves constructing meaning from what is acquired and to ‘make sense of their experience’, but constructivists differ as to whether ‘meaning-making’ is an individual or social process (Merriam *et al.*, 2007:291). Drawing on Vygotsky’s view, (Merriam *et al.*, 2007:292) that learning is socially constructed through interaction with others, this view emphasises the nature of learning in higher education through a hybrid study approach (HSA) that is interactive and collaborative. Vygotsky’s ‘activity theory’ integrates the ‘individual’ and the ‘social’ to make sense of the learning activity (Merriam *et al.*, 2007:292). However, Driver, Asoko, Leach, Mortimer and Scott (as cited in Merriam *et al.*, 2007:291) draw on Piaget’s theory, stating that learning is an ‘individual or personal activity’. Regardless of the perspective of social or individual, the constructivism theory of learning is understood as an active rather than inactive activity that takes place through ‘dialogue, collaborative learning, and cooperative learning’ (Merriam *et al.*, 2007:292).

Adults learn through shared knowledge that should be transferable to their real life situations. They have a need to apply what is learnt and should feel that the learning is authentic to their actual lives (Farmer, 2010:86), as opposed to when learning and context are separated, and knowledge itself is seen as the final product rather than a tool to be used (Herrington, Reeves & Oliver, 2010:6). This draws on the intrinsic cognitivist paradigm of Ames, Ford and Locke and Latham (as cited in Athanasou, 1999:112), which states the relationship between setting goals, expectations, social contextual influences and self-perceptions, including Zimmerman’s motivational theory (as cited in Athanasou, 1999:114), focusing on self-regulation of cognition, behavioural and emotional aspects, are the intrinsic motivational factors, driving the adult learner. Coogan (2009:317) and Martyn (2003:23) focus on the many demands there are on adults’ time, including family, work, travel time and social responsibilities. Adult learners should know how learning will fit into their time schedules and have clear expectations for conduct and activity. Stanford-Bowers (2008:38) views social inclusion, interconnectedness and a sense of belonging as factors meaningful to quality learning in a learning environment where learners are respected and able to express

themselves without fear, threat or humiliation. Will flexibility of learning, transport cost, convenience, an uninterrupted career path, the application to real life situations, hands-on experience, self-responsibility for learning, a relevant and immediate learning approach, a positive and supportive social climate and the inspiration of an income while studying have a motivational influence on the choice to learn through a hybrid study approach (HSA)?

The nature of society and the world we live in ‘at any particular point in time determines the relative emphasis placed on adult learning’ (Merriam *et al.*, 2007:5). Social, cultural and technological change calls for ‘New Learning’ (Kalantzis & Cope, 2008:xvi). The theory of ‘New Learning’ emphasises being transformative; it is learning by doing, by thinking and to be productive in the world and also knowing that world. ‘New Learning’ is about action as well as cognition, it is about collaborative social learning, connected with the ability to act and to be adaptable, responsive and flexible as opposed to individualised and cognitive learning where educational performance is measured by the stuff in one’s head that gives one a competitive advantage, in exams, then jobs then life (Kalantzis & Cope, 2008:9). Calling for social equity, more learning is happening outside traditional educational institutions – on the job, internet and media. Technology and globalisation is shaping the adult learning activity and ‘reshaping higher education’ through ‘international communications-based telecommunications’, ‘media technologies’, ‘movement of students to study in other countries, as well as a demand for online courses without a residency requirement in another country’, ‘increasing multicultural learning environments’ and an ‘increasing global circulation of ideas’ (Mason as cited in Merriam *et al.*, 2007:23).

A unique characteristic of adult learning is that it is learner-centred. Drawing on the theory of Knowles, based on his model of assumptions (Knowles as cited in Merriam, *et al.*, 2007:85), the goal of andragogy is to transform the learning-teaching experience from tutor-directed to learner-directed learning, moving towards the encouragement of independent and self-directed learning. In this theory the tutors’ role is to involve the learner in as many aspects of learning as possible to create a supportive adult learning climate, both physically and psychologically (Merriam *et al.*, 2007:85). Departing from the broad goal of self-directed learning, acknowledgement of individual behavioural differences and learning styles should be granted (Conti, 2009:888). In support Jarvis postulates that any learning begins with the five human senses and therefore learners’ unique ways of taking in and processing learning varies (Merriam *et al.*, 2007:100). Learning styles are too complex for one

instrument to assess all aspects. However, learning style should be taken into consideration if enhancement of the learning experience is required (DuCharme-Hansen & Dupin-Bryant as cited in Collins, 2011:154). Adult learning style instruments that correlate with technology learning is identified (Collins, 2010:154) in the VARK theory of Fleming with its focus on visual, auditory, read/write and kinaesthetic. The Gregorc's Style Delineator includes learners' perceptual and ordering abilities to enhance learning using concrete sequential, abstract sequential, abstract random and concrete random. The question is how and does learning style influence learning experience in technology based education?

Ashcraft, Treadwell and Kumar (2008:10) points out that 'in social constructivism, knowledge is developed through cognitive activity that occurs during the discussion of experience with other people'. In this theory the tutor is seen as a facilitator rather than an instructor as learners develop their own knowledge while the tutor facilitates rather than lead discussions to promote social interaction (Ashcraft *et al.*, 2008:111). Acknowledging the importance of institutional management's role in ensuring quality learning is a task not put beyond the tutor's responsibility. Quality learning and contact between tutor-learner and institution-learner can be challenging, as it is 'not defined and outlined through policies and guidelines that establish expectations for quality communication (Betts, 2009:34). Since there are significant communication differences between face-to-face and online education, both tutor and institution should be aware of the difference and adapt accordingly (Betts, 2009:34). According to Mehrabian (as cited in Betts, 2009:34) face-to-face communication consists of 7% spoken word, 38% relates to the way the message is relayed and 55% of the message pertains to body language. In telephone communication 86% are tone and 14% spoken word (*International Customer Management Institute*, 2008; Lockwood as cited in Betts, 2009:34). Considering the 7% and 14% spoken word, it appears the percentage communication doubles when the communicator is not visible? Why will learners still attend class to 'listen'? However, for the tutor and institution to be visible, there should be communication and instructional skills that support personalised human interaction to ensure the correct message or intended message is sent (Betts, 2009:34) in order to prevent an online 'lost in translation' or 'the deer in the headlights look'.

The words 'change' and 'challenge' has often been used in this study to imply new approaches and strategies. In managing the quality of learning is a supportive management approach and strategy conducive for learning is vital. Greenfields (as cited in Bush, 2006:13)



regards the systems management theory a dominant approach in educational institutions. The systems theory is often viewed as a 'bad theory', yet no alternative is put forward (Hughes & Bush as cited in Bush, 2006:14). When drawing on the systems theory of contemporary management approaches, which interrelates subsystems to contribute to quality management, management has to consider the interrelatedness of external factors and the institution to ensure quality learning (Smit *et al.*, 2007:38). Based on the systems theory, the institution is an open system as it does not function in isolation and is dependent on the environment in which it operates, which in turn is dependent on the system (Smit *et al.*, 2007:433). This is quite contrary to the classical management approaches of Taylor, Fayol and Weber, which is incompatible with technological change, hierarchical, inflexible, autocratic, homogeneous and slow in decision making (Smit *et al.*, 2007:441-442). However, one can say that both theory and the practice of management are useful in their own right. Bush (2006:2) makes a distinction when saying that 'academics develop and refine theory while managers engage in practice'. A theory of management is necessary to guide action as experience alone cannot teach managers everything they need to know (Copland, Darling-Hammond, Knapp, McLaughlin & Talbert as cited in Bush, 2006:3). Participative management approaches offer solutions to the more rigid hierarchical assumptions of the classical models, although Bush (2006:10, 22) says that the ultimate test of any theory is whether it improves practice.

Managers are re-evaluating approaches to management due to globalisation, cross country learning experiences, technology development that enables learners to access information regardless physical location, and the transformation of skills needs. Grulke notes in this regard that 'we need thinking skills, fundamentally different knowledge and service skills' (as cited in Smit *et al.*, 2007:439). There are new customer demands in terms of 'quality', 'time', 'service', 'innovation' and 'customisation' (Smit *et al.*, 2007:437). Knowledge management has become key, as 'knowledge workers will soon become the dominant group...' and 'knowledge is highly portable' (Smit *et al.*, 2006:29). Organisations now become learning organisations committed to lifelong learning. According to Peter Drucker, the greatest challenge is to change the mind-set of managers. He states that the problem is neither technology nor economic conditions, but a change in mind-set (Drucker & Wartzman, 2010:217). Drucker warns that to understand what management is and what management does, one has to start from the results on the outside (Drucker & Wartzman, 2010:236). 'Management is a social function and embedded in a culture - a society - a tradition of values,

customs, and beliefs, and in governmental and political systems'. He continues to say '...in turn, management and managers shape culture and society' (Drucker, 1986:5).

New knowledge and skills requirements create opportunities for management to unlock innovative and exciting possibilities for every individual. Institutions need managers in education, capable to establish a creative atmosphere for active learning. Supported by the *Department of Education* (as cited in Bush, 2007:404), the key focus, regardless of the management approach, should be to ensure quality learning and improve learning outcomes in employing new management strategies. The learning organisation based on the systems management approach is according to Senge, (as cited in Smit *et al.*, 2007:47) based on five disciplines to create new futures in institutions, including a commitment to lifelong learning, sharing a vision for the institution, encouraging active dialogue, promoting systems thinking and challenging one's own assumptions about the institution and the world around it. The postmodern society today based on science and technology requires the acquirement of new knowledge and skills to be sustainable at all levels. The importance of the management function today is a focus to 'reorganise, redesign and re-engineer to improve performance' (Smit *et al.*, 2007:436).

## **1.8 DEFINITION OF KEY CONCEPTS**

### **1.8.1 Hybrid study approach (HSA)**

The hybrid study approach (HSA), explained by Martyn (2003:19), is a learner-centred approach where online learning becomes a natural extension of traditional classroom learning, incorporating the dynamic nature of active, collaborative interaction to enrich the learning experience. It allows for flexibility of asynchronous, independent learning, with increased levels of cognitive activity.

### **1.8.2 Learning**

Learning is a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and worldviews (Illeris, 2000; Ormrodas cited in Merriam *et al.*, 2007:276-277).

### **1.8.3 Management**

Management is ‘the activity of getting things done with the aid of people and other resources’ (Boddy, 2005:13). It is a process that includes four management functions, namely planning, organising, leading and controlling of resources to achieve organisational goals (Smit *et al.*, 2007:9). Kroon (2004:4) includes six additional management functions, namely decision-making, communication, motivation, coordination, delegation and disciplining, stating: ‘The approaches are complimentary to one another, rather than being substitutes for one another’ (Kroon, 2004:7). He refers to the four basic management functions as the most important steps in the management process following in succession during each activity (Kroon, 2004:8).

### **1.8.4 Online learning**

Online learning refers to ‘learning that takes place partially or entirely over the Internet’ and excludes exclusively print-based and purely face-to-face instruction (US Department of Education, 2010:9). The integration of online learning, whether applied to serve as a replacement or as an enhancement of face-to-face learning, is embedded in the determined objectives and outcomes (US Department of Education, 2010:3).

### **1.8.5 Quality**

For the purposes of this study the researcher relies on the definition of Materu (2007:3), who refers to quality as the ‘fitness for purpose’ in saying quality is:

Meeting or conforming to generally accepted standards as defined by an institution, quality assurance bodies and appropriate academic and professional communities. A broad range of factors affect quality in tertiary institutions including their vision and goals, the talent and expertise of the teaching staff, admission and assessment standards, the teaching and learning environment, the employability of its graduates (relevance to the labor market), the quality of the library and laboratories, management effectiveness, governance and leadership.

## **1.9 STRUCTURE OF THE STUDY**

In chapter 1, the background of this study was set, and this is followed by a literature review in chapters 2 and 3. The research methodology is discussed in chapter 4, followed by the

data analysis and interpretations in chapter 5. Chapter 6 concludes with a summary, recommendations and suggestions for future research.

Chapter 1: The researcher introduced the study with a holistic view of the research. The background of the study was set, followed by the problem statement, the aim of the study, the research design and strategy, the theoretical framework, reliability of the study, the definitions of concepts and the structure of the study, followed by a conclusion.

Chapter 2: In establishing a theoretical background for the research, a focused literature review was conducted on technology integration using a hybrid study approach (HSA) in higher education.

Chapter 3: The researcher guided a literature study to establish a theoretical background on learning and new learning in adulthood.

Chapter 4: A description of the research design and methodology is presented to explore the ideas drawn from the literature study.

Chapter 5: Data analysis, research findings and interpretations are presented in this chapter, based on the findings from individual interviews, documents analysis and the case study. The chapter offers an interpretation of the findings.

Chapter 6: In the final chapter, the researcher concludes with suggestions and recommendations on the outcome of the study and provides a research based guidance on managing the quality of learning in higher education through a hybrid study approach (HSA).

## **1.10 CONCLUSION**

Considering the background of learning in higher education through a hybrid study approach (HSA) and the prominence of employability challenges, an exploration into an innovative pedagogy for post school education is inevitable. Education any where any time should no longer remain only a dream; it should be the paradigm shift policymakers are seeking. Hybrid learning is proposed to set the trend for change of a previously disadvantaged pedagogy into an innovative advantaged pedagogy of employability. The study strives to

provide a research based report on managing the quality of learning in higher education through a hybrid study approach (HSA) and is not presented as the best or only alternative to the current pedagogy, but rather as a supportive approach. In conclusion, I use the parable of the boiling frog (Smit *et al.*, 2007:46-47):

If you put a frog in a pot of boiling water, it will immediately try to scramble out. However, if you put the frog in a pot of cold water and gradually turn up the heat, the frog will become groggier and groggier, until it is unable to climb out of the pot. Although there is nothing restraining it, the frog will sit there and boil. Why? Because the frog's internal apparatus for sensing threats to survival is geared to sudden changes in the environment – not slow, incremental changes. This often happens when modern organizations react only to dramatic changes in the environment, ignoring gradual processes that may be bigger threats.

## **CHAPTER TWO: TECHNOLOGY INTEGRATION USING THE HYBRID STUDY MODEL**

*‘There are really only three types of people: those who make things happen, those who watch things happen, and those who say: “What happened”?’ (Landers as cited in Goetsch & Davis, 2010:3).*

### **2.1 INTRODUCTION**

Badat (2010:5) emphasises the need for reformation and improvement of training and education in South Africa to harmonise curricula with international standards of academic quality, knowledge, expertise and the skills needed to change the global economy. The Education White Paper 3 on Higher Education (1997); DoE attempted to address problems of equality, self-sufficiency, redress and the efficiency of higher institutions in South Africa. As a result the South African higher education system finds itself under substantial pressure to deliver accessible and quality education to all (Vandeyar, as cited in Mouton, Louw and Strydom, 2013:285). The higher education reform is shaped by international competitiveness and globalization pressures. These factors are not only felt in South Africa, but worldwide, especially with the integration of technology and education. As part of the vision of a transformed higher education, higher education was called upon to advance specific goals, which included restructuring ‘of the higher education system and its institutions to meet the needs of an increasingly technologically-orientated economy’ (DOE, as cited in Badat, 2010:6). These goals have not been adopted as quickly and intensively as expected. Despite it being a priority at national policy level, there is no specific educational technology policy, nor a quality management policy for using technology in education (The Council on Higher Education, 2006:21). Institutions offering technology-based training are almost left to their own devices due to the lack of policies. Such policies can be seen as ‘tools to facilitate program integrity, quality and growth’ (Simonson & Schlosser, 2013:437). Sound policy foundations should be developed prior to implementation of technology in training based on a clear outline of the values, mission and vision for the future in higher education within the evolving digital world. Higher educational institutions find it difficult to enter the online learning arena because of restrictive mission statements (Martyn, 2003:18). There is frustration with the absence of a national policy where institutional rules and policies are in place. When these are not supported by government, institutions do not know where they fit into the big picture (Moore, 2013:419). Policies should be justified by learning needs

identified through a needs assessment. Policymakers who understand these needs should make a decision to respond to these outcries (Moore, 2013:420) to ensure quality learning with the use of technology to enhance learning.

## **2.2 QUALITY LEARNING**

In reviewing the literature it has become evident that wherever the use of technology in education is addressed, the word 'quality' manifests. Data collected in a large meta-analysis by Schwartz and Schmid (2012:243-244) reveal how the rich interaction with technology can be very meaningful in the right context. This study revealed that learning equals quality, and showed deeply significant learning when technology is a dynamic component in the teaching-learning environment and when it is properly implemented. However, learning with technology does not merely involve taking a course and putting it on a computer. It includes a rapid adaption of learning material, teaching concepts, accessibility, flexibility, interactivity, learning support and structured learning activities to increase quality and value of learning (Noroozi & Haghi, 2013:1; Schwartz & Schmid, 2012:228).

Good learning is achieved by good teaching, and both are dependent on the quality of management (Moore, 2013:419; Bush, 2007:391). The researcher focused on the micro-level of managing the quality of learning in higher education through a hybrid study approach (HSA). This accentuates quality learning in a programme, rather than the macro level of strategic management or institutional level considerations. Little has been published on managing quality learning on the micro-level, and most of what has been said addresses strategic management (Kearsley, 2013:425). Gurba (2011:2) states that quality learning is learning that is 'accessible, interoperable, durable, reusable and cost effective', and should these factors be present, learning with technology can be effective. However, there are certain principle conditions for quality learning that should be considered. The need for customisation of learning content according to learners' capabilities, personalities, expectations and learning styles will have an impact on quality learning. Tutor visibility, even virtually, will eliminate feelings of isolation for learners. There are possibilities of interaction in a broader social context, including globally, such as virtual communities, future employers, subject specialists and more (Gurba, 2011:5-10). Tutor and institutional availability and visibility contribute to an increase in satisfaction and a positive learning experience. When considering the use of technology, Gurba (2011:5) suggests the use of a

hybrid study approach (HSA) to enhance and compliment the traditional face-to-face delivery mode. Technology learning should stimulate all the familiarity found in traditional learning, while adding new learning found in 21<sup>st</sup> century learning possibilities.

### 2.2.1 Traditional learning versus 21<sup>st</sup> century learning

Pedagogical change in learning and teaching is inevitable since technology has shaped the 21<sup>st</sup> century learners' learning styles and preferences (Tapscott & Williams, 2010:16). Coates (as cited in Conrad & Donaldson, 2012:9) states 'for today's students, the classroom is the world, and the information students have available at the flip of a switch is infinite'. Collins (2011:154) declares 'technology has entered the educational system and is here to stay'. Learning then and learning now has changed (Collins, 2011:153; Biggs & Tang, 2011:3) as seen in Table 2.1 and discussed below.

**Table 2.1: Establishing New Learning Environments by Incorporating New Strategies (Shelly, Gunter & Gunter, 2010:2).**

Traditional Learning Environments	21 <sup>st</sup> Century Learning Environments
<b>Tutor-centred instruction</b>	Learner-centred instruction
<b>Single-sense stimulation</b>	Multisensory stimulation
<b>Single-path progression</b>	Multipath progression
<b>Single media</b>	Multimedia
<b>Isolated work</b>	Collaboration
<b>Information delivery</b>	Information exchange
<b>Passive learning</b>	Active/exploratory/inquiry-based learning
<b>Factual, knowledge-based learning</b>	Critical thinking and informed decision making
<b>Reactive response</b>	Proactive/planned action
<b>Isolated, artificial context</b>	Authentic, real-world context

Table 2.1 shows attributes illustrating traditional learning approaches and comparable designs that can be associated with 21<sup>st</sup> century learning environments. The tutor is no longer the centre of the educational experience and higher education programmes have moved from a



tutor-centred to a learner-centred focus (Middleton-Brosche & Feavel, 2011:7; Gurba, 2011:11). Discussing a set of 21<sup>st</sup> century competencies, Pedró (2010:16) commends the benefits of technology learning for customisation of the learning process and for adapting it to particular needs of the learner, placing more focus on the learner as opposed to face-to-face facilitation, which is more tutor-centred. Pedró (2010:15) comments on the technology learning environment, which provides for technology-related competencies that are indispensable in the workplace. One attractive feature of learning with technology is the opportunity it offers learners to participate meaningfully in class discussions (Naroozi & Haghi, 2013:119).

Considering that a face-to-face class session of 50 minutes with 25 learners provides an average participation of 2 minutes per learner per session, many learners will not have the opportunity to participate in the discussion. On a technology platform many discussions can simultaneously occur on a variety of topics, resulting in meaningful participation (Allen, Omori, Burrell, Mabry & Timmerman, 2013:143). It is evident that learning without any interaction is not only unattractive, but limits the learner's chances to reflect and participate. Since a learner generally remembers only 10% of what occurs in the traditional passive learning environment, active learning not only improves learner outcomes, but engages learners in thinking and problem-solving activities (Naroozi & Haghi, 2013:119-120). Learners are no longer passive recipients of the 'wisdom' propagated from 'all-knowing' instructors, but are the active participants in their own learning experiences (Conrad & Donaldson, 2012:6).

Modern learning can be expressed by looking at the added value that technologies offer, including the potential for interaction, online support, flexibility in accessing learning any time, any place, any way, including collaboration and discussion (Tesar & Sieber, 2010:126) with the benefits of reduced cost of learning delivery, textbook cost and availability, travelling expenses, possible learner accommodation, initiating the building of more institutions and other factors (Naroozi & Haghi, 2013:1; Dzvimbo, 2006; Martyn, 2003:23). The increasing collaboration and experiences for both learner and tutor in learning with technology enables the application of the lessons learned about themselves beyond the restrictions of the instructional setting (Conrad & Donaldson, 2012:8). Adjusting traditional methods of instruction to the changing circumstances will become inevitable in the near future (Tesar & Sieber, 2010:128). The mixed use of traditional learning with technology

learning has become part of the daily routine of teaching in many institutions worldwide. However, 'these best practices still need to be transferred to solutions suitable for everyday life and inherent parts of modern curricula' (Tesar & Sieber, 2010:128) to enhance the quality of higher education learning globally.

### **2.2.2 Quality learning in higher education globally**

Internationalisation is a given. In-depth on-going research has been undertaken worldwide to establish parameters and recommendations on international standards for quality learning using technology in education since the beginning of the 21<sup>st</sup> century (Gurba, 2011:3). Reform in the higher education is a worldwide occurrence (Badat, 2010:5; Gurba, 2011:3). Van Schalkwyk (as cited in Mouton et al., 2013:288) states that internationalisation requires of countries to create nations that have effective access to learning, are able to construct knowledge and to enhance new learning experiences to the advantage of society as a whole.

An interesting occurrence is the growing number of learners from developing economies studying degrees with universities in developed countries, either enrolled as a foreign learner at a university in a developed country, or joining an internationally accredited educational institution in their home country (Van Raaij & Schepers, as cited in Naroozi & Haghi, 2013:122). The last-mentioned is the case in this study where learners are enrolled at a private institution in the Western Cape to study a qualification from a university in the United States of America by using a hybrid study model (HSM). Based in the above, quality learning for higher education in South Africa is discussed in the next section.

### **2.2.3 Quality learning for higher education in South Africa**

Given the youth population of around 3 million between the age 18-24 neither studying, nor working (Department of Higher Education and Training, 2011; Davis, 2011:27), President Jacob Zuma requested the Minister of Higher Education and Training, Dr. Blade Nzimande, to produce 10 000 artisans by 2014 and to produce various educational learning options for school leavers who do not qualify for university (Gwebinkundla, 2010:7). The *National Plan for Higher Education* set the target of a 20% participation rate by 2011/2016. The participation rate was 15% in 2001, and has increased with only 1% by 2008, which has negative consequences for economic and social development. The Department of Education

is seeking an increase of a 100 000 learners within the higher education sector with already stretched capacities at universities (Badat, 2010:11).

According to McGregor (2012:6) there are concerns that top learners emerging from South African schools are not properly equipped for academic success. Materu (2007:7) states that a post-school qualification is seen as sufficient for employability in some parts of the world, but the growing demand for highly qualified and skilled employees has increased and the inconsistency in the increase in the output number of graduates from the higher education system, versus the increase in graduate unemployment, is disturbing (Moleke, 2010:87). Badat (2010:16) emphasises the urgency for higher education to elevate knowledge, skills and competencies that will enable graduates to contribute towards economic development. He expresses the need for restructuring qualifications and programmes in higher education to be globally compatible with the knowledge, expertise and skills needed in a changing economy.

The uneasiness continues as Van Damme (2000:10) and Perold (2012:187) proclaim the decline of academic standards against the demands of key stakeholders in the industry, such as businesses, employer organisations and professional bodies. These stakeholders have all lost confidence in the traditional academic qualities of graduates and are voicing their concerns regarding the quality of graduates, who may have achieved academically, but have not yet achieved employability (Materu, 2007:7). A recommendation by Bunting and Cloete (2008) is that we do not need more universities, but rather more post-school options and a stronger workplace linkage (Perold, 2012:185-188). Van Coller (2012:6) supports this statement by stating that South Africa does not need more universities, but the role of universities should be extended to providing quality tertiary education through distance education opportunities (Mouton *et al.*, 2013:296). This emphasises a total quality approach that focuses on a management system that is concerned with 'how' quality is achieved for customer satisfaction (Goetsch & Davis, 2010:3).

#### **2.2.4 Managing quality for customer satisfaction**

Revenaugh, (as cited in Watson & Gemin, 2009:23) states the following about the management of quality:

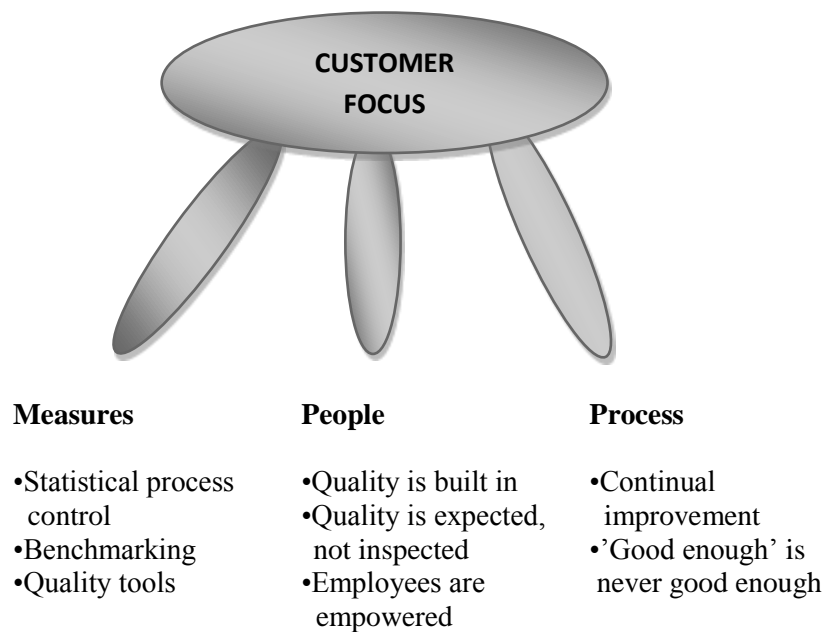
It's an enormous challenge... If we as online educators don't do all we can voluntarily to ensure that we have every possible quality system in place, we can be certain that policy-makers and regulators will attempt to do the job for us.

According to Gurba (2011:3), quality measures in e-learning have recently become a vital research target entailing various attitudes and theoretical frameworks. This implies an intense demand for classifying quality measures for quality assessment in technology learning. There are, however, various efforts to identify accepted quality measures for learning with technology and to show why management of quality is important. Developers of technology learning platforms need standards to authenticate their products, policy makers and stakeholders need them to make acceptable choices, and tutors and learners need quality standards alike (Gurba, 2011:1).

In 'A conversation with Joseph Juran' Thomas Steward (as cited in Evans, 2011:44), says that Juran stated that the 21<sup>st</sup> century should be designated the century of quality, saying, 'we've made dependence on the quality of our technology a part of life' (Evans, 2011:8). Quality was the catchphrase during the 1980's and 90's, especially in the manufacturing industry, focusing on the product rather than the process (Evans, 2011:7). Today quality is a given, yet still a critical issue, 'organisations don't talk about it as much' (Evans, 2011:7). Only when entering unidentified and unexplored terrain or when things tend 'to go wrong' the issue of quality becomes apparent (Evans, 2011:7). There has been a shift in the two views of quality. Quality pioneers such as Frederick Taylor (1911), Walter A. Shewhart (1931), W. Edwards Deming (1940), Joseph M. Juran (1951) and Philip Cosby (1970), focused on 'what' is achieved, but this has since shifted to a more modern philosophy of 'how' it is achieved (Goetsch & Davis, 2010:3-9). In achieving quality the customer is seen as the predominant trendsetter of what is acceptable, without losing focus of elements like 'how' quality is achieved. Total quality, which is a people-focused management system aiming at continual customer satisfaction with continually lower real cost, are often used interchangeably with performance excellence (Goetsch & Davis, 2010:9; Evans, 2011:22). However, there are different views and definitions of what quality management is, but most managers agree the main reason to pursue quality is for customer satisfaction (Evans, 2011:5).

However, customer satisfaction alone will not secure quality, as seen in the integrated approach (Figure 2.1) in the analogy of a three-legged chair by Goetsch and Davis, (2010:6).

The customer is seen as the main focus in total quality, supported by three legs, which are the inclusive components of the total quality theory according to Goetsch and Davis (2010:7).



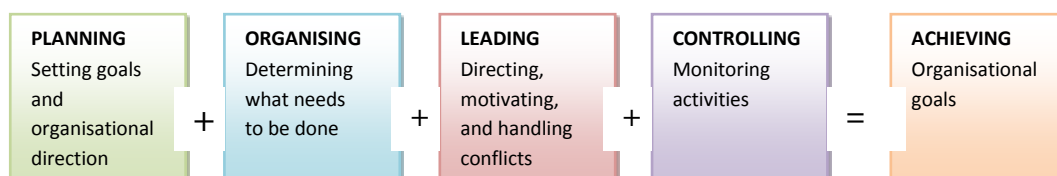
**Figure 2.1: Three-Legged Chair of Total Quality (Goetsch & Davis, 2010:6)**

The ‘measures’ leg of the chair indicates that quality must be measured, signalling ‘how’ it should be measured. With ‘people’ who are empowered to ensure quality, ‘quality is expected, not inspected’ (Goetsch & Davis, 2010:6). The ‘process’ of quality suggests direction and frequency as ‘what is considered excellent today may be just mediocre tomorrow’ (Goetsch & Davis, 2010:7). It is presumed that should the three legs not have exact measurements, an unbalanced customer focus will transpire. Despite the proposal of De Jager and Nieuwenhuis (as cited in Naidu, Joubert, Mestry, Mosoge & Ngcobo, 2008:38), where quality is seen as a ‘dynamic state’ related to people, processes, products, services and the environment to exceed customer expectations, it is evident that effective management functions are needed for quality learning and learning success.

### **2.3 MANAGEMENT FUNCTIONS FOR QUALITY LEARNING**

There is great interest in educational management in the 21<sup>st</sup> century because of the widespread belief that the quality of management is significant to learner outcomes (Bush, 2007:391). Management is the process that refers to a set of on-going and interrelated activities that utilise people and resources to ‘get things done’ effectively and efficiently

(Robbins, DeCenzo & Wolter, 2013:6; Robbins, DeCenzo & Coulter, 2011:33; Boddy, 2005:13) through inclusion of management functions. These functions consist of approaches that are ‘complimentary to one another rather than being substitutes for one another’ (Kroon, 2004:7) and comprises of planning, organising, leading and controlling to achieve organisational goals to ensure quality learning using technology (Smit *et al.*, 2007:9; Kroon, 2004:4). The four basic management functions in a visual mathematical equation (Robbins *et al.*, 2013:7), seen in Figure 2.2 are viewed as the most important steps in the management process, following in succession during each activity (Smit *et al.*, 2007:9). In managing quality learning to achieve some purpose, specific goals and direction are needed. This has to be planned by establishing strategies and developing plans to ensure that the focus stays on the goal of achieving quality learning. Institutional managers and tutors need to organise and structure what should be done, by whom it should be done, how it will be done, when it will be done, where it will be done and why it should be done. These functions that are executed by people should be coordinated and directed. Leading is directing people through communication, motivation and conflict solution to achieve set goals that need to be monitored and evaluated for rectification or deviations (Robbins *et al.*, 2013:31). Regardless of the different organisational levels of management, the size of the organisation, profit versus not-for-profit, the above managerial functions still apply. ‘The differences are of degree and emphasis, but not of activity’ (Robbins *et al.*, 2013:8).



**Figure 2.2: Four Management Functions (Robbins *et al.*, 2013:7)**

### **2.3.1 Micro-level management of quality learning for higher education**

There are two different levels of management used in learning with technology, namely strategic management, which focuses on macro-level management, and project management, which focuses on micro-level management (Kearsley, 2013:425). The traditional project management concepts ‘scope, task scheduling, risk assessment, quality control, progress tracking, change management’, according to Shackleford (2002) and Lynch and Roecker (as cited in Kearsley, 2013:425) apply to learning with technology. Quality management of

learning on the micro-level according to Kearsley (2013:426) comprises of six general areas that correlate with the five factors to manage quality of learning in Henrich and Sieber (2009:144). It incorporates institutional issues, curriculum management, staffing, support and evaluation of tutors, assessing learning and programme outcomes and technology decisions. Quality management of learning on the micro-level will be divided into relevant categories for the purpose of this study, namely institutional issues, curriculum management, assessing learning and programme outcomes, tutor participation, support and evaluation, learning styles for technology learning, staffing and learner support in technology learning.

### **2.3.1.1 Institutional issues**

Most institutional issues related to the management of technology used in education revolves around policies and procedures, the infrastructure needed for technology learning, how registration and billing systems will be incorporated, the use of libraries and research facilities, financial aid and access to learner facilities. Other extended matters on institutional issues relate to:

- How and if technology learning is compatible with the mission and goals of the institution (Kearsley, 2013:432).
- The recent economic crisis in many parts of the world, which means that institutions are experiencing reduced institutional financial support (Hanna, 2013:684; Mouton *et al.*, 2013:294).
- Increased birth rates with large youth populations unable to access institutions of higher education (Perold, 2012:179).
- The impact of new technologies directly driven by learner needs rather than through institutional initiatives (Hanna, 2013:692).
- Distance learning education plans, policies and policy models (Simonson & Schlosser, 2013:438).
- Transformation of institutional leadership due to technological innovation, which is perhaps the most compelling factor for many institutions since this demands compatible leadership approaches and styles are not typically characteristic of the management of educational enterprises (Beaudoin, 2013:467).

- Effective ways to enhance communication between learner-learner, tutor-learner and institution-learner for mindful learning (Davis, Harding & Mascle, 2011:1324).

An essential component for institutional management's concern when teaching with technology is successful design and effective curriculum management to ensure full participation of learners and tutors with high levels of interaction (Kearsley, 2013:426). This matter is discussed in the next section.

### **2.3.1.2 Curriculum management**

Curriculum management tasks are essential elements to observe during technology planning initiatives. The best curriculum management system should be implemented to suit the needs of the learner, tutor and institution (Luppicini, 2013:197). Successful technology integration involves proper development and review of learning objectives, topics, readings, assignments, tests and grading scales to accomplish instructional goals (Shelly *et al.*, 2010:330). Managing curricula via technology involves a serious overhaul, as subject and course content has to be revised, placed on a technological platform and made ready for learners to use (Kearsley, 2013:425). Not all learners learn the same thing at the same time, and both learning and teaching improves when differences in learners' approaches are recognised (Beetham, 2007:33). A different set of skills and management competencies are therefore required. However, amidst the expectation of an explosion in technology training opportunities over the internet, curriculum designers are still grappling with designing and programming user interfaces for high levels of interaction and there are few examples of good technology platforms available on the internet (Oliver, Harper, Wills, Agostinho & Hedberg, 2007:67; Shelly *et al.*, 2010:330; Noroozi & Haghi, 2013:83). Another aspect of curriculum management is quality assurance of subjects and courses placed on the technology platform and the aspect of full participation of tutors and faculty to participate in technology course development (Keasley, 2013:426). Understanding educational goals, how the programme is structured and programme content, are key concepts for educational leaders to consider. However, apart from the curriculum, which is a means to an end (Devaney, 2012:1; Mouton *et al.*, 2013:294), the assessment of learning and the learning outcomes, tutor participation, support and evaluation and the acknowledgement of different learning styles will make a course successful.



### **a. Assessing learning and programme outcomes**

With the number of stakeholders with an interest in quality and accountability in higher education, public scrutiny is fiercer than ever before and ever on the increase. The increase in interest in quality has resulted in a situation where many institutions find their standard processes and procedures to be insufficient and not a continuous process for improvement. The call for accountability in higher education with regard to quality in programmes and processes for both learning with technology and traditional learning is inevitable (Shelton, 2011:1). Assessing learning outcomes is one aspect of evaluating overall quality of programmes, but it is rarely done in both learning with technology and traditionally. Learner satisfaction does not imply directly what has been learnt. Learners could be asked to rate their achievement in a specific learning objective of a course, but self-assessments are not particularly valid measures of learning. A pass or fail grade in a programme is also not a useful measure of learning, since it may not correlate highly with the planned learning outcome (Kearsley, 2013:429). Shelton (2011:7) reviews 13 models for evaluating the quality of technology learning and identifies a number of factors that evaluate the overall quality of learning. He accentuates a strong need for a common model in assessing the quality of technology learning. However, until recently such a model could not be located (Shelton, 2011:9). The effectiveness of teaching with technology is challenging considering teaching behaviours like tutor participation, interaction, responsiveness, evaluation and tutor presence, which is complex in a learning system with technology integration (Kearsley, 2013:428).

### **b. Tutor participation, support and evaluation**

Tutors are not always willing to invest large amounts of time to develop material for technology learning without compensation or accommodation of their teaching loads (Kearsley, 2013:426; Pedró, 2010:16). According to Noroozi and Haghi (2013:83), tutors need adequate time to learn how to use technology and instructional activities and to use them effectively. Tutors who are ready to jump into using a new set of tools are the best way to go.

Good teaching is good teaching, but this is a different set of tools, and teachers need to know how to use those tools and how to use proper techniques to really engage students (Devaney, 2012:1).

Many teachers are asked to teach online with little to no preparation or support (Devaney, 2012:1; Kearsley, 2013:428) and inadequate staff is bound to result in learner and institutional dissatisfaction, which will have a negative effect on learning with technology. Limited technological knowledge and skills in teaching with technology could result in considerable amounts of time and cost of training and technical assistance to ensure the success of learning and teaching with technology (Betts & Sikorski, 2008). Makoe (2012:92) supported by Naidoo (as cited in Mouton *et al.*, 2013:293), urges that academics should be trained in different distant teaching devices to accelerate learner performance for the new learner generation. The new generation is referred to as ‘digital natives with hypertext minds’, and they socialise differently to most academics. Conole (2007:81) argues that the gap between the potential of technologies to support learning and the reality of how technology is actually used may be due to the lack of understanding of how technology can be used to afford specific learning advantages.

The limitations in reaching desired levels of interaction using technology learning, according to Noroozi and Haghi (2013:84), do not always refer to a lack of tutors’ technical skills, but can also be related to the traditional ways of teaching over many years. It is, however, remarkable how some tutors attempt new instructional activities that are unique to technology learning. The sharing of best practices should be encouraged among tutors, experts and technology specialists (Naroozi & Haghi, 2013:84). Regardless of the medium, the tutor’s importance is the same in teaching with technology as in tradition settings, and the tutor is the most significant impact on the success of the learner. Even with the unique nature of the technology learning environment, many of the same qualities essential to the successful traditional classroom management plan also apply in the technology classroom. According to Arends (as cited in Stewart, 2008:373), classroom management in the technology environment is one of the most important responsibilities tutors face. Good classroom management requires well-planned, relevant and effective teaching with stimulating lessons.

The evaluation of successful teaching using technology is one of the challenging aspects of managing technology teaching and learning, as teaching behaviours are complex when using technology integration in a learning system. The most familiar instrument used for tutor

evaluation is learner evaluations at the end of a programme, and there is little evidence these evaluations accurately reflect effective teaching practices. It is possible to track usage, the amount of time spent on discussions, forums, assignments and e-mails, but according to Kearsley (2013:428) there is no correlation between the time tutors spend online and learner evaluation ratings. Successful evaluation of teaching with technology is furthermore affected by learners' preferred learning style, which influences the learning experience (Collins, 2011:158).

### **c. Learning styles for technology learning**

The way in which learners prefer to receive, process and retain information is highly accommodated in technology learning, which shows a positive correlation between the learner's preferred learning style, knowledge retention and learning experiences (Clayburn, 2011:13; Shelly *et al.*, 2010:331; Collins, 2011:154). The needs of adult learners who are more comfortable using technology in learning and those who prefer tradition learning should be met. According to Cranton (2005:362) the preference of learning style in adult learners is based on six approaches to addressing learning styles, which depends on and are influenced by 'experience, social interaction, personality, multiple intelligences and emotional intelligence, perceptions and conditions or needs'. Most learners use a combination of several styles (Shelly *et al.*, 2010:331).

Fleming's VARK (visual, auditory, read/write and kinaesthetic) physiological style inventory is highly accommodated in learning with technology (Collins, 2011:158). Visual learners prefer information through maps, models, patterns and graphs, compared to auditory learners who prefer to hear information through videos, podcasts, chat rooms and discussions. Read/write learners prefer to have text in print, PowerPoint and websites available for use and kinaesthetic learners prefer to interact with information through touch, writing notes, highlighting information and simulations (Davis, Harding & Mascle, 2011:1332; Collins, 2011:158).

Knowledge of learning styles can assist in guiding the activities towards positive learning experiences. Tutors can thus not focus on only one style (Collins, 2011:158). The relevance of learning styles has become more prominent in learning with technology than the traditional classroom. In learning with technology greater emphasis is placed on the adult learner as a

self-starter, in control of his/her own learning environment and implementing active learning strategies to enhance their own learning (Clayburn, 2011:13). Studies conducted on the impact of technology learning, the adult learner and learning styles are few in comparison to studies where technology is used for learning at undergraduate and school level (Collins, 2011:158). Where teaching methods correspond with learners' preferred learning styles they tend to apply the learning more effectively, retain information for longer and have a positive learning experience (Moallem as cited in Clayburn, 2011:13). Diaz and Carnal (as cited in Collins, 2011:158) question if there is a difference between the learning styles of learners who choose a face-to-face format and those who choose an online learning format. In a study by Davis *et al.*, (2011:1332), none of the respondents felt that their learning style had changed, but they felt that their study habits might have changed. Even with the diversity of learners, their cognitive functionality and different learning styles, which is not the same for all learners at the same time of day, learners can equally contribute and participate regardless of personality type, physical challenges or personal reticence. They are able to not only hear, but see, hearing and interact (Coogan, 2009:316). It is good practice to incorporate learning styles into the pedagogical design of programmes to assure quality teaching by all staff associated and involved with a technology learning programme. The staffing function is dealt with in the next section.

### **2.3.1.3 Staffing**

Depending on the size and complexity of the technology learning programme, there are specific essential functions that have to be filled. Some staff functions may be outsourced and some may be provided internally within the institution. Regardless of whether the staffing function is internal or external, an inadequate staffing programme can result in learner and tutor discontent and this can negatively affect the success of a technology learning programme. Insufficient instructional design, for instance unclear assignment instructions, lack of effective technical support and poorly designed courses, can result in confusion and frustration for both learner and tutor, resulting in learners dropping out of the system. It is evident that a high staff turnover, unreasonable dropout rates and the lack of learner support are indicators of staffing problems (Kearsley, 2013:427).

#### **2.3.1.4 Learner support in technology learning**

An essential element found in technology learning is a learning support system, which includes technical, academic and administrative support (Watson & Gemin, 2009:15). Much focus has been placed on learner support services in the South African educational system (Council on Higher Education, 1997:26-38; Council on Higher Education, 2012:11), yet numerous tertiary institutions in South Africa do not perceive learner support services as a core role. With learner support services often not well-integrated across the academic and administrative function, the *Green Paper for Post School Education and Training* (Council of Higher Education, 2012:11; Letseka, 2009:97), underlines the importance of the learner support function at undergraduate level as an important and core essential in higher education. An urgent appeal was made for structure and pacing of higher education learners, including an increase in the use of technology in higher education. Evident from the literature is the sound technology support systems found in India, Ghana, Namibia and other African countries with good learner retention and throughput rates (Council of Higher Education, 2012:58). One of the huge barriers in learner persistence and successful throughput is effective access to learner support services, as is often the case with learners entering the technology learning arena and working adults with families not willing to risk something new if it involves making mistakes (Koen, 2007:70; Stanford-Bowers, 2008:42).

With the anticipated increase in wireless and technology progression, nearly 2400 adult learning centres in South Africa were called on to convert to learner support facilities. However, this decision has to be carefully weighed due to capital expenses, and the shift envisaged is from a physical contact centre to a web-based support system (Council of Higher Education, 2012:58).

Support activities should be maintained and should form part of the instructional design process, and not as an afterthought when difficulties in an existing instructional system are experienced (Larson-Daugherty, 2007:72; Naidu, 2013:269). Both tutors and learners should be orientated on the use of a technology platform, especially those who experience technology difficulties. One advantage of having online access to a tutor is the personal interaction often lost in the brick and mortar environment where learners sometimes feel they are only a number with a barcode (Welsch, 2007). It is evident as learners become more independent in learning with technology that feedback becomes more important for learners

who might never see a physical facility, tutor or administration staff (Davis *et al.*, 2011:1325).

The misconception holds that online learners are expected to be self-sufficient without assistance (Globokar, 2010:45; Herrington *et al.*, 2010:1). Institutional management has to ensure quality learning that includes both an institutional and virtual learner advisor to assist in administrative support, counselling services and technical support (Mossavar-Rahmani & Larson-Daugherty, 2007:72; Doering & Veletsianos, 2008:115; Davis *et al.*, 2011:1324). Institutions consider ways to enhance effective communication for mindful quality learning using technology. Effective communication for quality learning with technology is discussed in the next section.

## **2.4 EFFECTIVE COMMUNICATION FOR QUALITY LEARNING**

According to Tesar and Sieber (2010:125), communication is seen as the single most important success factor in technology learning to prevent misunderstanding and a lack of information, which is seen as crucial in quality learning. Learning with technology demands more collaboration and communication between tutor and learner and the dynamic interaction guarantees high quality learning (Henrich & Sieber, 2009:146). The quality of learning and the contact between learner-learner, tutor-learner and institution-learner can be challenging as it is 'not defined and outlined through policies and guidelines that establish expectations' (Betts, 2009:34). However, the goals in teaching with technology and face-to-face learning are the same, the change from process and phase-oriented procedures to more modern ways of communication ensures high quality and quick adjustment to demands (Tesar & Sieber, 2010:126). It is evident that knowledge is developed through cognitive activity that occurs during discussion of experience with other people (Ashcraft *et al.*, 2008:110).

Acknowledging the managerial importance of institutions in ensuring quality learning is not a task put beyond the tutor's responsibility (Betts, 2009:34). Recognising the significant communication differences between face-to-face and online education, both tutor and institution should be aware of the difference and adapt accordingly, and for both tutor and institution to be 'visible', 'communication and instructional skills that support personalised human interaction' should be acquired to ensure the correct message or intended message is sent (Betts, 2009:34). The social interactions with an appropriate social infrastructure found

in collaborative technology learning have a noticeable impact on individual performance (Cho, Gay, Davidson & Ingraffea, 2007:324). As the need for technology development in education and communication expands, the need to study those developments for education and training will remain (Davis *et al.*, 2011:1337). Technology learning and technology *per se* is 'less important' than learner interaction. The interaction between learner-tutor and learner-institution is evident in the use of communication tools that allow learners to share, have discussions, give presentations, upload visuals and data, and to have private conversations (Davis *et al.*, 2011:1329) and should adhere to quality assurance in using technology for learning.

#### **2.4.1 Quality assurance**

Quality assurance measures need to be in place and strictly managed to ensure quality learning using technology. According to Gurba (2011:1) there is a strong on-going need to categorise 'measure types' across quality assessment in technology learning. Jenkins (as cited in Jaggars, 2013:604) suggests that a complete system of quality assurance with continuous assessment should be installed to cultivate leadership for improved learner success. It is evident that learning with technology offers a far more sophisticated and advanced learner analytics than is possible in face-to-face learning. As new learning techniques develop, the assessment of both learner achievement and overall programme evaluation takes on an added importance to guide curriculum development, delivery, pedagogy, learning outcomes, evaluation of educational processes in general, learner support, cost effectiveness, institutional commitment and technology decisions (Irele, 2013:496).

#### **2.4.2 Technology decisions**

An on-going management task when using technology learning is the choice of a learning management system (LMS) or technology platform to be used. The technology platform provides the tools most commonly used in technology learning, which includes a discussion board, calendar, assignments, journal entries, announcements, textbooks, tests and a grade book. The technology platform provides tracking tools to enable monitoring of what, where and how the learner has accessed the technology class and to understand where learners are from an achievement standpoint at any given time. There are usually two major decisions to be made on the choice of a technology platform. Will a vendor be used or will a system be

developed and hosted by the institution? The use of either offers advantages and disadvantages.

In this study a technology platform is used from a partner institution in the United States of America, which according to Kearsley (2013:430) is a desirable option for smaller institutions. Many institutions start off with a hosted technology platform and later switch to an internally hosted system as own resources are developed. Another aspect of importance related to the technology platform is the interface between the learner record system and data on grades, which ideally should transfer automatically and in real time (Kearsley, 2013:431). Technology should be in service of educational goals and caution should be taken to ensure that pedagogy remains the focus rather than technology tools. Other factors in learning with technology integration includes the correct communication protocol of 'netiquette', which refers to proper etiquette when in online discussions (Martyn, 2003:20) and internet connectivity and availability, as learners should be able to access resources at any time and have space available to work if no internet connectivity is available at home, preferably with minimal network crashes (Devaney, 2012:1).

### **2.4.3 Correct technology communication**

The netiquette, or norms and manners that form a set of standards for application as correct technology communication, should be appropriate for everyone using technology to communicate. Standards should be implemented to execute proper and effective communication between technology communicators, including spelling, grammar and punctuation (Pratt, 2010:113; Martyn, 2003:20; van Dijk, 2012:260). The abbreviated forms of communication in text messaging, instant messaging and other social media 'have severely impacted the ability of individuals to communicate properly' (Pratt, 2010:113). Netiquette is strongly affected and influenced by the community of users and the occurrences encompassing technology communication (Van Dijk, 2012:260; Pratt, 2010:113). Netiquette will probably be determined by institutional rules and regulations or guidelines set by instructors for different programmes. The implementation of these strategies will not only indicate respect for fellow learners, tutors and institution, but will ensure a willingness to learn how to communicate thoughts and ideas more effectively (Pratt, 2010:114). The following guidelines should be considered in the technology classroom (Pratt, 2010:114-124):



- Font style, the use of colour, emoticons and all capital letters
- Delivery and read receipts as proof of assignments having been delivered and opened
- Discussion forums should be tutor led and should adhere to the topic
- Spam should be limited through controlled use of e-mail addresses
- Flaming emotional responses should be avoided at all times
- E-mails cannot be heard and words alone convey the tone
- Avoiding misinterpretation by presenting work with tact and sensitivity
- Conveying respect by using names and titles correctly
- Grammar and spelling errors are common mistakes, but inexcusable
- Attitude in technology communication might have serious consequences
- Views should be factually based and topic driven
- Sending the wrong message is the responsibility of the sender
- Offensive language and personal threats should not be accommodated
- Conflict should be handled according to institutional procedures
- Apologies should be offered immediately after an error occurs
- Plagiarism in the academic arena has strict rules and regulations

Effective communication in the technology classroom is possible where institution, tutors and learners all adhere and assure proper netiquette and avoid the ordinary stumbling blocks through verification before any communication is sent (Pratt, 2010:124). With its social structure and high levels of interaction and collaboration, the hybrid study approach (HSA) accommodates high levels of communication to positively affect quality learning experiences for learners, tutors and institutionally.

## **2.5 THE HYBRID STUDY MODEL**

An online technology platform using a Learning Management System (LMS) has been developed in the United States and was introduced to an educational institution in the Western Cape of South Africa. The technology platform was implemented in July 2011, focusing on two study fields, namely Business Management and Information Technology for post-school learners studying towards a Bachelor of Science degree.

On enrolment the learner is issued with a laptop computer included in tuition fees, which becomes the property and responsibility of the learner and should accompany the learner to any scheduled face-to-face delivery. The institution offers reduced insurance and maintenance costs, upgrades of software, software licensing, insurance against possible theft of computer components. This ensures better utilisation of classrooms since the laptops are not restricted to technological use only.

### **2.5.1 Orientation phase**

During the first week face-to-face orientation classes are scheduled to familiarise the learner with the Learning Management System (LMS), to create an e-mail account, an e-mail address, unique password and Skype address. In the orientation week a learner assessment on information literacy and end-user computing skills is conducted. Globokar (2010:3) exposes eight myths of online learning and confirms the importance of orientation to reduce the initial ‘overwhelmed feeling’ learners might encounter. The account information, which contains personal details, can be edited at any stage should the learner profile change. Login to the Learning Management System (LMS) is not confined to the classroom or campus, but accessible from any internet connected device provided the username and password information is correct. The first scheduled face-to-face class for each subject serves as an introduction to the subject on the technology platform and allows the learner to experiment, explore and participate in various introductory exercises for a particular subject. The learners are introduced to the tutor’s teaching style and approach in both the face-to-face and the online environment (Coogan, 2009:319). In this initial stage, course rules and policies are discussed. Learner expectations and objectives are addressed during this initial stage to benefit both tutor and learner to identify and address potential looming issues (Coogan, 2009:319; Mossavar-Rahmani & Larson-Daugherty, 2007:70). Time management skills, self-discipline, research techniques, plagiarism and communication skills are addressed (Koen, 2007:84; Watson & Gemin, 2009:11). The final face-to-face class serves as an evaluation session, including feedback from both learner and tutor about using a hybrid study model (HSM) (Martyn, 2003:20; Coogan, 2009:322).

## **2.5.2 Using the online platform**

The characteristics of a hybrid study model (HSM) encompass the distinctiveness of an online Learning Management System (LMS), where course materials are electronically accessible. Registered subscribers have access to the online technology platform, which provides user-friendly easy accessible entry to pre-loaded subjects. When logged into the Learning Management System (LMS), the learner receives a welcome message with a summary of the orientation programme already discussed during the orientation week. The online platform consists of different buttons placed on the homepage across the top of the computer screen, containing information to access different functions.

### **2.5.2.1 'Go To'**

The button 'Go To' contains all the registered subjects. Each subject comprises of different units (numbered 0-10), which are listed in separate buttons across the screen. The screen includes a 'Course', 'Gradebook', 'Textbook' and 'Announcement' button. An introduction, description, objectives, evaluation methods and information on the final project is explained in the 'Course' button. Unit 0 contains visual and audio tutorials to assist in the subject. Each unit (numbered 1-10) contains specific learning objectives, reading and study material, helpful internet links, slide shows, video clips, tasks and assignments for the unit. A benefit of using a hybrid study model (HSM) is the opportunity to review missed lessons or to comprehend lessons not fully understood in the face-to-face delivery. Hislop (as cited in Mossavar-Rahmani & Larson-Daugherty, 2007:73) indicates that online education is facing a change as rich media materials (video clips, slide shows, and graphics) are more frequently expected, as opposed to text heavy materials.

### **2.5.2.2 'Announcement'**

The 'Announcement' button shows important notices from the system administrator related to maintenance, upgrades, missing account information and technical aspects.

### **2.5.2.3 'Textbook'**

In the 'Textbook' button an electronic version of the textbook is available. Some publishers do not offer an e-Book version. In those instances learners will not see a 'Textbook' button for the subject. However, there will be a portable document format (PDF) or enter an activation code provided by the publisher to download the textbook.

### **2.5.2.4 'Gradebook'**

Perhaps the most important is a record of learner performance for tests and assignments, which is displayed in the 'Gradebook' button. The 'Gradebook' displays a 'pass' or 'fail' entry with the tutor's comments after final submission of an assignment.

### **2.5.2.5 'Personal Journal' and 'Submit Assignment'**

At the bottom of the screen a button 'Personal Journal' is displayed where assessments, notes or thoughts are temporarily compiled and reviewed before submission into the 'Submit Assignment' button is done. Once a project or assignment has been submitted, the file cannot be edited or changed. Pre-scheduled weekly face-to-face meetings with the tutor for each subject are scheduled to discuss assignments and tasks posted, to give effective constructive feedback and address concerns. Evidence shows that these meetings result in more effective and productive use of time online (Coogan, 2009:319). Tasks, assignments and tutor's feedback are submitted via the online technology platform. After completion of an assignment, a learner submits the assignment to the tutor for review and marking. Local tutors assess submissions received from learners and award a mark - often the same day or within 48 hours of submission. An accredited external examinations board based in the United States and consisting of academics in the relevant subject matter has full access to learners' and tutors' online platforms. External evaluators review learner submissions and tutor's feedback continuously. An outside perspective assures unbiased feedback and advice, both on the quality of submissions from learners and quality of internal evaluations done by tutors (Materu, 2007:16). Shortcomings and limitations often unnoticed could be rectified instantly.

### **2.5.2.6 'Calendar'**

Other helpful tools on the platform contain a 'Calendar' button for events, assessment due dates, pre-scheduled meetings and other dates of note.

### **2.5.2.7 'My Group'**

The 'My Group' button is used to communicate with peers and tutors logged into a subject. Registered learners' names and online status appear in a block within the 'My Group' button and is helpful to obtain immediate answers from tutors or peers or for having online synchronous discussions using the Skype function. Ernst (2008:40) indicates that learners feel isolated or detached when not engaged in traditional face-to-face instruction. Martyn (2003:22) reports that electronic communication enhances collaboration among learners, between tutors and learners and the integration of outside specialists can add a valuable dimension to the learning process. Martyn (2003:22) additionally reports that 'many students seek online group-learning environments because they enjoy collaboration with other students'. In addition to the 'My Group' function, there is a 'Discussion Board' button located at the bottom of each unit page.

### **2.5.2.8 'Discussion Board'**

A posted discussion will only appear in the unit it was posted in. To comment on a different unit, the learner has to first go to the page for that unit. Most units in a subject have an asynchronous discussion forum assignment the learner has to post on the 'Discussion Board'. The function is used for peer review and comment, or for asking assistance if needed. Evaluation of the quality of communication and discussions are managed by the relevant subject tutor. An e-library is available to access textbooks, journals and other relevant material online. Before submissions are made, learners are advised to use the online dictionary and thesaurus provided. The online platform contains social media access to 'Twitter' and 'Facebook' to enable social integration into the learning experience. Asynchronous communication allows the learner who does not feel comfortable expressing an opinion in the classroom to participate freely. Flexibility (any where, any time), and diversity (learners has different learning styles and cognitive functionality is not the same for all learners the same time of day) (Coogan, 2009:316) is highly accommodated in a hybrid

study approach (HSA). Learners can equally contribute in discussion points and discussions can be posted instantly or be saved to work on at a later stage. Peer group discussion forums enable learners all over the world enrolled for a specific subject to engage in discussions beyond institutional or geographical boundaries and provide learning opportunities to all learners regardless age, social background, physical abilities, time zones and more. Short weekly online quizzes with questions relevant to the specific unit ensure instant feedback on incorrect answers with the correct responses provided. Learner support services, as highlighted in Watson and Gemin (2009:15), are particularly supported in a hybrid study approach (HSA).

## **2.6 CONCLUSION**

From the literature study it is evident that the need to reform and improve the quality of learning in the higher education arena in South Africa is shaped by international competitiveness and global economic pressures, especially with technology integration in education. The literature reveals that technology interaction enables meaningful and significant learning when technology is used as a dynamic ingredient in the teaching-learning environment. Learning with technology as seen in a hybrid study approach (HSA) does not entail taking a course and putting it on a computer. When a technology learning platform is flexible, accessible, interactive, supports collaboration and learning activities can accommodate different learning styles to enhance the learning experience, and the quality of learning, then good learning is achieved. The main conditions for quality in technology learning are that traditional teaching methods should be complimented by new learning to address the quality and value of post-school qualifications in South Africa by means of restructuring current programmes to be globally compatible. A total quality approach with a strong customer focus is recommended where people are seen as the most important element in the system and the system is a personalisation of learning content. There should be a strong human presence and a community situation with effective and prompt feedback from users. Users should become more self-contained (Gurba, 2011:13). In chapter 3 learner, tutor and institutional expectations in quality learning are explored.

## **CHAPTER THREE: LITERATURE REVIEW: LEARNING AND NEW LEARNING IN ADULTHOOD**

*'Tell me and I forget. Teach me and I remember. Involve me and I learn. (Franklin, B. 1750).*

### **3.1 INTRODUCTION**

In a continuously changing world, adult learners are, more than ever before, expected to be familiar with a wide range of concepts that they need to acquire and apply in an even wider range of contexts (Herrington *et al.*, 2010:xiii). This chapter explores learner diversity, descriptions of traditional learning practices, learning styles and an outline of a new learning theory. Social, cultural and technological changes have brought about new learning, and it is important to build a vision for future education. A one-for-all educational and learning approach is not well-suited to the needs of society today and does not foster an all-inclusive educational and learning approach (Kalantzis & Cope, 2012:11). The focus in this chapter is on the nature of learning and the adult learner.

### **3.2 THE NATURE OF LEARNING**

Learning is a complex phenomenon and an extremely difficult concept to define. Theorists agree that there is no definition that includes all the necessary phenomena and excludes all other phenomena. There are different views of learning, and it is described in many different ways. Knowledge of the phenomena and principles of learning is critical when trying to understand human behaviour, and it is necessary to understand learning to structure the educational process and environment. An extensive literature study explores the different views of theorists and researchers, identifying the differences, similarities and commonalities in views on learning.

Learning is perceived as the process of getting to know new things and reproducing those things at an appropriate time. Learning, even self-directed learning, according to Jarvis (as cited in Merriman *et al.*, 2007:5), rarely occurs 'in splendid isolation from the world in which the learner lives; it is intimately related to that world and affected by it'. The concept of change is inherent in the concept of learning. Learning, according to Burton (1963:7), has

also been seen as a change in the individual due to the interaction of that individual, his/her environment and a 'change in behaviour as the result of experience' (Haggard, 1963:20).

Learning can be seen as a process and not an end result, focusing on what happens when learning takes place. What one wants to learn, what is offered, and the ways in which one learns are determined to a large extent by the nature of the society at any particular time (Merriman, *et al.*, 2007:5; Kalantizis & Cope, 2012:22). Economically, the rising unemployment forces individuals to explore means of self-sufficiency and entrepreneurial possibilities. The introduction of technology and readily available information through technology has resulted in a society that expects immediate and recent results.

A behaviourist view of learning is that it is indexed by a change in behaviour that results from experience and must always be measurable. Thus, after learning, learners do something that they did not do before learning took place. The changes in behaviour do not need to occur immediately after the learning experience. There may be a probability to act differently and the probability to act may not be translated into behaviour until a later time (Olson & Hergenhahn, 2013:2). Famous behaviourists like John B. Watson, Edward Thorndike and B.F. Skinner agree that learning is a process through which behaviour is changed, shaped or controlled (Knowles, Holton & Swanson, 1998:13).

Other theorists prefer to define learning in terms of growth, development of skills and the fulfilment of potential. Humanists refuse to accept the notion that behaviour is predetermined by either the environment or one's subconscious. Humanist theorists believe that human beings possess unlimited potential for growth and development and stress personal involvement, self-initiated discovery of learning and the essence of meaning and the value of experience in the learning process. The most famous humanists are Abraham Maslow, (1970) and Carl Rogers (1983) (as cited in Merriman, *et al.*, 2007:282-283). Both conclude that human beings can control their own destiny and that behaviour is the consequence of human choice.

Learning as a continuous process is based on the reality that the learner does not enter the learning process without any prior knowledge. Jerome Bruner, as well as Jean Piaget, (as cited in Knowles, *et al.*, 1998:13) observe that learning is an active process during which learners construct new ideas or concepts based on their current and previous knowledge. In



the process of learning, the learner selects and transforms information, constructs hypotheses and make decisions, relying on a cognitive structure to enable this. Cognitive structure provides meaning and organisation to experiences and allows the learner to venture beyond the information given (McLeod, 2008:1). This is evident from the intrinsic cognitivist paradigm of Ames, Ford, as well as Locke and Latham (as cited in Athanasou, 1999:112) which state the relationship between setting goals, expectations, social contextual influences, self-perceptions and Zimmerman's motivational theory (as cited in Athanasou, 1999:114). These theories focus on self-regulation of cognition, behavioural and emotional aspects, which are seen as the intrinsic motivational factors driving effective learning. Bruner (as cited in Knowles, *et al.*, 1998:32) had a basic theory about learning, which involves three processes:

- Acquisition of new knowledge to replace previous knowledge
- Transformation of knowledge to fit new knowledge
- Evaluation of whether the new knowledge is adequate for a specific task

Much learning occurs in a social environment through observation. By observing others, skills, attitudes, knowledge, behaviours, rules and more can be obtained. However, according to Miller and Dollard (as cited in Olson & Hergenhahn, 2013:314) people do not learn from observation alone, without imitation and reinforcement of what they observed. Bandura (as cited in Olson & Hergenhahn, 2013:316) focuses more on the cognitive processes involved in observation, stating that one learns from observation, but do not necessarily imitate what has been observed, especially when it may result in negative consequences.

Learning is how people make sense of their experience through a process of constructing meaning. The constructivist view of learning involves active participation, self-direction and transformation of knowledge. All forms of constructivism understand learning to be an active rather than a passive venture, where learning occurs through dialogue, collaborative learning and cooperative learning. Collaborative and social constructivist learning techniques draw on the theories of Dewey, Vygotsky, as well as Piaget (as cited in Jacobs *et al.*, 2011:4; Tapscott & Williams, 2010:21) emphasising the need for active involvement, reflective thought and the understanding of previous experience connected to new information. Brown and Adler (as cited in Tapscott & Williams, 2010:20) report on the social constructivist

learning approach with the emphasis on ‘how’ learners acquire knowledge and not ‘what’ knowledge learners acquire. This opposes the Cartesian approach: ‘I think, therefore I am...’ which in turn contrasts the social approach in learning: ‘We participate, therefore we are’. Regardless of the number of adult learning theories, adult learners are in an environment with enormous learning needs. Just as there is no all-inclusive theory that explains human learning, there is no all-inclusive theory of adult learning.

### **3.3 THEORIES OF LEARNING**

There are a number of theories and models that attempt to represent adult learning. For the purpose of this study three theories have been selected to offer insight into adult learning. The cornerstone of adult learning is probably the concept of andragogy, a concept Malcolm Knowles introduced. Knowles’s (as cited in Merriam *et al.*, 2007:83) andragogy theory focuses on the adult learner and his/her life situation. His approach is based on the differences between adult learning and child learning. The question still remains if Knowles’s approach can be defined as a theory, a model of assumptions (Knowles 1980) or a system of concepts (Knowles 1984) (as cited in Merriam *et al.*, 2007:85), as Knowles has also called it. However, the following six assumptions for adult learning according to Knowles *et al.*, (1998:64-66) still holds, namely:

1. Adults ‘need to know’ (Knowles *et al.*, 1998:64) and make a conscious decision why they should learn something.
2. Adult learning should be an active rather than a passive process in which adult learning moves from tutor-directed to learner-directed learning.
3. Adult learning should be based on the learner’s previous experience. The accumulation of experience is a resource to new learning approaches and higher experiences.
4. Adults’ readiness to learn signifies the timing of learning experiences to correlate with specific developmental tasks. Thus, the experience should be the starting point for organising adult learning activities.
5. Adults are more problem-centred than subject-centred in learning. Adults are subject to learn new knowledge and attitudes when it could be applied to real-life situations.

6. While adults are responsive to some external motivators to learn (promotion, higher salaries and more), the most powerful motivations are still internal rather than external factors.

Illeris's (as cited in Merriam *et al.*, 2007:97) is most interested in the learning process itself. His learning model positions learning as the continuous interaction between the cognition, emotion and social context. The cognitive dimension involves knowledge and skills, while the emotional dimension consists of feelings and motivation. The social dimension in Illeris's theory is the dimension of external interaction such as participation, communication and cooperation. This dimension refers to the interaction with others as we learn, or can refer to the contribution of others to our learning (Illeris as cited in Merriam *et al.*, 2007:97). A large portion of adult learning research and many of the theories emphasise the cognitive dimensions. The strength of Illeris's model lies in the inclusion of emotional and social dimensions in adult learning.

Jarvis's learning process claims 'All learning begins with experience' (Jarvis as cited in Merriam *et al.*, 2007:100) and with an adult's life situation. He postulates that all learning begins with the five human senses and experiences within the learner's individual world, which is ever-changing. The transformation of the learner through experience 'changes over time in relation to the changes that occur both in the wider world, in which it exists, and to the individual's involvement in it...' (Jarvis as cited in Merriam *et al.*, 2007:101). Adult learning, according to Jarvis (2006), is considered as a combination of processes where the whole person, body and mind, is transformed cognitively, emotively or practically through interaction and social occurrence, resulting in a changed individual (Merriam *et al.*, 2007:102).

### **3.3.1 Adult learning**

How academics define adult learning and what adults themselves consider learning are complex and diverse. However, there has been a keen interest in understanding adult learning that brings deep change and transformation. In societies hurrying to catch up and the accelerated rate of change, adults feel the urgency of dealing with social realities. Society no longer has the luxury of waiting for its youth (Merriman *et al.*, 2007:5). Belanger (1996) (as cited in Merriman *et al.*, 2007:5) notes, 'The question is no longer whether adult learning is

needed, and how important it is. The issue today is how to respond to this increasing and diversified demand'. There are, however, many different perspectives on how learning occurs. These perspectives are discussed in the next section, and the discussion includes the behaviourist learning perspective, the constructivism learning theory and the social cognitivist theory.

### **3.3.1.1 Behaviourism: The modern past**

From the view of the behaviourist learning perspective, there is no real learning if learning is not conditioned by an external stimulus to produce an observable response, which in turn prompts reinforcement. Most famous among its initiators were John B. Watson, Edward Thorndike and B.F. Skinner (Kalantzis & Cope, 2012:199). One philosophy many behaviourists hold is that change in behaviour is due to external forces, and they disregard the internal thought process. The aim of behavioural theory is to transform a learner's behaviour to a more desired behaviour. However, given the fact that different people with different backgrounds react differently, it does not support differences in cultures, social and educational experiences and knowledge levels. From an educational perspective, behaviourism supports a tutor-centred approach where the tutor directs the learning process. The learning process is often found to be more passive with less responsibility on the learner regarding his/her education, accommodating lower level processing skills and learning content that is often isolated from real-world situations. Behaviourists are not concerned with how knowledge is obtained, but rather if the correct response is given. Even though direct instruction is frequently used in many classrooms, encouraging the learner to remember, memorise and reproduce information, there are other modern approaches in adult education that give better results when using problem solving, critical thinking and logic in learning (Bryant, Vincent, Shaqlaih & Moss, 2013:98).

### **3.3.1.2 Developmentalism and constructivism: More recent times**

In contrast to the behaviourists, Jean Piaget was a leading campaigner of the developmentalism and constructivism learning theory, where learning occurs through a process of assimilation and accommodation. The learner builds knowledge that is adapted to prior experiences that fit into the learner's existing mental framework to make sense of the world he/she lives in (Kalantzis & Cope, 2012:206). The constructivist learning theory

supports a learner-centred approach where learning is not externally observed, but occurs internally as the learner attempts to arrange and rearrange thoughts and experiences to his/her real-life situations. This is done by active involvement of the learner, trying to work backwards and forwards between new knowledge and what is already known. Constructivists posit that learners only learn what they are developmentally ready to learn. The constructivist approach encourages experiential learning opportunities with less didactic and tutor involvement where the learner can enquire, search, self-activate and construct knowledge according to the learner's own development (Kalantzis & Cope, 2012:205). Learner-centred learning that highlights the fundamental importance of collaborative and cooperative learning between learner-learner and tutor-learner, where the learning process leaves more scope for differences, has a tendency towards new learning.

### **3.3.1.3 Social cognitivism: Towards new learning**

According to the Vygotskian social cognitivism approach (1978) human learning occurs in a social context through social interaction with others where learning is a collective and shared, rather than an individual occurrence (Paciotti, 2013:105). Supporting the Vygotskian social cognitivism model, Bandura's (2006) research states 'Most human functioning is socially situated' (Paciotti, 2013:108) where learners can exercise control over their own levels of functioning and over events that affect their lives. Bandura (2006) notes that self-direction in social cognitivism does not only affect the learner's action directly, but affects the learner's goal-setting, learners have higher intrinsic motivation and perform better. He states that the use of technology and other advances in social and global communication have progressed social cognitive learning, allowing for instantaneous practice personally and collectively, to influence human functioning on a global scale (Paciotti, 2013:109). This then provides the foundation for new learning. Active engagement in learning is a key construct in learning success for tutor, learner and the institution. In adult learning, a large amount of responsibility for learning is placed on the learner, who has to be autonomous, and this turn might have a long lasting impact for success on the learner outside the educational environment through reflection and by constructing new knowledge through experiential learning (Merriam *et al.*, 2007:160).

### **3.3.2 Adult learning approach**

The transformation from traditional learning theories to more modern adult learning approaches indicates the shift from seeing learning as an individual activity to a more collaborative activity. Collaborative learning is enhanced in situations where learners have similar experiences where they can challenge one another in ways a tutor cannot and also create a safe environment for the learner who struggles with complicated aspects, complex concepts, skills or attitudes (Akyol & Garrison, 2010:53). In a digital world where the amount of information is constantly changing and with life demands and other different roles adult learners have to fulfil, they intentionally search for educational settings that support their way of learning. The changing informational environment affects adult education and also emphasises the need for lifelong learning. The interchange of technology and globalisation has led to more intense and diverse interactions across societies (Farmer, 2010:82).

One assumption of approaches to adult learning is adults' preference for self-directed learning as they are used to direct different aspects of their lives. A second assumption about adult learning approaches is that approaches to learning differ depending on the learning circumstances. The research of Schulz and Roßnagel (as cited in Raemdonck, Meurant, Balasse, Jacot, & Frenay, 2014:79), demonstrates that where adult learners have little control over their learning and where learning is isolated and unsociable, the learning outcomes are less favourable. This is opposed to learning approaches where learners have more opportunities to pace their learning according to their own capabilities and needs with increased opportunities of experience-based learning.

#### **3.3.2.1 Experiential learning**

Positively or negatively, we all learn from experience and all learning is experiential. Kolb, who draws strongly on the work of Dewey (1938) (as cited in Zijdemans-Boudreau, Moss & Lee, 2013:115), highlights the importance of experience in the process of learning, and posits that learning as a process involves constant adaptation and engagement with one's environment. Learners create knowledge from experience in a variety of ways rather than just from received instruction (Merriam *et al.*, 2007:159). Experiential learning emphasises the role of reflection on received knowledge, highlights interaction, stresses critically

engagement with others and draws attention to the implementation of specific given knowledge in real life situations (Dyke, 2009:295). During the past three decades, experiential learning has been used to actively engage learners in the process of identifying their learning styles and constructing meaningful connections between theory and practice to extend formal learning into effective professional development and to action change in communities through collaboration with others (Zijemans-Boudreau *et al.*, 2013:117; Merriam *et al.*, 2007:159).

### **3.3.2.2 Collaborative learning**

Compared to the characteristics of the older learning theories, which tend to be individualised and cognitive, collaborative learning is characterised by the dimensions of practical capability and social learning, providing an ability for the learner to be adaptable, responsive and flexible in a diverse and dramatically changing world (Kalantzis & Cope, 2012:25). Collaborative learning, where learners work in pairs or small groups, enables the learner to think and act as part of a team and to recognise that the collective outcome is greater than the individual effort of the learner (Kalantzis & Cope, 2012: 68). Thus, collaborative learning can be seen as learning with and from one another in producing knowledge that is jointly owned. According to Starkey (2012:32), learners are social beings and they naturally form social connections with each other in a group. In the future, academic structures may differ, but adult learners become used to social levels of engagement due to new media and the sociability of learning environments, in such a manner that individualised and assisted learning seems boringly inadequate and sterile (Kalantzis & Cope, 2012:294). Both collaborative and cooperative learning strategies have resulted in improved student learning and learning outcomes that positively motivate learning (Starkey, 2012:33).

### **3.3.2.3 Cooperative learning**

Cooperative learning and teaching, where learners work with one another in small groups and everyone can participate in a collective task without direct and immediate supervision of a tutor, were not deeply researched or taught as an instructional methodology to learners or tutors before. In more recent learning, educational practices have changed and cooperative teaching and learning, which is learner-centred, has become a preferred instructional methodology (Johnson & Johnson, 2009:42). The positive aspects of cooperative learning

postulated by Slavin (1980, 1995, 2011) (as cited in Fredrickson, Dunlap & McMahan, 2013:200) not only focuses on the value of cooperative groupings, but also the individual accountability of learners. Individual learners have proven a higher self-esteem, self-efficacy and improved academic achievement after working in groups. Cooperative learning builds on the concepts in constructivism in that it emphasises meaningful collective interactions between learners, where learners are dynamically involved in learning through working with their peers to seek a common goal. This serves as an opportunity for learners to construct their own knowledge as they simultaneously engage in making sense through shared dialogue with their peers.

#### **3.3.2.4 Constructivist Learning**

Constructivist learning focuses on the notion that learners actively gain understanding and meaning through their experiences, relationships, interactions and encounters individually or socially through their own cognitive acts (Confrey, 1990:108). According to Hoover (as cited in Narayan, Rodrigues, Araujo, Shaqlaih & Moss, 2013:169), learners always enter the learning situation with prior knowledge and experiences and there are two vital concepts in constructing and integrating knowledge, which include: i) prior knowledge constantly influences the formation of new knowledge and ii) learning as an active process. Constructivist learning is learner-centred with the focus on the individual learner as the constructor of his/her own knowledge. The view of active learning is a key facet in constructivist learning, where the role of the tutor as the knowledge keeper, transfers onto learners. Thus the tutor assist as the facilitator of activities that coaches, mediates, prompts and assist learners in developing and assessing their understanding and learning. Learner involvement and participation in learning has shown positive results in knowledge retention, higher order learning, deeper understanding, problem solving skills and critical thinking abilities. Many theories of adult learning is constructivist in nature via contextual, real life situations that foster individual and social construction of meaning towards transformation within the adult learner (Narayan *et al.*, 2013:169).

#### **3.3.2.5 Transformative learning**

Transformative learning can be identified as an adult learning theory concerned with how adults make sense of their experiences and make meaning in their lives. According to Taylor



(2007:174-175), transformative learning is the most researched and discussed theory in adult education. Transformative learning is a process of reformulating imbedded structures for making meaning, usually through reconstructing dominant narratives. It is manifested in the constructivist orientation to learning, in which meaning is made through experience, critical reflection, and development (Merriam *et al.*, 2007:135). Transformative learning also implies inner change within the learner – ‘changing what we know’ (Kegan, 2000:48). According to Mezirow (2000:3-4), transformative learning occurs when there is self-reflection, awareness and understanding within the learner’s experiences of what is known and believed to be true and justifiable. It is seen as deep learning that goes beyond content knowledge acquisition, memorising or learning historical facts and data. This is the desirable process for adult learners to think for themselves and take ownership to action their personal and social roles. By offering a safe and supportive system, tutors may greatly facilitate the learner’s willingness to move forward with transformative learning and lifelong learning (Mezirow, 2000:8).

### **3.3.2.6 Lifelong learning**

The need for continuing education has drastically escalated with the increase in knowledge production globally, socially and technologically. A transformation in traditional working and learning is advocated to address the greater uncertainty in life and the need to adjust to new challenges (Merriam *et al.*, 2007:19). New processes and structures that recognise the unique challenges to assist the adult learner are imperative for lifelong and life-wide learning. Dede (2011:2) argues that learning can no longer be confined to the compulsory formal learning years, but must be lifelong, life-wide and available on demand. In support, Sternberg (as cited in Knowles *et al.*, 2012:208) argues for a broader view of intellectual capacity in educational systems to significantly and fully promote lifelong learning and success. The rapid changes and advancement in technology, the growth of non-traditional learners and the need for lifelong learning have encouraged the use of digital technology as a method of instructional delivery. According to Knowles *et al.*, (2012:301), technology in adult education fosters lifelong learning as it provides for consistency of content delivery, the ability to provide training to remote settings, eliminates travelling costs, enables tracking of learner progress, administers standardised testing, renders learner flexibility in regulating and pacing learning, provides for diverse learning needs, advanced opportunities for practice through simulation, ensures greater retention and reduces instructional time. Knowles *et al.*,

(2012:313) further postulates that the higher the level of self-directed learning, the less external support is needed. According to Merriam *et al.*, (2007:105), the primary goal of institutions is to enable learners to be lifelong and self-directed learners.

### **3.3.2.7 Self-directed learning**

The three main goals of self-directed learning as located in Knowles *et al.*, (2012:184-186), are to enhance the adult learner's ability to be self-directed in learning, to encourage transformative learning essential to self-directed learning and to foster individualised and social collaborative learning as a vital element of self-directed learning. Adult self-directed learning is an integral part of the adult learner. It refers to the process where the learner takes the first initial steps in planning, executing and evaluating their own learning experiences (Merriam *et al.*, 2007:110). Bandura (as cited in Olson & Hergenhahn, 2013:324) postulates that intrinsic reinforcement elements imbedded in self-directed learning is considerably more significant than extrinsic reinforcement elements dispensed by others and they have enhanced intrinsic motivational advantages for the adult learner. Knowles *et al.*, (2012:184) notes that in self-directed learning, the adult learner is capable of taking control of his/her own learning activities, often as a result of true-life experiences. Greater autonomy and independence in adult learning mean taking control of the goals and purposes of learning and assuming ownership of and responsibility for learning. Successful self-directed learning where the learner can independently access and explore information globally implies a notion of ubiquitous learning (Kalantzis & Cope, 2012:326).

### **3.3.2.8 Ubiquitous learning**

Ubiquitous learning can be described as an adaptive and new learning system approach that actively and dynamically supports personalised and individual independent learning to accommodate the individual learner's traits like learning styles, personality, prior knowledge, experience, levels of understanding and the learning situation (Graf, Lin, Kinshuk & McGreal, 2012:xvii). As the digital age continues and the multiplicity of learning technologies increase at a rapid pace, new learning territories for education beyond the classroom and away from a tutor, becomes evident. The flourishing array of digitally available resources demands a rethinking of pedagogy where learners can take control of their own learning with the promise of more active, self-directed and independent learning.

Such learning includes collaborative, experiential, inquiry-based and problem solving approaches founded in theories of constructivist-, collaborative- and cooperative learning. The theoretical concepts and approaches to learning in formal education still call on learning theorists to understand what it takes to learn. However, with no challenge to the fundamental understanding of learning *per se*, the possibilities and approaches of pedagogy change as new technology emerges (Beetham & Sharpe, 2013:xvi). The way emerging technologies enable ubiquitous learning, any time any where, away from the classroom as the primary place for learning and the tutor as primary source of information can be identified as new learning (Dede, 2013:3).

### 3.4 NEW LEARNING

In order to construct an understanding of developments in education today, a broader view of learning is needed. In new learning and newer approaches to learning, the focus is on exploring environments that are more engaging, more effective and more appropriate to the present-times and the imaginable futures. Economic, social and technological changes are questioning the equitability, relevance and appropriateness of traditional pedagogy and educational practices (Kalantzis & Cope, 2012:9; Merriam *et al.*, 2007:187). According to Kalantzis and Cope (2012:9), four foundational values and principles underlie the theory and practice of new learning. At first, the diversity of learners, understood in a broad and all-encompassing way, should be a key value in our thinking about education, as opposed to a one-size-fits-all and a good-for-all system which, according to Kalantzis and Cope (2012:9), is not well-suited to the needs of today's society. In more modern designs for learning, differences in knowledge, life experience and motivation among learners, including the rapidly changing world of work, should be accommodated. A second foundational principle in education is the cultivation of deep levels of knowledge for meaningful learning. Thirdly, an educational focus should be developed and maintained on designing learning experiences and tracking learning processes, rather than measuring effective learning only through successful learner performances. A fourth principle in new learning is a globalist frame of reference, which consists of the knowledge, appropriateness and awareness required by factors such as the changing technology, economy and social factors.

Globalisation, according to Merriman *et al.*, (2007:17) is technology driven. Learning with technology has an enormous impact on society and adult learning. From a globalist

perspective, the move to a knowledge society where learners are interconnected and where information about teaching and learning circulate around the world faster than ever, a change in the approach to learning is imperative. Therefore, a change in learning requires a new view of teaching (Kalantzis & Cope, 2012:12). Kalantzis and Cope (2012:24-28) observe eight dimensions of learning present to address a theory and practice of new learning.

### **3.4.1 Social significance**

Within a globalised world with the focus on a new economy and a knowledge society, education became a crucial part of economic and social progress (Blackmore, 2013:1006). According to Beetham (2013:269), there is a strong tendency in both developed and developing economies to position education as a driver of economic recovery, which, as a primary goal, has led to a focus in learning design and on employability. In order to assure social equity, education should provide learners with the ability to develop and enhance positive social, cognitive and physical development and should offer possibilities of equal access to education for each learner to be developed to their fullest (Burke, 2007:338). With the large and significant social transition due to globalisation and the acceleration of digital technology in education, education should provide learners with the freedom to develop a range of options and choices. Learners should be educated in a context that provides more than one view of the world to encourage active participation (Blackmore, 2013:1007).

### **3.4.2 Institutional locations of learning**

For long the formal traditional educational settings have been the pedagogical sites where learning occurred. However, more and more learning appears to be happening outside the traditional educational environment – work-based, informal, through the media, through technologies and at home. This may be attractive options for the adult learner who is trying to fit studying into a busy life (Beetham, 2013:270; Merriman *et al.*, 2007:17). Due to rapid changes in the world, Kalantzis and Cope (2012:24) propose that traditional education should become ‘less a site for learning about ..., and more a set of experiences of learning in and for’ in a world where the future shape is only imaginable yet unpredicted. The use of technology in education allows for institutions to offer learning outside the traditional learning environment and beyond specific geographical settings (Beetham, 2013:269; Merriman *et al.*, 2007:19). In a globalised world with limited technological boundaries, the

emergence of what is called a learning society can be witnessed in adult education. According to Merriman *et al.*, (2007:19), human beings rather than educational institutions should be the appropriate starting point where the learning society is a response to the social context, often outside the comfort zones and habits of educational institutions.

### 3.4.3 Tools of learning

Although, the use of new technologies are often called disruptive, the attention of educators, employers and society are focused on developing skills that are needed in a fast-changing and highly technical society in order to produce productive and informed members (Merriman *et al.*, 2007:25). Education systems have been relatively slow in responding, let alone leading the way of developments, innovations and transformation in teaching and learning using technologies (Kalantzis & Cope, 2012:24). Some possibilities of how to take control of these disruptive changes using technologies in new learning compared to traditional learning are discussed by Kalantzis and Cope (2012:25).

New learning	Traditional classroom
<ul style="list-style-type: none"> <li>• <b>Ways of communicating</b></li> </ul> <p><b>Horizontal communication</b> as learners interact around each other's work, have discussion forums, peer review groups, clearly outlined learning task schedules, feedback postings and more.</p>	<p>Mostly <b>silent, individualised work</b>, some hands-up, one-learner-at-a-time discussions. Noise is often a sign of disruptive behaviour.</p>
<p><b>Lateral learning</b> as peer to peer learning is related and based on clearly stated objectives, learning task schedules and structured feedback and revision. Tutor designed, supervised and managed projects allowing learners to self-manage and work with others.</p>	<p><b>Hierarchical learning relations.</b> Mostly tutor managed and tutor-centred.</p>
<p><b>Higher order thinking.</b> Learners involved in critical thinking, problem-solving, innovative and creative learning. Learners giving structured feedback from personal involvement with learning matter.</p>	<p><b>First order thinking.</b> Learners absorbing facts, repeating and applying rules.</p>
<p><b>Individualised learning.</b> Having a scheduled project plan that indicates that not all learners</p>	<p><b>Homogenous learning.</b> Learners work together and all on the same page. Shoot-</p>

working on the same thing at the same time and the same pace.	for-the-middle-of-the-class tutoring, excluding the learner on either end of the spectrum.
<ul style="list-style-type: none"> <li>• <i>Ways of teaching</i></li> </ul> <p><b>Differentiated instruction.</b> Learning can be customised to accommodate different learning needs, interests and identities.</p>	<p><b>Generic learning.</b> One-size-fits-all-good-for-all learning, regardless of learner diversity.</p>
<p><b>Asynchronous learning.</b> Learning any time, any place at own pace, following the scheduled project plan with peers available online.</p>	<p><b>Institutionally isolated learning.</b> Learning is classroom bound according to a timetable.</p>
<ul style="list-style-type: none"> <li>• <i>Ways of assessing</i></li> </ul> <p><b>Formative assessment.</b> All assessments, group discussions, peer reviews and quizzes that contribute to the learning. <b>Summative assessment.</b> Can be as a final research project.</p>	<p><b>Summative assessment.</b> Once-off testing, usually more a test of medium-term memory.</p>
<ul style="list-style-type: none"> <li>• <i>Types of media</i></li> </ul> <p><b>Multi-modal learning.</b> Knowledge represented in a web writing space using a mix of words, sound, images, videos and data.</p>	<p><b>Read. Remember. Reproduce.</b> Strong emphasis on textbooks and handwritten exercises.</p>

### 3.4.4 Outcomes of learning

According to Biggs (as cited in Mayes & de Freitas, 2013:18), a good pedagogical design should serve as a guideline for judging whether the specific learning and teaching processes adopted will achieve the desired learning outcomes. New learning anticipates a different kind of learner and is characterised as learning by doing and learning by thinking, which includes action and cognition as opposed to traditional learning, which is individualised and cognitive. In traditional learning the emphasis in educational performance is measured by the knowledge in one's head that gives the learner the competitive advantage in examination, career and in general life. In new learning, practical, social collaborative learning and thinking is connected to conceptual change and a deep understanding to foster critical thinking, problem-solving, innovative and creative learning, which enables the learner to be responsive and versatile in a diverse and changing world (Kalantzis & Cope, 2013:25).

### **3.4.5 Balance of learner-centred and tutor-directed learning**

The balance of learner-centred and tutor directed learning refers to the compatibility of tutor and learner subjectivities in the learning process. According to Kalantzis and Cope (2013:26), learning of the modern past depended mainly on tutors who were responsible to tell and ask and learners, who were responsible to listen and answer. The successful tutor is seen as one who successfully transmits prescribed content, control the way learners receive and use it and then test if they have received it. The balance of learner-centred and tutor-directed learning supports dominant tutor subjectivity where the knowledge authorities of tutor, curriculum designer and textbook writer prevail. However, for Knowles (as cited in Griffith & Wong, 2010:14) self-directed learning, adults' life experiences, problem-based rather than subject-based approaches and the importance of social context for learning should be incorporated in effective adult learning practices. Therefore curriculum development should be flexible and incorporate choice, involve self-expression and integrate learning with adults' life experiences. New learning, according to Kalantzis and Cope (2013:26), provides a balance, whereas it is evident in the world at large that learners are as much the makers of their own knowledge as they are receivers, and tutors are as much the developers and designers of learning activities as they are knowledge experts.

### **3.4.6 Learner differences**

Not all people learn the same thing in the same way at the same time with the same outcomes. Beetham (2013:36) points out that a learner-centred approach begins with learner differences as a starting point rather than an inconvenience. Deep, meaningful learning occurs when learners take responsibility for their own learning and are challenged to develop alternative strategies (Olson & Hergenbahn, 2013:1; Merriam *et al.*, 2007:110; Farmer, 2011:17). Earlier, modern learning featured to maintain an appearance of an identical one-size-fits-all approach to learning, with little provision for differences in learning aspirations, motives for learning, expectations of the learning situation, social and interpersonal skills, digital and information literacy skills, prior knowledge and competence, physical and sensory disabilities and other related factors (Beetham, 2013:37). In fact, according to Kalantzis and Cope (2013:27), 'not dealing with differences means excluding those who don't fit the norm' and does not engage with each individual learner to enhance a positive learning outcome. Not only is the recognition of learner differences beneficial for the learner, but teaching

improves when differences in learners' approaches are identified and acknowledged. A positive connection between learner and tutor is found to be significant in the teaching and learning process. In new learning, the need to establish and maintain an effective learning environment where learners feel safe, empowered and free to participate as opposed to being overwhelmed by these opportunities, is the responsibility of the tutor and forms an important component of effective tutoring (Starkey, 2012:30; Beetham, 2013:38).

#### **3.4.7 Relation of the new to the old**

According to Van Dijk (2012:1), a new lifeline is being added to all the ones we already had. Dependence on technology does not apply to individuals only, but goes for organisations and society at large. The resulting question is how this dependence on the use of technology has grown so deep and so fast? In their aim to explore new territories for learning and to build a vision for the future of education, Kalantzis and Cope (2012:9) postulate that social, cultural and technological changes question the relevance and appropriateness of traditional educational institutions. However, according to Beetham (2013:259-260), technology futures in education is hard to foresee as change is driven by a gigantic and accelerating global market. The focus in education has moved to understand how learners relate to and value the technologies they have in hand, and how best to recruit those resources for learning. Beetham's (2013:259) projections are based on the assumption that tutors will continue to have a central role when using technology in teaching, although their roles, responsibilities and relationships within institutions might change. In this regard new learning is not seen as radically different (Beetham, 2013:259). However, it should be continuous with the present and supportive of the past.

#### **3.4.8 Professional role of the tutor**

Teaching with technology presents both opportunities and challenges to tutors regarding learner diversity, needs and interests, prior knowledge, learning outcomes, knowledge creation and more. Effective teaching in the digital age is learner-focused and requires tutors who possess powerful and innovative educational ideas, which in turn could become implementable ideas for new learning strategies. In new learning, the starting point when considering how to teach are the learners and their learning needs. Understanding how to build effective learning relationships and how to be culturally responsive will remain



important features of effective tutoring (Starkey, 2012:93). According to Kalantzis and Cope (2012:28), in digital teaching tutors are autonomous, highly skilled and responsible managers of student learning. In this time of social transformation, tutors should regard themselves as designers of social futures. They should search for new ways to address learning needs, new ways to teach learners the concepts and skills they will need to participate in society, to be self-regulated professionals, to be evaluators of their effectiveness, to become researchers, social scientists and intellectuals in their own right. According to Starkey (2012:92), the professional tutor has to facilitate opportunities for learners to ‘collaboratively create and critique knowledge within and beyond the formal learning environment’.

### **3.5 LEARNING PROCESS**

Learning processes are an on-going subject of study in educational research, but can be defined as thinking activities learners apply to process learning matter to obtain certain learning results and to determine learning experiences (De Clercq, Galand & Frenay, 2014:141). The above authors highlight the following four important factors that contribute to a successful process of learning:

- Goal orientation: Learners’ purpose for engaging in academic activities and to achieve goals.
- Self-efficiency beliefs: Learners’ confidence in their abilities and expectations for success.
- Self-regulation: Level (surface or deep) of processing strategies.
- Learning strategies: Steering of the learning process by using different strategies.

According to De Clercq *et al.*, (2014:146), goal orientation and self-efficiency beliefs are motivational factors that lead learners to engage in learning tasks, whereas self-regulation and learning strategies are considered cognitive processes in the learning process where adult learners steer their own learning. In literature on learning processes in higher education, it is evident that these four constructs positively relate to academic achievement (De Clercq *et al.*, 2014:141).

The reason most adults enter any learning experience is to create change that can be translated into measurable behaviour (Olson & Hergenhahn, 2013:1) and this draws on the behaviouristic approach to the learning process. This could include a change in learners' skills, behaviour, knowledge level and even their attitudes about things. Adult learners' previous academic and former life experiences can assist the adult learner to change current learning experiences into more meaningful experiences through their level of engagement in the learning process and how their learning is applied. This view draws on the constructivist learning process where the focus is learner-centred and the learner is seen as an active constructor of his/her own knowledge. Further to that, Merriam *et al.*, (2007:110) postulates that adult learners have a need to be self-directed and self-regulated in their learning, where they have control over the nature, timing and direction of the learning process, as can be found in much of the adults' natural life. With the advancement of information technology in learning, self-directed and self-regulated learning draws on the social cognitivist learning process where learners can exercise control over their own levels of functioning and steer their own learning processes.

The andragogical process model for learning, developed from Knowles (1992) and Knowles (1995) (as cited in Knowles *et al.*, 2012:114) illustrates the fundamental elements found in adult learning to provide a series of steps to support learners in acquiring knowledge and skills.

- Preparing the learners: A high degree of self-direction and responsibility is placed on the adult learner, and for this reason newly enrolled learners should be provided with information and should be prepared for participation to develop realistic expectations.
- Institute a climate conducive to learning: An environment supportive of education that 'values human beings as its most valuable asset and their development its most productive investment' (Knowles *et al.*, 2012:121) will ensure elements that refer to the provision of physical, environmental, human, interpersonal, psychological, individual, cultural diversity, institution policies, management philosophy and reward systems that are conducive to learning.
- Creating a system for mutual planning: In adult learning where self-directing is encouraged, adults feel committed when they are involved in their educational setting and its planning.

- Identify the needs for learning: This focus on the individual learner's own perceptions of what he/she wants to achieve, the institutional needs for learning and the general association of desired performance or competencies.
- Assessing discrepancies: In adult learning feedback tools are necessary to determine the deviation between learning competencies and the existing level of development by learners.
- Setting objectives: Programme and educational objectives could be agreed upon as a desired outcome or achievement of learning.
- Designing learning plans: In adult learning, supportive environments in which mutual participation between tutors and learners exist, where adult learners identify problem areas in their learning through self-diagnoses, and selecting appropriate formats for their learning, a positive learning experience is evident.
- Operating the programme: This element in adult learning is focused mainly on the programme development process, which forms part of institutional quality and resources.
- Evaluating the programme: If the main purpose of programme evaluation is to improve teaching and learning, the evaluation process should provide for re-diagnosis of learning needs in adult learning, especially with technology incorporation.

Technology has changed the face of adult learning and influences the processes of learning for adult learners (Farmer, 2011:17). According to Farmer (2011:17), 85% of 21st century professions involve technology and it will therefore just make sense to include technology in adult education. The distinctive qualities of technology that include text, visual aspects and sound could have a noticeable impact on learning and the combination of these elements enables learners with different learning style preferences to meaningfully engage in their learning. It is evident that globalisation forced adults to re-engage in learning to develop new skills and assume new roles, which includes the notion of lifelong learning (Farmer, 2011:21). Based on the six assumptions for adult learning according to Knowles *et al.*, (1998:64-66) technology seems to reinforce and enhance adult learning in the following ways:

- Self-directed and self-regulated learning: Technology provides for the accumulation of experience through social learning with others and learners can respond to each other much more easily and faster through technology.
- Diverse, active learning: Technology supports diverse, active learning that moves from a tutor-directed to a learner-directed learning process.
- Control of learning: Technology resources could be accessed asynchronously and be used flexibly and independently.
- Problem-orientation: Adult learners who are more problem-centred than subject-centred have many digital resources available through immediate utilisation.
- Use of new knowledge and materials: Access to information is available globally and this can be applied to real-life situations (Farmer, 2011:24).

In the literature reviewed (Merriam *et al.*, 2007:105; Farmer, 2011:19; Knowles *et al.*, 1998:135; De Clercq *et al.*, 2014:141), self-directed learning as a process where adult learners take responsibility for their own planning, implementation and evaluating their own learning experience, has received much attention. The shift in focus in recent years with the flourishing technological resources and learners' increasing digital skills necessitates a pedagogy remodelling for learners to be independent, active in the learning process and to be self-directed to ensure deeper and more meaningful learning.

### **3.6 MEANINGFUL LEARNING**

Meaningful learning is a cognitive process that involves how learners make sense of information presented to them. Meaningful learning occurs when learning matter is understood and the learner makes sense of the learning experience by using prior knowledge to construe new knowledge to guide future actions (Mezirow as cited in Merriam *et al.*, 2007:132). Not all learners learn in the same way, and what might be meaningful for learner A is not necessarily meaningful for learner B. The act of learning is largely initiated by the learner through experience, exploring and extending his/her own understanding in creating individualised observations of perceiving, comprehending and storing information (Rogers & Horrocks, 2010:126). Learning as a cognitive process cannot be directly observed and must be reasoned through a change in behaviour, or as the performance in a task or test. For cognitivists, meaningful learning, especially in adulthood, involves the reorganisation of new

experiences to make sense of stimuli from the environment (Merriam *et al.*, 2007:286). According to Rogers (as cited in Merriam *et al.*, 2007:283) meaningful learning leads to individual growth and development and has the following essential elements:

- Personal involvement: All three levels (emotional, cognitive and environmental influences) should be involved in learning, for the learner to reach a meaningful level of learning.
- Self-initiated: A sense of own discovery must be present.
- Pervasive: When learning brings a change in behaviour, attitude and even personality of the learner.
- Evaluated by the learner: A self-assessment can best determine whether an experience meets the learner's needs.
- Essence is meaning: When the meaning of learning becomes incorporated into the total learning experience of the learner.

Much of human learning takes place in social settings, and according to Rotter (as cited in Merriam *et al.*, 2007:289), meaningful learning does not only rely on individual growth and development, but is acquired through social interactions with others. The social constructivist orientation of learning in adulthood postulates that knowledge is constructed when individuals engage socially in dialogue and events and they learn better when their current views of knowledge is challenged, transformed and elaborated through interactions with others. Vygotsky's work (as cited in Merriam *et al.*, 2007:292), combines both the individual and the social construction of meaning. Most important is the notion that all forms of constructivism understand learning as an active rather than passive attempt and that meaning-making is accentuated as both an individual cognitive and a socially interactive activity.

In an extensive review of existing literature from all over the world, there are many interesting efforts implemented to create learning that is more stimulating and intrinsically motivating by shifting from traditional, tutor and textbook-centred learning, to more meaningful and activity-based learning approaches (Parsons & Beauchamp, 2012:219; Merriam *et al.*, 2007:292; Farmer, 2011:24). Vosniadou (2001:6) identified twelve general

applicable and universal practices that are interrelated to encourage active, collaborative and authentic engagement for meaningful learning.

- Active involvement: Meaningful learning requires the active, constructive involvement of the learner through participation, discussion, observation, experiments and own goal setting.
- Social participation: Learning is primarily a social activity. A collaborate and co-operative atmosphere is essential for the learner to interact with others and express opinions.
- Meaningful activities: Learners should understand the purpose of doing something and participating in activities that are meaningful as preparation for real life situations.
- Relating new information to prior knowledge: It is important for learners to see the relationship between existing and new knowledge. Learning is enhanced when the tutor pays attention to prior knowledge and this knowledge is used as the starting point in instruction.
- Being strategic: Learning strategies are important elements for learners to understand and solve problems in ways appropriate to the situation at hand.
- Engaging in self-regulation and being reflective: Learners should apply specific learning strategies to regulate and evaluate their learning. Reflection can take place by means of discussion and debates where learners can express and defend their opinions.
- Restructuring prior knowledge: At times prior knowledge could obstruct the way new knowledge is perceived. Learners should be able to restructure new knowledge and solve internal inconsistencies when necessary.
- Aiming towards understanding rather than memorising: In order for learners to understand what they are learning they should engage with others and understand how to apply this knowledge, instead of memorising information, which is easily forgotten.
- Knowledge must be transferrable: Learning becomes more meaningful when it can be applied to real-life situations.
- Time to practice: A great deal of practice is necessary to acquire expertise in any given area. Success in specific skills relate to the amount of time spent on a specific activity.

- Developmental and individual differences: The best learning environment should be created to accommodate developmental differences and individual learning styles.
- Creating motivated learners: Learning is critically influenced by learner motivation.

When learning provides for a multiple and a personalised learning environment where the learner can actively engage in content that includes rich and authentic learning experiences such as collaborative learning groups, learner-led review sessions, analysis or reactions to discussions, videos, analysing case studies and more, then meaningful learning comes to mind (Parsons & Beauchamp, 2012:219).

### **3.7 LEARNING ENVIRONMENT AND MOTIVATION**

The learning environment refers to where leaning happens. For the adult learner, the learning environment varies and occurs in many and in diverse places. Consideration of the prior knowledge and experience adult learners has accumulated during their lifetimes, serves as a basic acceptance in adult teaching and learning. According to Merriam *et al.*, (2007:29) learning for adults occurs in four types of environments, namely, formal institutional settings, non-formal settings, informal contexts and through online learning. The online learning environment is one that includes formal, non-formal and informal learning (Merriam, *et al.*, 2007:29). For the purposes of this study the researcher focuses on the online learning environment only.

A vital aspect of the learning environment is to ensure effective learning through the accessibility of learning resources, especially in recent times with technology (Knowles *et al.*, 1998:118). In establishing a learning environment conducive to learning, the behaviourist point of view acknowledges that such an environment may reinforce desired behaviours, especially with reference to motivation and in transfer and maintenance of learning. A learning environment that promotes self-improvement is highly approved and likely to increase motivation to engage in learning activities (Knowles *et al.*, 1998:118). According to the constructivist theory, a learning environment that is learner-centred with an active involvement of the learner to enquire, search, self-activate and construct his/her own development, wherein clear goals, explanation of expectations, transparency of a system, active enquiry with honest and objective feedback, are vital elements for a positive and

motivational learning environment (Knowles *et al.*, 1998:119). The social cognitivist approach sees the learning environment as a place where learning happens in a social context through collaboration and active engagement with others, where learning is collective and shared and where learners exercise control over their own learning, has higher intrinsic motivational outcomes and learners perform better with a long-lasting impact on the learner outside the educational environment (Paciotti, 2013:109).

Regarding the online learning environment, Akyol and Garrison (2010:63) feel that adult learners express three important elements that should be present for higher learning. These include cognitive presence, tutor presence and social collaborative activity. The presence of the tutor plays an important part in arranging activities and setting the climate for the development of social and cognitive presence. Course design and the presence of the tutor providing frequent communication and feedback, were ranked highly in adult learning using technology (Ausburn as cited in Akyol & Garrison, 2010:62). In the social, collaborative nature of learning with technology, learners are enabled to create knowledge collaboratively by adding to each other's ideas and by integrating those ideas, which enhances a cognitive presence for the purposes of higher levels of learning. Through social collaborative learning, where learners identify and belong to a group, they work more productively and higher levels of motivation are evident. The social presence in the online learning environment reflects the need for respect and trust of learners towards one another and the opportunity to freely participate. The need to create a comfortable environment for discussion and for provision of individual learning styles was perceived highest by learners (Akyol & Garrison, 2010:63).

### **3.8 LEARNING STYLES**

Learning styles refer to the widest range of preferred methods and environments for learning. One noticeable aspect in learning is the increasing significance of differences among learners to the process of learning and the differences among learners on how different learners learn the same thing in different ways depending on their existing personal knowledge (Smedley, 2012:97). Mostly tutors are intuitively aware of different learning styles among adult learners which they work with and by considering the various dimensions of style differences, tutors are often able to adjust a learning situation to reach more learners effectively (Knowles, *et al.*, 2012:211).



Much of the literature on cognitive style and learning style use the concepts *learning style* and *cognitive style* interchangeably. According to Knowles *et al.*, (2012:211), there is variation in the way researchers define learning style. However, learning style tend to differ from cognitive style in two ways. Firstly, learning styles include cognitive, affective and physiological dimensions, and secondly, include characteristics of instruction and instructional settings with learning. Desmedt and Valcke (2004:459) point out that most cognitive style models are developed in objective and laboratory settings to explain individual differences in cognitive processing, while learning style models are developed in diverse educational contexts to describe and harbour individual differences in learning. Cranton (2005:362) defines learning styles as ‘preferences for certain conditions or ways of learning, where learning means the development of meaning, values, skills and strategies’. It is noticeable that some definitions of learning style are very similar to cognitive style (Merriam *et al.*, 2007:407) and researchers studying learning styles generally emphasise the learners and the learning environment.

Learning styles refer to individual differences in the learning process and derives from differences in learning orientations based on different approaches to the learning process. For tutors to assist learners in meeting specific learning outcomes, individuality in the learning process, expressed in learning styles, is essential and must be accepted (Van Rensburg, 2002:41). Adult learners tend to have characteristic ways in which they prefer to receive information. Apart from the traditionally researched categories, which includes cognitive, affective and physiological dimensions, James and Galbraith (as cited in Knowles, *et al.*, 2012:211) expand these dimensions to include print, auditory, interactive, visual, sense of touch, kinaesthetic elements and smell as trends for adults to acquire information. Adult tutors should be sensitive in their learning designs to accommodate multisensory preferences (Knowles *et al.*, 2012:211).

### **3.8.1 Essence of learning styles**

Research in individual differences has been significant in promoting an understanding of individual differences in adult learning behaviours (Knowles *et al.*, 2012:214). In adult learning, different learners bring different preferences, aspirations and resources to the learning situation due to their cognitive abilities, personalities, cultural attitudes and experience (Beetham & Sharpe, 2013:36). The core essence of learning styles is embedded

in the notion that individual learner preferences lead to learners being less effective in a learning situation should their preferred learning style and strategies not be accommodated. Unless learners develop a diverse set of learning skills, they will suffer in learning situations that do not fit their natural learning style (Knowles *et al.*, 2012:217). According to Beetham and Sharpe (2013:38) there is no doubt that learners can benefit in their own learning processes and instruction can improve when differences in learners' approaches are recognised. It is evident that deeper learning may occur when learners take responsibility for their own learning and are challenged to develop alternative strategies. For learners to feel empowered rather than overwhelmed by these alternative strategies, some form of intervention and support is needed (Beetham & Sharpe, 2013:37).

Although learning styles refer to the widest range of preferred methods for learning, Knowles *et al.*, (2012:213) see no consolidated theory or predominantly accepted approach to learning style research and practice. All the learning style approaches have been affected by either limited research, questionable psychometric qualities of the instruments and other mixed findings (Knowles *et al.*, 2012:213). Despite the reason that there is no uniform consensus on which elements create a learning style, it seems evident that the acknowledgement of learning styles in adult learning have proved beneficial in assisting learners and tutors to become aware of their personal learning styles and their strengths and weaknesses as learners and tutors. It is also important to acknowledge there is no one style better than another, but that individuals vary in their approaches, strategies and preferences during learning activities (Merriam *et al.*, 2007:409; Knowles *et al.*, 2012:214).

### **3.8.2 Learning style preferences**

The learning experience, personality and the preferences adults have while learning, as well as various learning style instruments associated with each of the approaches, have received much attention in adult learning. The experience approach, addresses issues that adult learners have different preferences in making meaning out and learning from experiences (Cranton, 2005:362-363). Kolb's Learning Style Inventory (1984, 2005) (as cited in Merriam *et al.*, 2007:408) is the most frequently used instrument to assess learning styles in adult learning. The personality approach is a more inclusive mode of measuring learning styles as it gives a wider and more in-depth depiction of the individual learner. The Myers-Briggs Type Indicator (as cited in Merriam *et al.*, 2007:408) is mostly used to assess learning styles

based on learners' auditory, visual and kinaesthetic learning preferences. Practitioners of learning styles often believe this approach constitutes what they mean by learning styles (Merriam *et al.*, 2007:408). Learning style preferences are based on the assumption that adult learners have established and preferred ways of learning because of their experiences, social interaction, personality, perceptions and needs (Merriam *et al.*, 2007:408). According to Graf, Kinshuk, Zhang, Maguire and Shtern, (2012:5) active learners prefer to learn by trial and error and by working with others, whereas reflective learners prefer learning by thinking through matters and by working alone. Sensing learners prefer to learn from visible and tangible materials like samples and have a tendency to be more practical and careful where details are included. Intuitive learners prefer learning where abstract matter is present and have a tendency to be more innovative and are more attracted to challenges. Visual learners tend to remember best what they have seen, whereas verbal learners establish more out of words, regardless if those words are spoken or written. Sequential learners learn in linear steps and prefer to be directed and steered through the learning process, whereas global learners learn in large leaps and prefer more freedom in their learning process. Van Rensburg (2002:44) points out that these differences express learners' individual preferences for learning atmosphere, modes of delivery and types of tutors. Learning in a preferred way or having a preferred style, enables learners to feel more comfortable and learn more effectively (De Young as cited in Van Rensburg, 2002:44).

### **3.8.3 Individual learner differences**

Pashler, McDaniel, Rohrer and Bjork, (2009:105) advocates a new movement in learning and teaching, namely that each individual learner has his/her own most favourite approach to learning and teaching. According to the Learning Style Movement (Pashler *et al.*, 2009:105), it is possible to examine and assess the learning styles of learners and adjust teaching methods for the maximum benefit of the learner. In different studies performed, it was evident that some learners learn better when information is presented verbally and others seem to learn better through visual presentation. It is therefore important for tutors to determine which learning style prompts their interest, absorption and retention of new and difficult information and how tutors should respond to this for making meaning in the learning process. The identification of a specific learning style for an individual learner often appeals to learners as they experience that they are treated uniquely as individuals. All learners have the potential to learn effectively if the learning activity is customised for their

unique and individual learning style (Pashler *et al.*, 2009:107). However, it is impossible to accommodate all learners with individualised learning environments and therefore other means of accommodating individual styles must be found (Van Rensburg, 2002:78).

### **3.8.3.1 Cognitive**

An important aspect of cognition related to adult learning is the understanding of cognitive style. Cognitive styles, according to Schunk (2008:306), can be characterised as uniformities in the processing of information that adults develop in conjunction with specific personality traits and are reflected in how individuals receive and process information to make sense of their world. Cognitive styles are thought to be more solid characteristics present in the learner and refer to a learner's approach and preference in obtaining and processing information (Messick, as cited in Knowles *et al.*, 2012:210). According to Flannery (as cited in Merriam *et al.*, 2007:406), some learners engage in complicated learning situations with a global perspective while other learners are more interested in absorbing information with precision and exactness. Global learners perceive information in a tangible, concrete and subjective manner whereas analytical information processors prefer information in a step-by-step manner and tend to perceive information in a theoretical, abstract and objective manner (Merriam *et al.*, 2007:406).

### **3.8.3.2 Personality**

In the learning situation the tutor experiences different personalities, which gives a much broader description of the learner than just a learning style. Personality gives a comprehensive picture of the learner, which encompasses certain unique characteristics and serves as an indicator of what secures the learner's attention (Cranton, 2005:364). In theory, when tutors are sensitive to the different types of personalities, a more positive learning experience and learning outcome is expected with regard to how the learner perceives and justifies perceptions in their learning encountered. Introverts gain energy from within, focusing on the self and being critical and reflective in their learning, whereas the extrovert learner gains energy from and focuses on the external world and learns from organised planned experiences (Collins, 2011:157). The thinking function is demonstrated in learners when they approach learning logically and analytical. The feeling function in learners is when learners take others and values into consideration in their learning. The sensing

function is demonstrated when learners assess information from the world through the five senses. When learners perceive the world through intuition, possibilities and imagination they are demonstrating the intuitive function in their learning approach (Collins, 2011:157).

### **3.8.3.3 Prior knowledge and experience**

Acknowledging adults' prior knowledge and learning experience are an important feature and essential part of the learning process. Every person has a learning style, but styles can be influenced by experience and the environment. Most learners have a learning style preference, although within a single preference there are considerable diversification among learners (Collins, 2011:155). In essence, to recognise and acknowledge the individual learner's learning and to enhance that learning through customised instruction to accommodate the learner's learning style, some intervention is necessary. Logically, it is undeniable that the most favourable instructional method will often differ between individual learners in some aspects. Particularly when there are differences in educational backgrounds, cultural differences and prior knowledge, it can be a critical consideration in selecting the most favourable method of instruction. New knowledge builds on previous knowledge and an individual learner's prior knowledge is likely to determine the level and type of instruction and activities appropriate for that learner. Research studies by McNamara, Kintsch, Butler-Songer and Kintsch, (as cited in Pashler *et al.*, 2009:108) confirm the conditions of instruction that is most favourable differ depending on learners' prior knowledge. It is evident that reliable aptitude measures can assist in choosing the most favourable instructional methods for effective learning (Pashler *et al.*, 2009:108).

### **3.8.4 Theories and models of learning styles**

Learning style instruments in adult learning have proved useful in assisting both learners and tutors to be aware of personal learning styles, including their strengths and weaknesses. In using learning style instruments it must be remembered that each instrument measures different things and are best used to create awareness that learners differ in their approach to learning and that one style is not necessarily the only or the best style for them to learn (Merriam *et al.*, 2007:49). However, many learning style researchers claim strong reliability and validity for learning style instruments, others claim further studies to provide reliability

and validity is needed, as is found in Pashler *et al.*, (2009:105), Cassidy (as cited in Merriam *et al.*, 2007:410) and Della Porta (as cited in Merriam *et al.*, 2007:410).

Exploring adult learning literature, Cranton (2005:362) addresses six approaches to address adult learning styles, which include: '1) experiential, 2) social interaction, 3) personality, 4) multiple intelligences and emotional intelligence, 5) perceptions, and 6) conditions or needs'. Due to the diverse learning style typologies available, Cranton's framework (as cited in Collins, 2011:155) is used to systematically group and direct the discussion on learning styles.

In the first category of experiential approaches, Kolb's theory on learning styles, known as experiential learning, highlights the role of experience in the adult learning process (Albergaria-Almeida, Teixeira-Diaz, Martinho & Balasooriya, 2012:154) and draws strongly on transformative learning, which can be identified as an adult learning theory of how adults make sense of their experiences. Exploring studies in adult learning styles, it became evident the learning style model of Kolb (1984) has come under harsh scrutiny (Knowles *et al.*, 2012:213; Merriam *et al.*, 2007:408; Pashler *et al.*, 2009:106). However, Kolb's Learning Style Inventory is still the most popular instrument to determine learning styles in adult education (Merriam *et al.*, 2007:408; Pashler *et al.*, 2009:106). Kolb's experiential learning theory has two dimensions to explain how learning happens, namely abstract-concrete and active-reflective. The abstract-concrete dimension is the ways new knowledge is understood and the active-reflective dimension is how, when new knowledge is understood, it is then processed and transformed. It indicates the learner's preference for active experimentation (doing) versus reflective observation (reflecting) and concrete experience (experiencing) versus abstract conceptualisation (thinking) (Collins, 2011:155). Kolb (as cited in Albergaria-Almeida *et al.*, 2012:155) identifies four learning styles with particular characteristics. Each of these learning styles - diverger, converger, assimilator and accommodator - represents a different learning experience. According to Kolb (as cited in Collins, 2011:155-156) convergers prefer practical application of ideas through logic and science and have a preference for actively experimenting with information and being able to apply this information to practical situations. These learners are unemotional in their approach to learning and prefer to work alone. Assimilators create theoretical models and make sense of distinct observations through reflective reasoning. Both the converger and assimilator type share a preference for abstract conceptualisation. Assimilators prefer to

spend time refining theories and are more interested in abstract thoughts than in people. Divergers and accommodators learn through hands-on experience instead of abstract conceptualisation. Accommodators combine concrete experiences with a preference for active experimentation and learning through trial and error. Divergers observe information from different angles and are creative learners who consider multiple potential strategies for learning and problem solving. Kolb's learning style inventory has been used in technology-supported learning environments and a positive correlation between learning style and technology learning behaviour has become evident (Lu, Jia, Gong & Clark, 2007:189).

In Cranton's (as cited in Collins, 2011:156) second category the social interaction approach highlights the interaction and collaboration with others during the learning process. The Grasha-Riechmann learning style scale measures the social interaction preferences in learners and address six dimensions, which includes competitiveness, where learners try to outperform others, collaboration, where learners prefer to share ideas and discussions, avoidant, where learners do not prefer interaction or attend physical instructions, participative, where learners prefer to take responsibility and to be active in the learning environment, dependent, where learners prefer tutor direction and independent, where learners prefer to learn on their own and be self-directed learners. According to Collins (2011:156), all six categories are present in all learners, but learners will show a stronger preference for one or two categories.

The third category in Cranton (2005) as cited in Collins, (2011:156) indicates the personality learning style models and is a more inclusive way of assessing the individual learner in the learning process. It is a 'Psychological type theory based on two attitudes towards the world and four functions of living' (Cranton, 2005:364). The Myers-Briggs Type Indicator (as cited in Merriam *et al.*, 2007:408) and Knowles *et al.*, (2012:212) is how a learner perceives and make conclusions of what is perceived. Learners are assessed on four scales, which include extraversion versus introversion, intuition versus sensing, thinking versus feeling, and judging versus perceiving. Examples of learning characteristics in the personality learning style are learners that use introversion thinking and are reflective and critical in their learning approach, while extraverted thinkers learn through organised planned experiences (Collins, 2011:157). This learning style model according to various practitioners constitutes what is actually meant by learning style (Merriam *et al.*, 2007:408).

Cranton's fourth category of learning styles (2005) (as cited in Collins, 2011:157) contains multiple intelligences and emotional intelligence. Howard Gardner (as cited in Collins, 2011:157) guided the concept of multiple intelligences in learning. Earlier notions that dominated the educational arena were based on linguistic and mathematical intelligences. Linguistic learners have a learning preference for written or spoken words and mathematical learners are logically and scientifically inclined. According to Gardner (as cited in Collins, 2011:157) other intellectual competencies include musical intelligence, where learners are sensitive to musical performances and composition, spatial intelligence, refers to three-dimensional thinkers such as artists and surgeons, kinaesthetic intelligent learners use their bodies to create, as found in athletes and dancers, interpersonal intelligence are learners who work effectively with others, understand their needs and desires, intrapersonal intelligence refers to the knowing, understanding and regulating of oneself, the naturalist intelligence understand plants and animals, the spiritual intellectual competencies refer to religious and mystical intelligence and existential intelligence refer to learners who have an aptitude for transcendent knowledge. Emotional intelligence relates closely with interpersonal and intrapersonal intelligences.

The fifth category listed by Cranton (as cited in Collins, 2011:157) deals with perception learning style models and include learners' instructional preferences of visual, auditory, tactile or kinaesthetic preferences in learning. The VARK (visual, auditory, read/write and kinaesthetic) learning style method implies that visual learners prefer information presented using maps, models, patterns and graphs. Auditory learners show sensitivity for listening to lectures, hearing information, mobile phones and discussing learning materials. Learners who prefer read/write learning styles prefer information in print, through textbooks, slides and websites. Kinaesthetic learners lean towards demonstrations and interactions, writing notes, touching and simulating. Most learners possess all these modalities and blend them as they need.

Cranton's (as cited in Collins, 2011:158) sixth category is conditions and needs. The Dunn and Dunn Learning Style (1974) include environmental elements such as the amount of light, background noise, temperature in the room and the location of the learning space provided. Other elements included are the physical needs like the time of day for learning to be successful, emotional elements such as motivation, persistence and responsibility, sociological factors include working alone, in pairs, an instructor and or in teams.



### **3.8.5 Educational importance of learning styles**

One way in which higher education since 1940 has been enhanced is through the application of learning style research (Collins, 2011:154). The core aim of higher education is to effectively facilitate learning and ensure learning success towards responsible adults in the workplace. One vital area of neglect is the exploration of learning styles in higher educational settings. However, more tutors are aware of this essential educational approach in recognising differentiated individualised learning (Abidin, Rezaee, Abdullah & Singh, 2011:143). Establishing a comprehensive understanding of the learning process and acknowledging and accommodating the educational importance of differences in learning styles have great benefit for the learner, tutor and the institution. These benefits lead to (Van Rensburg, 2002:136):

- an increase in motivation to learn;
- elimination of frustration in being exposed to unsuccessful learning processes;
- an increase in the capacity of individuals to learn;
- an acknowledgement that reluctance to learn from one learning activity does not generalise reluctance to learn from another learning activity;
- establishing learning opportunities beyond the formal learning situations;
- fostering improved learner-learner and learner-tutor relationships;
- reduced tutor dependency;
- fostering continued learning beyond formal education;
- enhanced identification of the role of learning in the workplace.

Higher education institutions and tutors alike have a responsibility towards the learners they serve. These learners are often paying customers with families, full-time careers and they are in many cases involved in community efforts. Institutions and tutors have to assist in improving learners' individual abilities and act towards an understanding, promoting not solely their learning style needs, but guiding them towards self-direction and independence.

### **3.8.6 Learning styles and teaching styles**

According to Beetham and Sharpe (2013:38) learning style research has informed effective teaching strategies in many ways. Learning styles and their interrelationships with teaching styles, academic achievement, technology use and educational value is an important aspect in adult learning. Graf *et al.*, (2012:3) state that when tutors are aware of learners' learning styles and using that information in the learning process leads to dual benefits for both learner and tutor. Firstly, when learners are made aware of their learning styles and the implications of their styles for learning, including general strengths and weaknesses of learners in the learning process a more positive learning experience can be expected. With such information available tutors can assist learners to understand why learning can sometimes be experienced as complicated for them and assist in establishing a basis for developing their weaknesses. Secondly, information about learners' learning styles can be used to harmonise teaching styles with learners' learning styles. Many educational theories support and have demonstrated this matching hypothesis has shown supportive result that learners learn easier and faster if their learning matter is adapted to their individual learning styles. Sturges (2011:238) claims that should learning style preferences not be included in tutor instruction and delivery at all times, discrepancies and complex learning content structures that overload the learner, might emerge. Many learning style tests, assessments and technologies are available, which appears to have wide acceptance among tutors to identify learners' learning styles and to assist tutors in adapting their teaching strategies (Pashler *et al.*, 2009:106). According to Pashler *et al.*, (2009:107), it is a reality that learners' learning style preference and assessing learners' learning styles do not guarantee effective instruction and delivery for any particular learner and individual instruction and delivery to accommodate a learner's style can achieve better academic achievement.

### **3.8.7 Learning styles and academic achievement**

It is often found that the learning materials have less impact on learners' achievement than the way learning is delivered. Thus, learning styles are essential in the learning environment to achieve academic success. Many studies have been conducted to indicate the significant relationship between learning styles and academic achievement (Abidin *et al.*, 2011:143). It is evident according to Sitt-Gohdes (as cited in Abidin *et al.*, 2011:143) that most tutors deliver learning matter in a way familiar to them and how they have already learned. Careful

consideration is necessary, as this might imply that learning preferences are often not taken into account by many tutors and it might have implications in circumstances where learners come from diverse education experiences and with different cultural backgrounds. According to Keefe and Ferrell (1990), Dunn (1983), Fairhurst and Fairhurst (as cited in Albidin *et al.*, 2011:143) there was a dramatic improvement in academic achievement when learning styles were taken into account. This indicates that the manner in which delivery happened had a greater impact than the content covered in a learning programme. Each learning style has its own strengths and weaknesses. Some learners learn in many ways using different styles, whereas others prefer one or two. It is evident that learners with multiple learning styles achieve more and show greater academic success compared to learners who rely on one or two styles (Dunn, Beaudry & Klavas, 1989) as cited in Albidin *et al.*, 2011:144). Much experiential research according to Moallem (2007:218) indicates that learning style can either improve or constrain academic achievement in a variety of ways and the challenge for tutors is to produce learning materials that do not have an obvious tendency towards one specific learning style.

### **3.8.8 Learning Style and Technology**

A learner-centred approach, as is evident in learning with technology, includes an understanding of learning styles and the provision of instruction in different ways to address and accommodate as many different learning styles as possible to foster content retention (Carroll, 2007:466). According to Collins (2011:153) research on learning styles has effectively informed face-to-face instruction for many years. However, with the introduction of technology, learning has moved beyond a physical learning environment. Learning styles and the interrelationships between technology and adult learning has demonstrated limited alignment of learning styles with current technology. Even fewer studies have been conducted on the impact of learning styles, technology and adult learning. Higher education today is compelled to meet the needs of adult learners in both electronic environments and physical classroom environments alike. Digital connections and other technologies have drastically changed the course of information flow. One has to ask what impact technology has caused on how adults absorb and process information. Allen and Seaman (as cited in Collins, 2011:154) indicate that evidence shows the steady increase in online hybrid education over the last 10 years and further postulate that technology has entered the educational arena and are here to stay. However, the challenge for tutors is how to apply

technology in ways that facilitate the highest levels of learning outcomes (Cox, 2008:1). Some research studies, as discussed in Collins (2011:158-161), show that certain learning styles prefer certain approaches in face-to-face delivery, just like certain learning styles prefer certain technological approaches to their learning. Therefore tutors and curriculum specialists have to design learning experiences that include a variety of learning styles, as is evident in Kolb (as cited in Collins, 2011:161). Exposing learners to a variety of learning approaches not only compliments their dominant learning styles, but also strengthens their non-dominant learning styles. In teaching with technology, valuable insight is often found through tracking the learner's technology platform. Information on how learners learn, difficulties they experience, if learning activities such as videos, graphs, exercises, forums and other are used and which activities are experienced as complicated for the learner. Furthermore, information from the learner's behaviour when using the online platform can be used to identify learning styles, cognitive ability, affective state and more (Graf *et al.*, 2012:3). It is evident that individuals want to define their own ways of how they prefer to engage and interact with learning activities and this notion calls for a rethinking of learning in society (Quinton, 2012:65).

### **3.9 NEW PERSPECTIVES ON LEARNING**

However difficult it is to predict the entire scope of change over the next decade, Quinton (2012:65) feels that there is little doubt that current strategies in higher education teaching will be inadequate for addressing the complexities of a knowledge-based society. New ways of thinking are required to provide for innovative knowledge creation to deal with emerging issues and challenges. A redesign in curriculum development approaches to interconnect all facets of the learning process towards an established, flexible and adaptive environment, to support the learning needs of the individual should be envisaged. The degree of flexibility should extend to room for diverse individual differences, learning preferences, learning styles and attitudes of current, future and past learners (Quinton, 2012:66). The desire expressed by learners to learn in new ways, to evaluate their own progress and to be able to transfer knowledge to real life situations is evident, especially now at a time when process skills like critical thinking, problem solving, interpretation, team working and more are progressively favoured over factual knowledge (Liber as cited in Quinton, 2012:68).

The unexpected ways in which technology has changed and has impacted all spheres of life, including education, were never envisaged by anyone. Despite wild statements made by opinion formers about technology transforming learning, there are no indications how and if educationalists have to change their understanding of how learners learn. Learning theorists and learning approaches such as Dewey, Vygotsky, Bruner and others still hold that there is no challenge to the fundamental understanding of learning in formal education. Fundamentally, pedagogy is still about guiding a learner to learn, and pedagogy should lead the use of technology in learning (Beetham & Sharpe, 2013:xvi; Kalantzis & Cope, 2012:18). With technology present in education the focus has shifted from a tutor-directed learning approach to a learner-centred approach in order for learners to take control of their own learning and be self-directed and independent. New technology is increasingly becoming an integral part of formal and informal training programmes, both in the academic world and workplace, and it has changed the way adults receive and request information. Demands from employees for advanced levels of information and communication technology skills necessitated educational institutions to adapt accordingly. Technology has a profound impact on the autonomy of the adult learner. As learners have a choice about when, where and how they want to pursue formal education, they most probably find the institution online, apply online and enrol online. They might contact their tutors via e-mail, access course information and resource material through an electronic platform, have assessments online and receive results via an institutional platform (Beetham & Sharpe, 2013:6). According to Mason (as cited in Merriam *et al.*, 2007:22-23) globalisation in concurrence with technology is reshaping the higher education arena in terms of:

- International communications-based telecommunications.
- Information and media technologies, which facilitate global circulation of text, images and artefacts.
- The global movement of learners to pursue studies in other countries and a demand for online learning without a residency requirement in another country.
- Growing multicultural learning environment, whether face-to-face or online
- Growing international flow of ideas, both formally and informally.
- Increase in international and virtual organisations offering online education and training.

It is evident that globalisation and technology has extended economic and cultural boundaries and there are definite benefits for learners from an intercultural point of view, as it offers opportunities to live and work globally (Merriam *et al.*, 2007:24; Beetham & Sharpe, 2013:266).

### **3.10 CONCLUSION**

Success in meeting the needs of learners calls for radically new teaching and learning methods and strategies. The ultimate aim is to support lifelong learning needs and personal development of all individuals towards self-direction, characterised by flexible and ubiquitous learning, any time, any where. It cannot be assumed that the simple delivery of information will lead to learning following suite. The demand for research aimed at the creation and purpose of new learning approaches is evident (Quinton, 2012:70-71). However, the scope and style of pedagogy changes as technology changes. It has to be emphasised that technology use in learning is merely to enhance the learning experience and not to substitute and replace the fundamental understanding of what it takes to learn. Adult learners and tutors are required to study the tools related to the use of technology, but they also have to study the nature of knowledge, the nature of learning and various kinds of educational philosophies. New learning builds on the deep knowledge of the discipline and the long and wide experiences of educational practice (Kalantzis & Cope, 2012:12). Although the primary aim is to imagine the new, this is only possible, because we are ‘standing on the shoulders of giants’ (Isaac Newton, 1676).

## **CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY**

*'Designing is a matter of concentration. You go deep into what you want to do. It's about intensive research, really. The concentration is warm and intimate and like the fire inside the earth - intense but not distorted. You can go to a place, really feel it in your heart. It's actually a beautiful feeling'. (Zumthor, P. nd).*

### **4.1 INTRODUCTION**

This study focusses on managing the quality of learning in higher education using a hybrid study approach (HSA). Chapter two presented an in-depth literature study on the quality of learning in higher education through technology integration, using a hybrid study approach (HSA), and how higher education world-wide is shaped and influenced by international competitiveness and global pressures. Chapter three presented an in-depth literature review on learning and new approaches on learning in adulthood. It is against this background that this chapter presents the research design and strategies followed to address the research questions asked. An explanation of the research design and strategies, the population and sampling and the researcher's role, including adherence to ethical measures, are included, followed by the process of data collection and analysis and considerations to ensure validity and reliability. The chapter concludes with a summary.

### **4.2 RESEARCH QUESTIONS AND AIM**

The core problem statement, namely that technology integration with a rethinking in pedagogical approach for higher education is inevitable, resulted in the following main research question: How can the hybrid study approach be used in higher education to manage the quality of learning? Emanating from the main research question, the following sub-questions are addressed:

- What are the experiences of learners using the hybrid study approach?
- What are the experiences of tutors using the hybrid study approach?
- What are the experiences of institutional management using the hybrid study approach?

The aim of this study is to explore the matter of managing the quality of learning through technology integration using the hybrid study approach to determine:

- The experiences of learners, tutors and institutional management using the hybrid study approach, and
- if using the hybrid study approach, addressing the needs and expectations learners, tutors and institutional management had.

### **4.3 RESEARCH DESIGN AND STRATEGY**

A qualitative research design was used as part of a structured and logical process to identify, examine and evaluate empirical data to link the research questions to answers. This process is supported by a strategy and conceptual framework (Punch, 2011:112-113). A qualitative approach is used to holistically study the diverse perspectives of individuals in their real-life settings, identifying its intricacy and its context (Creswell, 2012:207; Punch, 2011:118-121). The qualitative approach is best suited to address the research problem where the variables are unknown and need exploration (Creswell, 2012:16). The literature reviews in chapters two and three validated the research problem, but did not adequately address the central phenomenon. This forced the researcher to learn more from the participants through exploration (Creswell, 2012:16). This was not initially foreseen.

‘Strategy was important as it drove the design’ (Punch, 2011:113). The study started off with an exploratory study for gaining insight and familiarity with the research problem, rather than testing or confirming a hypothesis with a predetermined set of variables. Drawing on Collis and Hussey (2009:5), ‘an exploratory study is conducted when there are very few studies to which we can refer for information about the research problem’ and where the researcher’s exploratory study focus is ‘gaining insight for more rigorous research at a later stage’. In using exploratory research as a preliminary study, the researcher attempted to discover new ideas by exploring literature, individuals, social groups, processes and activities to clarify the exact nature of the research problem to be solved (Creswell, 2012:543; Stebbins, 2001:5; Johnson & Christensen, 2012:18).



Exploration can be thought of as a ‘bottom-up approach’ as its emphasis is starting with particular data and discovering what is occurring more generally (Johnson & Christensen, 2012:17-18), based on concepts generated from and the development of an understanding from the collected data, exploring the how and why of the research problem. As the researcher came to a more clear understanding of the research problem, the focus of reliability was ‘less and less on exploration and more and more on prediction and confirmation’ (Stebbins, 2001:7).

### 4.3.1 Population and sampling

A purposive sampling method was used for this study to best learn, explore and understand the central phenomenon, which is to determine the quality of learning in higher education using a hybrid study approach (HSA). The sampling involved selecting a specific group of individuals with experience in either studying, tutoring or managing learning in a hybrid study approach (HSA), to provide information rich data that answers the research questions (Creswell, 2012:206). A theory sampling strategy assisted the researcher in generating, exploring and discovering an understanding (Creswell, 2012:208) learners, tutors and institutional management’s experiences using a hybrid study approach (HSA) appeared appropriate. Due to a small number of learners enrolled in the hybrid learning programme, only eight learners, three tutors and one management staff member were identified on a research site based in the Western Cape of South Africa. Four additional learners, two tutors and two institutional management members were identified on a research site in the United States of America where the hybrid study model (HSM) was developed and is managed. Table 4.1 is an outline of the participants involved in the study.

**Table 4.1: Number of participants on two research sites**

<b>Participants</b>	<b>Western Cape</b>	<b>United States of America</b>
Learners	8	4
Tutors	3	2
Management	1	2

The participants on both research sites use the same technology platform, and learners are either enrolled in a Business Management-related, or an Information Technology-related

degree programme and are either full-time or part-time employees or full-time learners. A summary of the participants follow in Table 4.2, with the learner participants identified as L1, L2, L3 up to L12. Tutor participants are identified as T1, T2, T3 up to T5, and management participants are identified as M1, M2 and M3. The profile of learner participants outlines their field of study and their career status. Tutor participants are positioned according to their field of tutoring and if they are full-time or part-time employees. Management members are all indicated as full-time employees.

**Table 4.2: Profile of participants**

<b>Learners</b>	<b>Business Management</b>	<b>Information Technology</b>	<b>Full-time employee</b>	<b>Part-time employee</b>	<b>Full-time Learner</b>
L1		√			√
L2		√	√		
L3		√		√	
L4	√				√
L5	√				√
L6		√	√		
L7	√		√		
L8	√		√		
L9	√			√	
L10		√		√	
L11	√		√		
L12		√			√
<b>Tutors</b>	<b>Business Management</b>	<b>Information Technology</b>	<b>Full-time employee</b>	<b>Part-time employee</b>	
T1		√	√		
T2	√		√		
T3	√			√	
T4	√				
T5		√		√	
<b>Institutional Management</b>			<b>Full-time employee</b>		
M1			√		
M2			√		
M3			√		

According to Marshall (1996:523), the appropriate sampling size ‘is one that adequately answers the research question’ and is not determined by a specific number of participants. The researcher approached the research phenomena (Punch, 2011:162) by following a

confirming sampling strategy after data collection has commenced to explore further specific findings and to verify the accuracy of the findings throughout the study (Creswell, 2012:209).

#### **4.3.2 The researcher's role**

Since the researcher's interest was to gain insight and an understanding of learners', tutors' and institutional management's perceptions, opinions, concerns and experiences in their real-world conditions using a hybrid study approach (HSA), the qualitative design appeared appropriate and focused on the micro-level of managing quality of learning by assessing the 'learning' in learning with technology (Hew *et al.*, as cited in Ernst, 2008:40). A 'wide-and deep-angle lens' (Johnson & Christensen, 2012:35) was used to examine learners', tutors' and institutional management's viewpoints, social interaction, meaning and experiences as it occurred naturally in all of its detail. The researcher aimed to constantly understand the participants' viewpoints to 'verstehen' (Weber as cited in Johnson & Christensen, 2012:36) and make sense of the participants' perspectives through direct personal and participatory contact, which was the motivation for proposing a qualitative research approach. The researcher acted as the instrument of data collection through questions asked and interpretation, and the observances were voice-recorded. The researcher's interest was to explore 'why' and 'how' individuals' experience what they do, rather than 'how many' as portrayed in quantitative research that relies on statistics and numbers. It was therefore imperative to adhere to ethical measures as the researcher acted as the primary research instrument in collecting and analysing data.

#### **4.3.3 Ethical measures**

To ensure 'a high level of participant disclosure' (Creswell, 2012:230) participants' trust, their treatment, confidentiality and anonymity, including documentation reviewed was considered vital in conducting the study (Johnson & Christensen, 2012:103). Due to ethical reasons the researcher was requested to withhold the identities of both institutions in this study. The following ethical measures were undertaken throughout the study to guide and assist the investigation.

#### **4.3.3.1 Informed consent**

Prior to conducting this study, the researcher requested and obtained written permission from both institutions involved (Appendix A and B). The researcher also obtained permission from all the prospective participants, which included learners, tutors and institutional management (Appendix C), after giving them a description and pertinent information pertaining to the study, since it could influence their decision to participate. The information included the following:

- The research background and purpose
- The procedure to be followed
- The participant population
- Access to participants' online platforms and discussion forums
- Duration of interviews
- Participants' right to anonymity and confidentiality
- Voluntary participation and the right to withdraw at any point (Johnson & Christensen, 2004:114-115).

#### **4.3.3.2 Anonymity and confidentiality**

The anonymity and confidentiality of the information provided by all participants interviewed and observed, including documentation reviewed, has been respected and held in strict confidence, as shown in Appendix C. Participants were assured that no data from the interview that might identify a participant to a third party will be revealed or presented in any record or report and that there would be no link between the data and the participants (McMillan & Schumacher 2010:121). Furthermore, both institutions involved, as well as the individual participants, would not be identifiable in print to ensure their anonymity and confidentiality. Therefore participants were requested not to include any personal and identifiable information that could be linked to individual participants by name. Participants' privacy and anonymity were ensured by assigning letters and numbers to each individual (Johnson & Christensen, 2012:104; Creswell, 2012:232) to protect the names and identities of participants and institutions. Learner participants were identified as L1, L2 and L3 etcetera,

tutor participants as T1, T2 and T3 etcetera and management participants as M1, M2 and M3. In addition, all collected data is kept in a place of safety.

#### **4.3.3.3 Maintaining honesty and openness**

Protecting participants is the primary focus in research ethics. Both the character and integrity of the researcher will manifest in the honest and ethical disclosure of methods used and reporting of research results (Creswell, 2012:279; Bogdan & Biklen, 2007:50; Check & Schutt, 2012:55). Biases and personal pressures to find particular outcomes or pre-existing prejudices to reach specific outcomes are questionable in performing honest and open research (Check & Schutt, 2012:55). Discretion and honesty are essential elements due to the researcher's personal involvement in both the researched institutions.

#### **4.3.4 Instrumentation and data collection**

A multiple data source was used for data collection (Creswell, 2012:212). Data collection was done by means of an intensified literature study of local and international sources to enlighten the study with similar research already undertaken. Individual interviews were conducted, supplemented by the case study method to ensure external validity and for the purpose of triangulation (Creswell, 2012:259). As the study drew on multiple sources of information from learners, tutors and institutional management, it was anticipated that the collection-rich evidence through replication verifies the accuracy and credibility of the findings (Creswell, 2012:259).

##### **4.3.4.1 Case Study**

A case study was proposed at the micro level, assessing the learning of online learners (Hew *et al.*, as cited in Ernst, 2008:40), and investigating how managing the quality of learning within a bounded context, involving a group of learners, tutors and institutional management using a hybrid study approach (HSA) in their natural settings occurs (Creswell, 2012:465). In the case study, the researcher has access to coordinate data from different sources through entry onto learners' and tutors' online platforms, peer group discussion forums, e-mail communication, institutional records, asynchronous discussions, journal entries, assignment postings, evaluation records and feedback available from learners, tutors and management.

The hybrid study model (HSM) is flexible enough to include topic-driven responses in real-time, should the need exist. Company policy authorises institutional management access to intellectual property issued and assigned to users, including the use of internet provider (IP) addresses. Participants gave permission that the researcher could access their online platforms and discussion forums by signing the informed consent form (Appendix C). Participants answered the ‘how’ and ‘why’ questions by means of face-to-face interaction with all participants.

#### **4.3.4.2 Interviews**

Interviews are flexible as a data collection tool (Punch, 2011:146). In an effort to ‘understand the language and culture’ and ‘establish rapport’ (Punch, 2011:148), on site, face-to-face, semi-structured individual interviews were conducted. The interviews contained open-ended questions, following a ‘broad-to-narrow’ approach when the response communication deepened (Creswell, 2012:216). Interviews were conducted with participants in the Western Cape of South Africa and face-to-face individual interviews via Skype were conducted with the participants in the United States of America. Questions were prepared, interview notes were taken and voice recordings were transcribed to explore the different learning perceptions, personal experiences, and possible uncertainties using the hybrid study model (HSM).

#### **4.3.4.3 Document analysis**

Media reports, government journals, educational forums, newspapers, audio and visual evidence and other related information available were collected and integrated with the data obtained through interviews in an attempt to add finer distinction that might reside in these resources. Documents were evaluated according to reliability, integrity and ‘representativeness’ (Punch, 2011:160).

#### **4.3.5 Data analysis**

Due to data collection and analysis being ‘concurrent and continuous’ (Johnson & Christensen, 2012:402), a preliminary analysis guided the researcher in redesigning questions to focus on central themes as the study progressed, ‘... the researcher moves repeatedly back

and forth through the data' (Vithal & Jansen, 2010:29) to determine the kind of data collected and what aspects of already collected data were the most important for making sense from the data (Corbin & Strauss, 2008:66; Johnson & Christensen, 2012:403). The following six steps provided by Creswell (2012:237) were followed in analysing and interpreting data:

- Step 1, the researcher organised and electronically transcribed and prepared the interview voice recordings from spoken and written words to text data. Data was explored in detail to start the process of coding and was organised according to participants and according to the two research sites involved.
- Step 2, coding of concepts started after the first interview to distinguish between usable and non-usable data (Corbin & Strauss, 2008:163). Coding involved the labelling of concepts, important words and phrases in the collected data (Corbin & Strauss, 2008:195; Johnson & Christensen, 2012:403). A simultaneous process of analysing the collected data, while collecting new data occurred. According to Creswell (2012:238), these are simultaneous activities in conducting qualitative research, as opposed to quantitative research where data collection occurs first, followed by data analysis.
- Step 3, concepts were condensed into different themes where the researcher looked for relating themes that appeared across the data (Corbin & Strauss, 2008:195; Johnson & Christensen, 2012:403). These phases were also repetitive as the researcher repeatedly moved back and forth for more information to fill in gaps.
- Step 4 is 'theoretically sensitive' (Johnson & Christensen, 2012:403) and the researcher continuously asked questions, used analytical thinking and reflected on the collected data to develop a deeper understanding of the information provided by participants.
- Step 5, although several guidelines exist in performing qualitative data analysis, there is no single, accepted approach (Creswell, 2012:238). At the point where all themes were well-developed and further analysis added no new information or concepts emerging from the collected data, 'theoretical saturation' was reached (Corbin & Strauss, 2008:163).

- Steps 6, in this step, the findings were compared with the research questions to determine reliability and trustworthiness of the study, which is the final stage in data analysis. It was at this point in the study where the researcher made personal interpretations to fit the themes that captured the major categories of information. The researcher was involved in rechecking the theory with the data to eliminate any possible mistakes to establish the trustworthiness of the analysed data (Johnson & Christensen, 2012:404).

#### **4.3.6 Trustworthiness**

In ensuring trustworthiness and accuracy to determine reliability, consistency and validity (Creswell, 2012:259; Johnson & Christensen, 2012:245) when the research was conducted, different strategies for validation were applied to eliminate selective recordings of information, subjectivity, personal views and perspectives of the researcher that could affect data interpretation (Johnson & Christensen, 2012:264-265). Four elements for establishing trustworthiness, according to Lincoln and Guba (as cited in Creswell 2012:259), includes:

- *Credibility*, which indicates the confidence of the researcher in the truth of data collected and in the credibility of the findings.
- *Transferability*, which indicates if the study is applicable in other contexts and can be transferable to have future purpose.
- *Dependability*, which indicates the consistency and replication in other contexts, other settings and groups of people. An important aspect was the participant consistency that prevailed, when certain interview questions were answered one way, and closely related questions were consistently answered in the same way (Creswell, 2012:159).
- *Confirmability*, which indicates the degree of neutrality and objectiveness without researcher biases to influence the findings, descriptions and interpretations of the study. The study was shaped by the participants' involvement and the researcher engaged in member checking by submitting transcribed data to participants to verify if transcriptions were accurate and authentic (Creswell, 2012:259). For justification, triangulation of the research was done, using document analysis, case study and



individual interviews to externally validate the research problem (Johnson & Christensen, 2012:269; Zaidah, 2007:2).

#### **4.4 CONCLUSION**

The risk of introducing a new unconventional pedagogic approach in managing the quality of learning using the hybrid study approach substantiated the participation of information rich participants to explore and investigate a full understanding of the phenomenon through exploration. The researcher applied an interpretive research approach through social constructivism, exploring the dynamics of interaction between learners, tutors and management, involving knowledge and meaning, aimed at understanding the research phenomenon (Terre Blance *et al.*, 2006:278). In this qualitative study generalisable results were not the purpose of the research, but rather to richly describe a group of people in a specific context (Johnson & Christensen, 2012:270). The results and findings of the study will be presented and discussed in the next chapter.

## **CHAPTER FIVE: ANALYSIS OF DATA AND DISCUSSION OF FINDINGS**

*‘Interpretation is a complex and dynamic craft, with as much creative artistry as technical exactitude, and it requires an abundance of patient plodding, fortitude, and discipline. There are many changing rhythms; multiple steps; moments of jubilation, revelation, and exasperation ... The dance of interpretation is a dance for two, but those two are often multiple and frequently changing, and there is always an audience, even if it is not always visible. The dancers are the interpreters and the texts’.* (Miller & Crabtree as cited in Schutt, 2012:323).

### **5.1 INTRODUCTION**

This chapter presents a discussion of the research findings based on the data analysis process to link the research questions to answers. This study explores the experiences of learners, tutors and institutional management members in relation to how a hybrid study approach (HSA) should be used in higher education to manage the quality of learning. Therefore, an analysis was performed of the research results, obtained from individual semi-structured interviews with learners, tutors and institutional management members. Interviews were conducted according to a time suitable for all participants. On site face-to-face individual interviews were held with the twelve participants on the research site based in the Western Cape of South Africa and face-to-face, individual Skype interviews were held with the eight participants based on the research site in the United States of America, as described in section 4.3.1 table 4.2. The interview questions for learners, tutors and institutional management are attached as Appendix D, E and F. Individual interviews were supplemented by the case study method through access to data from learners’ and tutors’ online learning platforms, assessing the online learning of learners and were supported by documents analyses according to its reliability, integrity and ‘representativeness’ (Punch, 2011:160).

### **5.2 DATA PRESENTATION**

Within the exploratory study the researcher continually moved ‘back and forth’ (Vithal & Jansen, 2010:29) between the analysed data, establishing which characteristics of the data were the most important and developing a deeper understanding of ‘what the data are saying’ (Johnson & Christensen, 2012:402) as discussed in section 1.6 and 1.6.3. Drawing from an inductive analysis strategy, following a bottom-up approach to present conclusions, the researcher discovered patterns and interrelationships to generate codes, themes and categories

from the data collected. The researcher analysed the data according to the six steps found in Creswell's data analysis process (2012:237) described in section 4.3.5. Electronically transcribed individual interviews were analysed and the coding of concepts started. An example of a transcribed interview is attached as Appendix G. Concepts were condensed into different themes and similar themes were listed and clustered together in appropriate and descriptive categories and sub-categories. *In vivo* codes, which are phrases of the 'exact words of participants' (Creswell, 2012:431), were applied to create categories. This provided the researcher with an understanding of the data, and assisted in generating an explanation and constructing predictive evidence about the experiences individuals have in learning with technology.

Due to insubstantial research found in South African higher education regarding the use of a hybrid study approach (HSA), reported success rates, interaction and experiences by learners, tutors and institutions, the research data and findings presented in the *United States Department of Education* report (US Department of Education, 2010:1-55), *Model for an Interaction Assessment Strategy in Hybrid Learning Including Web 2.0 Resources* (Hijón-Neira *et al.*, 2010:450-465), *Eight Educational Considerations for Hybrid Learning* (Alberts, Murray, Stephenson, 2010:185-202), *Exploring the Hybrid Course Design for Adult Learners at the Graduate Level* (Coogan, 2009:316-324) and *Supporting the Hybrid Learning Model: A New Proposition* (Mossavar-Rahmani & Larson-Daugherty, 2007:67-78), were used to compare the research findings.

### **5.3 DEVELOPMENT OF THEMES AND CATEGORIES**

Using qualitative data analysis as described in section 1.6 and 4.3, the raw data collected from the three data collection methods were analysed to develop themes, categories and sub-categories grounded in the theoretical framework drafted in section 1.7. The aim of the study, as discussed in section 1.5, shaped the creation of themes, categories and sub-categories to organise and group the raw data accordingly. Categorising the raw data in Table 5.1 assisted the researcher in discussing the research findings outlined in section 5.4.

**Table 5.1: Themes, categories and sub-categories**

<b>THEME 1</b>	<b>5.4.1 21<sup>ST</sup> CENTURY LEARNING EXPERIENCES AND EXPECTATIONS</b>
Category 1	5.4.1.1 Technology integration in everyday life: <i>‘It’s natural - like a signature’.</i>
Category 2	5.4.1.2 Experiences and expectations: <i>‘Technology stretches the boundaries of teaching to a lot of lengths’.</i>
Category 3	5.4.1.3 Learning styles and personality types: <i>‘In class you will just be quiet...but on technology you can say it’.</i>
<b>THEME 2</b>	<b>5.4.2 CREATING A TECHNOLOGY LEARNING PLATFORM</b>
Category 1	5.4.2.1 Traditional versus technology learning: <i>‘I don’t have to be in a classroom for hours...My schedule is now very flexible’.</i>
Category 2	5.4.2.2 Hybrid learning versus pure online learning: <i>‘You have the real place and the online to get together and gather’.</i>
Category 3	5.4.2.3 The promotion of interaction and feedback: <i>‘We can post comments, questions, concerns...to other students and staff members’.</i>
Category 4	5.4.2.4 Social equity through global interaction: <i>‘They [international student] always ask me about South Africa...it’s quite cool’.</i>
Category 5	5.4.2.5 Challenges using technology for learning: <i>‘Sometimes, because technology is not 100% you don’t have access’.</i>
Sub-category 1	a. Adjusting to changes in technology
Sub-category 2	b. Practical application of learned theory
Sub-category 3	c. Netiquette
Sub-category 4	d. Assessment without direct supervision
Sub-category 5	e. Technology learning not fit for all
Sub-category 6	f. Inferior or superior qualification

Table 5.1 illustrates how the raw data collected from the case study, interviews and documents reviewed as discussed in section 1.6 and 4.3 were analysed and developed into two main themes, eight categories and six sub-categories. In reference to the table, the use of a hybrid study approach (HSA) in higher education to manage the quality of learning was

affected by two main themes, namely (1) 21st century learning experiences and expectations and (2) creating a technology learning platform.

The two main themes guided the emergence of categories and sub-categories. The first theme included three categories, namely: (1) Technology integration in everyday life, (2) experiences and expectations and (3) learning styles and personality types. Themes, categories and sub-categories portray the findings of the research and these are discussed in the next section.

## **5.4 FINDINGS OF THE STUDY**

The obtained results analysed and gathered from the raw data, which was organised into themes, categories and sub-categories as illustrated in Table 5.1, were applied to serve as the main headings and sub-headings, leading the discussions below. In the discussions of the findings, applicable verbatim accounts were selected to provide information about ‘participants’ interpretations and personal meanings’ (Johnson & Christensen, 2012:267) and to emphasise some research findings.

### **5.4.1 21<sup>st</sup> Century learning experiences and expectations**

In the vision of learning in higher education, as discussed in section 1.1, it is evident that the experiences and expectations of learning in the 21<sup>st</sup> century is shaped by global pressures and competitiveness, especially with the integration of technology in learning, as discussed in section 2.1. Learners expressed the need for convenience, to have recent and relevant learning materials and have tutors who are up to date with technology. Other expectations were included access to material and knowledge at their fingertips, and when they have a question, they want instant answer. Expressed by L1 as,

I think we [students] want customisation and affordability. A single method of teaching and learning applied to an entire group of diverse students is no longer acceptable for this modern age. Education should be affordable and appropriate.

For tutors and institutional management the expectations of learners in the 21<sup>st</sup> century include a delivery approach that is concise, convenient, current and affordable. Expressed by

T3 as, '*...they [students] don't [sic] want to sit in a classroom, they don't [sic] want to have a set schedule, they want to be free... [and it must] be convenient for them*' (T3).

New methods and ways to supplement and enhance positive learning experiences in higher education with the use of technology integration are evident, seen from both the participants' perspective and the documents analysis. This is discussed in the sub-categories below.

#### **5.4.1.1 Technology integration in everyday life: '*It's natural - like a signature*'.**

Data from interviews conducted with learners and tutors revealed technology use in everyday life, both inside and outside the formal practices of work and for study purposes, extended into personal, social and entertainment networking applications. The everyday use of computer technology and staying connected has become an indispensable necessity for many in describing technology use for work purposes, doing research on the internet, for business and banking, to do online buying and selling, for e-mail correspondence and for entertainment purposes like communicating with family and friends globally, listening to music and radio, reading news, doing photo editing, Twitter, Skype and Facebook. These were noticeable extensions of technology use in everyday life. Learners indicated that they spend around one to three hours per day engaging in some form of non-academic interaction with technology.

The amount of time learner and tutor participants spent on academic activities were influenced by the projects they were doing, the time they spent on other activities, the amount of subjects they were doing and if they were first doing research activities and then completing assignments. Tutors expressed their time spent on the computer per day as, '*...email discussion posts, announcements, grading, making remarks...lot of communication [and] interaction... [with] the students*' (T4). Learner and tutor participants indicated that they spend an average of around four hours per day on academic activities.

Learner participants were asked if they spend more time or less time learning with technology versus traditional learning methods. Seven learners concluded they spend less time on their learning when using technology, as everything is electronic and they can research faster, they do not have to attend classes on a daily basis and they can access their learning any where. Four learners concluded that they spend more time using technology in learning as there is no

lecturer to guide them and they have to do everything themselves. One learner concluded that the amount of time using technology learning versus traditional learning is the same.

Technology integration and the amount of time spent on the computer per day highlight the invaluable, enhanced, diverse and complex technology saturated practices in everyday life. The next section focuses on the experiences and expectations when using technology in learning and teaching.

#### **5.4.1.2 Experiences and expectations: *‘Technology stretches the boundaries of teaching to a lot of lengths’.***

The perceptions of learners, tutors and institutional management members were found to be positive overall and it had a notable effect on the learning experiences for all involved. The learners in the study described modern learning, referring to the added value technologies offer, including the potential of interaction, online support, flexibility to access learning any time, any place, any way and other factors (Tesar & Sieber, 2010:126), as innovative, interesting, more relevant to the current way society operates. They found this kind of learning to be more flexible and accommodating, as many of these learners have to balance studies, work and family lives. Kandiko and Mawer (2013:6) confirm the notable effect experiences and expectations hold, as L8 expressed,

I like the fact that I do not have to be in a classroom for hours at a time. I don't have to fight traffic to get to the campus or worry about parking. The schedule is very flexible and I am able each week to work at my own pace. If things come up, I am able to rearrange my schedule easier.

Meaningful learning is seen as a cognitive process involving how learners make sense of the information presented to them. When learning matter is understood, the act of learning is largely initiated by the learner, as discussed in section 3.6 and supported by Rogers and Horrocks (2010:126). Meaningful learning occurs through experience, exploring and extending one's own understanding through perceiving, comprehending and storing information that leads to individual growth and development, which is an essential element in the cognitivists' view. L3 states,

I read my textbook by myself. That way I can understand...because I do it myself and rely on myself...I won't forget...and learning the material myself, I am a better student...I am constantly learning new ways of doing things...and feel more confident.

Drawing on the social constructivist view of learning in adulthood, namely that much of human learning takes place in social settings (Rotter as cited in Merriam *et al.*, 2007:289; Coogan, 2009:317), when individuals engage socially in dialogue and events, they learn better, their current views of knowledge is challenged, transformed and elaborated when interacting with others. L6 expresses interaction with others via technology as,

... they [other learners] pass you research legs...my learning experience is [now] different. I did not have that before...they [learners] become more academic because of technology, they continuously talk towards their peers, their demands, their studies, about research...as opposed to non-computers, non-technology, so the proliferation of technology I think, also give a proliferation to academic advancement.

This is largely supported by Vygotsky's work (1978), cited by Merriam *et al.*, (2007:292) Vygotsky claimed that meaningful learning in higher education, where learning is seen as an active rather than passive attempt, accentuates both an individual cognitive and a socially interactive activity.

The ready availability of information through technology resulted in a society that expects instant and recent results, which leads into self-directed learning, described as, '*...studying with technology has made me more resourceful and self-sufficient*' (L1). According to Knowles *et al.*, (2012:184), as discussed in section 3.3.2.7, the adult learner's ability to take control of his/her own learning activities encourages greater autonomy, independence and responsibility, expressed as, '*If I reach a section where I feel the content is being explained very poorly or inefficiently I will look around for alternative resources*' (L1).

The experiences and expectations of tutors using technology for teaching, in reference to a set of 21<sup>st</sup> century competencies (Pedró, 2010:16) discussed in section 2.2.1 and in the analysis of the raw data obtained from interviews with tutors, is the customisation and adaption to learner specific needs. The following comment aptly illustrates this, '*...it really is student-centred, how you approach your delivery system, your student support system, everything...*' (M2).



The notable attempts by tutors to enhance technology learning activities as discussed in section 2.3.1.2 (b) is reflected in another comment ‘...*you have to be innovative...to bring in outside sources...[and] ...try to keep up with different tools and use those tools...*’ (T4). Supported by Naroozi and Haghi (2013:83), it is evident that a different set of skills and management competencies are therefore required. Tutors mentioned that it is important to be a good written communicator to express yourself in writing, to have exceptional technology software and hardware skills, to be organised and have time management skills for meeting deadlines and for your students to meet their deadlines, to be emotionally intelligent and to be a team player when using technology in learning, expressed by T3 as,

Even though you are not actually in front of a person but when you speak to them, or on the computer with them, your tone, your communications have to be personable.

Tutor training in different aspects related to technology and sharing best practices to accelerate learner performance is supported by Naroozi and Haghi, (2013:84) and expressed by T4 as,

...we meet as instructors on a monthly basis...we have in-service training modules to complete...you have to have two [modules] in your expert subject and two [modules] in regards to teaching and regards to technology... [name of institution] does a great job in trying to keep up with technology and give us different tools in the classroom...the tools we utilise have tremendously increased and improved [and] it doesn’t [sic] take necessarily a lot of time to train with it.

Regardless of the medium, many of the same qualities essential to successful traditional classroom learning applies to the technology classroom with the tutor as the most significant to impact on learner success. It is evident that,

...you [still] need to elaborate...break down ideas and concepts that the student can understand even without your presence. I draw out the learning process...if a student posts information I build on that...I ask questions...to help draw out more than what the question ask and I try to be visually there for them [students] like in the classroom...be in front of them (T4).

Teaching styles when using technology were found to be different from traditional face-to-face instruction. One participant admitted, ‘...*my traditional lecturing approach would not sail...*’ (T5),

...when I first started [teaching] online I though...it's [sic] not gonna [sic] be the same experience, the discussions are not gonna [sic] be that dynamic...it will be more difficult to build relationships. But having taught more online...you can communicate in so many other ways and build relationships with students in other ways than being face-to-face... (T4).

Where the tutor is traditionally responsible for the establishment of an atmosphere in the face-to-face classroom, the physical interaction and the real person engagement are missing from the technology classroom. Expressed by T2 as,

...with traditional [teaching] you have the physical contact...you can observe...see reaction from the person you talking too. If I talk to somebody there is a number of things I can assume based on the physical situation...there are some things you can talk [through] in passing about [sic] in class (T2).

Limitations in reaching desired levels of interaction when using technology learning can be related to the traditional ways of teaching over many years (Naroozi & Haghi, 2013:84). Kearsley (2013:428) states that the effectiveness of teaching with technology is challenging when considering tutor participation, interaction, responsiveness, evaluation and tutor presence when using technology in learning, in whichever way it could be achieved. Tutors expressed measures such as having a welcome video for learners at the beginning of a subject, to be available on specific days for learners to meet in person, to have Skype, telephone and e-mail availability with a 24-hour response time during the week and a 48-hour response time over weekends to meet the needs of learners.

In relation to the evaluation of tutor effectiveness and teaching outcomes, different instruments are available. One of the most familiar instruments used for tutor evaluation is learner feedback and evaluation (Kearsley 2013:428). M2 lists other instruments used to measure and evaluate successful tutoring,

there are a lot of different quantitative and qualitative measurements we looking at...about the instructor, about the delivery system, about the content of the class...and then the supervisor can go into the [online] classroom and making sure you [tutor] responding to emails and discussion and you grading and you making comments on the grades... [and that] you keeping your grades up to date every week. They [Tutors] also have what's [sic] called the critical friend review. It's [sic] another instructor who has access to your class and looks at your announcements, your discussions, your participation and how that looks. Your partner to student needs. [If] you [tutor] [are] not meeting the needs of the students, then you're [sic] not a match [for technology teaching].

Assessing learning and learning outcomes as discussed in section 2.3.1.2 (a) is one aspect of evaluating the overall quality of programmes. However, regardless of the medium of

instruction, the learning outcomes are paramount for success in higher education. Assessment methods include mid-term and final examinations, online quizzes, discussion forums, weekly assignments and a final research paper for each subject. Throughout the learning process the tutor has access to learners' online platform to assess learner involvement and competency. All these methods, when effectively implemented, provide valuable feedback which is not available in the traditional classroom. One tutor comments as follows,

I can insert comments and give feedback to students immediately. I can gauge participation in discussions from students' online presence and I can track how many times a student logs on. I can track if students are posting to the discussion forums and are commenting on topics. All the assignments are located in one place...I can go back...to the history of assignments if I need to evaluate progress (T5).

Institutional management seems to attempt to propose attractive options for the adult learner who is trying to fit study into a busy life and to offer more a set of educational experiences and less a site for learning (Kalantzis & Cope, 2012:24). These managers felt that using technology to enhance learning could change the face of the future adult learner. With learning outside the traditional learning environment and beyond geographical boundaries, a diverse audience from various academic levels, different towns, skills, knowledge and prior experiences become involved. M2 says, '*...with almost 3000 sections of classes that we offer online and 14 campuses on ground...with students across the globe*' (M2).

Supported by Shelton (2011:1), there are some key aspects when evaluating online activities for effectiveness. In order to ensure learner retention and establish a rich learning experience, the overall assessment of the learning process should be recognised as stated by M2, that

...our [student] marks...how well they [students] are achieving in the classroom...how many graduates we have per quarter...per year...our accreditation...guidelines we have to follow...there are results that help us understand...student outcomes in regards to grades and grade point average. Completion rates...more quantitative measurements that we looking at.

Other measures taken by institutional management to evaluate online activities for their effectiveness are found in formal processes of regular programme evaluations with remedial actions if necessary, and with the involvement of employers, M2 states this as follows, '*...we [are] involved in connecting with employers that hire our graduates...so from an outside perspective... [measuring] how effective are they in their career they choose...*' .

However, a pass or fail mark in a programme is not a useful measure of learning since it may not correlate highly with the planned learning outcome as discussed in section 2.3.1.2 (a) (Kearsley, 2013:429). M2 offered the following insight, ‘...*their ending grades is [sic] a part of that...but it is not the whole thing because the student is ultimate responsible for learning... it’s [sic] their responsibility.*

Shelton (2011:9), Noroozi and Haghi, (2013:83) express the need for a model assessing online activities for effectiveness, but to date none could be located.

In relation to future employment and learning with technology, tutor and management participants expressed learning with technology as an advantage. Learners stay current and learn to keep up with demands outside the educational environment. The technology skills acquired by learners entering the market place equip them with more than just the theory of a subject. Participant T5 said,

...students [learning with technology] will be a few steps ahead...with technology you learn documentation skills, you learn report writing [skills], analysis skills...because they [students] participate in discussion forums. Students learn research skills...

In support, Pedró (2010:15) postulates that technology learning environments that provide for technology-related competencies are indispensable in the workplace. Lifelong learning and the ability to learn throughout ones career, is seen as a benefit for learners using technology to learn. However, a stronger workplace linkage should be established as learners often achieve academically, but are not employable, as postulated by Materu (2007:7) and Perold (2012:187). M2 argues that,

We have what is called employer advisory boards...we have representatives from every programme, career [and] workplace that come together on a regular basis...they look at our curriculum and [look at what] we [are] training...are we giving them [students] the education they need to go out and into the workforce and into their careers.

Participants experienced the effect of learning with technology on employment as positive. Learners who work and study expressed the benefits of improved computer skills, more resourceful in their work and the ability to work independently. Stated as, ‘...*it is in a company’s best interest to employ those who are confident and capable of being able to put that advantage [technology learning] to good use*’. (L1).

Successful evaluation of teaching and learning with technology and the possible effect on employment prospects are furthermore affected by learners' preferred learning style, which influences the learning experience (Collins, 2010:158) and will be discussed next.

#### **5.4.1.3 Learning styles and personality types: *'In class you will just be quiet...but on technology you can say it'.***

How learners prefer to receive, process and retain information is highly dependent on their learning style and personality type, as discussed in section 2.3.1.2 (c) and learning with technology shows a positive correlation between learning style, knowledge retention and learning experiences (Clayburn, 2011:13; Shelly *et al.*, 2010:331; and Collins 2010:154). Not all learners learn the same thing the same time and in the same way, as supported by L3,

...if I feel I have energy at 2 am, I wake up and do my assignment...because at night it is quiet. No disturbances. I like it more than during the day...[but] everything must be available for me...I don't [sic] have to waste the whole day to go to school to my tutor. My learning style [is] I like to read and study by myself.

Learner participants further expressed that they feel more comfortable to express themselves in the online classroom as they do not experience peer pressure. They feel more comfortable and find it easier to concentrate. Participant L4 expressed this as follows, '*...you are afraid of saying [something] in front of a person, so technology helps us, there is no one to criticise you or laugh at you.*

The acknowledgement of different learning styles and the need for customisation of learning content according to learners' capabilities, personalities and expectations will make a programme successful, as the following comment describes,

...some students learn audio, some are visual, some are kinetics, so there are different styles of learning the student has...so they want to be matched...so in the classroom you have to offer video for visual people, you offer Powerpoint for visual people, you offer the opportunity to read the e-book as oppose to a hard copy...you have multiple choice and essay because you have different students. I think you want to be as broad scoped as you can, to meet each individual adult by their need on how they learn best... (M2).

Preferred learning styles have an impact on the quality of learning. Several participants stated that their preferred learning style allows them active thinking, independent learning

and making their own choices, which is meaningful for each individual learner. Participant L7 said,

...online learning is a good match to my personal learning style...that is what made it such a good choice for me...being able to read information is helpful to me...if I had only lectures it would not work for me...I need visual input...I am very detail oriented...that works for me more than the traditional setting because [in the traditional classroom] it is the only way the instructor can break the knowledge.

In this study it is evident that where adults learn with technology, and active learning strategies are implemented to enhance the learning and the emphasis on self-direction and control of own learning is highlighted, the acknowledgment of different learning styles and personality types has become more prominent. It is furthermore evident that different learning styles can simultaneously be accommodated in the technology classroom. T4 speaks as follows on this matter,

..some students might not do well on quizzes but do great on a paper or some students might not do well on papers but do great on quizzes...because it's [sic] multiple choice...so I think there is a variety of opportunity [and] learning outcome tools when it comes to that [learning styles] (T4).

In the next category, the creation of a technology learning platform is discussed. It is affected by various factors presented as sub-categories, focusing on and examining related elements in the choice of a technology learning platform.

#### **5.4.2 Creating a technology learning platform**

Decisions on technology when creating a learning platform as discussed in section 2.4.2 is seen as an on-going management task to provide learners, tutors and institutional management with the most commonly used learning tools to enrich and enhance the learning event. For the purposes of this study the researcher does not focus on the development or design of a technology learning model with related aspects in hardware and software needs, but rather on sharing the experiences and expectations of learners, tutors and institutional management using the different tools available on a technology learning platform. Well-developed technology platforms provide user friendly tools in technology learning and are discussed in section 2.5. It is, however, pivotal to acknowledge that technology is in service of educational goals, and pedagogy is more important to quality than technology tools.

Participant T2 emphasises this by stating ‘...*in modernising teaching [and learning] ...we [tutors and institutional management] should make it [learning] comprehensible but [should] not compromise on the quality...*’ as supported by Alberts *et al.*, (2010:188).

First time experiences of some learner participants using a learning platform with different technology applications were expressed as,

At first I was not impressed at all. I thought how I am going to survive this thing [sic]? But now, after experiencing it [the platform], it is really nice and convenient...you don’t [sic] struggle to do anything...I can even learn more than I use to (L3).

Using the advantages and features of technology tools on a technology platform, learners expressed their experiences as,

All your studies are built in so when you log in everything is right there. [You] click on your course and see what you need to do...the quizzes get marked instantaneously, the assignments are very easy...it is not complicated... (L6).

Supported by Alberts *et al.*, (2010:193), tutors expressed the advantages and features of technology tools on a technology platform as user friendly applications that allow for paperless and easy administrative features as classes, assignments, discussion forums and grade books are available online. Tutors feel that the availability and provision of visual materials enhance the learning experience for users and the online platform encourages learner-tutor interaction as tutors’ visibility is noticeable when users are logged into the online platform.

In the next sub-category participants discuss their experiences with the use of different learning tools found on a technology platform. This includes experiences of traditional versus technology learning, hybrid learning versus pure online learning, the promotion of interaction and feedback, social equity through global interaction and the challenges using technology for learning.

#### 5.4.2.1 Traditional versus technology learning: *'I don't have to be in a classroom for hours...My schedule is now very flexible'*.

Analysing the raw data from learner participants when asked for the reasons why they have decided to learn using technology as opposed to traditional learning, various factors influenced their decisions. Reasons include the lack of transportation to a physical place of instruction, medical reasons, work and family responsibilities, sport involvement and the flexibility of learning any time, any place and anyway. One participant said *'I can study any time of the day or night...'* (L1), *'...according to my hours and my place'* (L6).

Opposed to the benefits experienced and expressed by some learners using technology in learning, other learners experienced the benefits of traditional learning as,

...it is easier to learn information from spoken communication [attending class] than with reading...it [attending class] is real-time, human presence, social context...it is easier for most students to remember what is said [in class] than to work alone (L10).

Tutor participants mentioned the convenience of using technology learning versus traditional learning,

.....there is more preparation on the traditional side than the online and the facilitation is easier...[because] the material is available and elaborated...in standard learning [traditional] a lot of concepts you need to explain from the textbook...online is easier to facilitate because the concepts are already well explained in the videos and the text...we [tutors] can leverage of technology because the generation nowadays are good on technology...we [tutors] can definitely use the good side of technology to train them [students] and help them [students] (T2).

However, tutors mentioned concerns such as the fact that physical contact and possibilities for observation and assessments of learner reaction are lost in the technology classroom.

Regardless of the medium, many of the same qualities that are essential to successful traditional learning and teaching also apply to the technology classroom. The establishment of a new learning environment supports the attractiveness and the benefits of learning using technology in higher education. This is supported by Alberts *et al.*, (2010:185) and is discussed in section 2.2.1 and is illustrated in Table 2.1. The next sub-category addresses hybrid learning versus online learning.



#### 5.4.2.2 Hybrid learning versus pure online learning: *‘You have the real place and the online to get together and gather’.*

Online learning refers to learning offered on a learning platform via the internet that excludes face-to-face and print-based instruction, versus a learning approach that includes face-to-face and print-based delivery using technology to enhance learning and teaching. One participant sees this as *‘...the best of both worlds, a little of the old traditional with integration of the new...’* (M3).

L1 speaks as follows on this topic,

I really enjoy the blended learning system. I think there are definite benefits to meeting once or twice a week with other students and the lecturer face-to-face. Apart from just the social interaction and bonding, it helps keep you more accountable and focused. It also gives the lecturer a chance to ensure that students really understand the basics of each lesson and then answer any questions that they might have. Meeting in class makes the course feel [sic] a bit more tangible and can perhaps be a bit of a reality check for students who need it.

However, some learners expressed learning using the hybrid learning approach versus pure online learning as,

I think it depends on the type of class...with programming [subject in Information Technology]...I don't think I would need class...you need to work that [sic] on your own. But with the classes where we had to come in...it helped... [as] there were many times stuff [sic] you needed help with. But I enjoy working on my own...[however] I would say you have to at least go to class once a week...to make sure you still understand the work (L2).

Tutors and management participants involved in using a hybrid study approach expressed the combination of real-time interaction and technology in learning as beneficial for a more positive learning result,

[When] I look at that [hybrid approach] on how you combine sort of the real life time interaction with the flexibility of learning...that sort of combination is golden and we [name of institution] find that it is sort of like the best way...to have face-to-face interaction too. Hybrid learning gives us better results and we see great retention rates... (M1).

In support a research report submitted by the *United States Department of Education* (US Department of Education, 2010:xiv) and a study conducted by Mossavar-Rahmani and Larson-Daugherty (2007:67) state that learners in a hybrid learning conditions performed

better than learners in pure online or exclusively face-to-face instruction. In the next sub-category the promotion of interaction and feedback using technology in learning is discussed.

**5.4.2.3 The promotion of interaction and feedback: ‘We can post comments, questions, concerns...to other students and staff members’.**

The data and the Vygotskian social cognitivist approach (1978) focusing on new learning, as discussed in section 3.3.1.3, show clearly that human learning occurred in a social context through social interaction with others where learning is collective and shared (Paciotti, 2013:105). Learners’ interaction with course materials available on the technology platform show resources such as well-indexed and searchable online textbooks, the availability of visual materials such as video clips and presentations, online quizzes with immediate results and feedback and the availability of an online library. L6 said,

...to do your assignments, you get an e-book and that’s [sic] great...to get quotes from it [e-book]...they [tutors] always post links where you can get additional information...and the actual tutorials are good. I don’t [sic] find the material online any different to the material you will get from non-online education...

However, not all learners prefer to have an electronic copy of a textbook and experience the interaction with online course material differently. One participant reveals, ‘...with an e-book I only have a two year subscription to access that content...it’s [sic] better to have a permanent book I can keep forever that become mine...’ (L7).

The experiences of learners in relation to peer support and their collaboration with other learners using technology to learn were expressed as a positive learning experience, as learners socially engage to exchange important links for research purposes, to encourage one another and learn from one another. Supported by Alberts *et al.*, (2010:188) that learners can further their own understanding through social interaction with their peers, L5 says, ‘...things you don’t [sic] understand you find it easy if you discuss with another student’.

However, not all learners utilise learner-learner interaction fully and/or they do not experience the opportunities available on the technology platform due to various reasons, which might include learner inferiority when commenting online. One participant admitted, ‘...I don’t like the discussion thing...you can all think and say, but someone can say you are

*wrong...I don't like it...* (L10). Some learners do not feel the need to socially interact online, such as L9, *'I don't [sic] really interact with other students on the platform besides commenting on discussion posts which is required'* or for reasons as expressed by L1 that, *'...student discussions tend to be fairly forced and I feel many of the discussion topics are chosen very poorly'*.

The social collaboration related to learner-tutor interaction experienced by learner participants in the study were experienced as positive. They have an online and build-in message and communication function that enables prompt feedback from tutors. Tutor availability and assistance were regarded as highly positive with regard to feedback, visibility and learner support. However, other experiences of learners pertaining to learner-tutor interaction included tutors who are helpful, but not always available when needed, or that feedback is generic and clinical.

In response, tutors' and institutional managements' experiences regarding the interaction and feedback from learners were described as, *'I have seen more interaction lately but it is a few students here and there and the same students again and again. I would like to see students more engaged'* (T3).

Learners' personal experiences related to learner-institution interaction and feedback as supported by Naidu (2013:269), relates to the implementation of an orientation programme where tutors and learners using a technology platform to teach and learn, are seen as an important management function. Participants in the study spoke about this as possible, *'...with a brief in-service [training] they [institutional management] do training with folks [tutors] that are new...on how to use the system [online platform]...'* (T4) and with learners *'...we have an orientation... a student has to go through the orientation of the [name of platform]...'* (M2).

In relation to learner support functions available on the technology learning platform as discussed in section 2.3.1.4 and supported by Watson and Gemin (2009:15) and Naidu (2013:269), learner support activities, including administrative and technical support, should be included and maintained to form part of the instructional design process when using a technology learning platform. Besides the academic support experienced by learner participants, it is evident participants experienced learner support outside academic care,

Each student is assigned to an SAS [student affairs specialist]. This is the person a student goes to for any and all needs. The SAS is our own personal cheerleader. They are your mentor, support and your friend...maybe you have difficulties...submitting assignments...or maybe you have a [sic] issue with yourself or you have a problem...they [student affairs specialist] ask you things [sic] and you explain to them (L4).

Learner support in relation to administrative and technical matters as experienced by learner participants included assistance with internet connection problems, updates on new starting dates for classes and enrolment dates, assistance with login problems and password issues on the technology platform, reminders on pending assignments, outstanding balances and '*...there is something like ticket help if you have a problem then they [institutional management] come back to you within 24 hours*' (L10).

The availability and advantage of having online academic, technical and administrative support for users of the technology learning platform highlights the advancement of interaction and feedback in the process of learning. In the next sub-category social equity through global interaction is discussed.

#### **5.4.2.4 Social equity through global interaction: *'They [international students] always ask me about South Africa...it's quite cool'*.**

As discussed in section 1.7, technology and globalisation is shaping adult learning through international media technologies and the global circulation of ideas. It is evident from the analysed online peer group discussions, available from participants' online discussion forums and included as Appendix H, that learners engage in social and academic discussions beyond geographical and institutional boundaries, as stated in section 2.5.2.8. One participant said the following,

...students ask me about [name of country]... I learn from them [international students] and they learn from us...we discussed culture, stereotypes and things like that. There are no more boundaries...online you know you have students...in different places... (L3).

It is evident that customisation of learning, which includes interaction in a broader social context, eliminates feelings of isolation for learners and contributes to positive learning experiences. The challenges using technology for learning will be discussed in the next sub-category.

#### 5.4.2.5 Challenges using technology for learning: *‘Sometimes, because technology is not 100% you don’t have access’.*

Drawing from the raw interview data analysed from participants in the study and supported by Hijón-Neira *et al.*, (2010:451) as discussed in section 1.3, the challenges when using technology in learning is emphasised through all aspects of management and operations. Different technological and technical challenges are experienced, not only by learners and tutors, but also institutional management. Learners that reside in remote areas who are unable to connect or upload assignments or get support from tutors mentioned this as a challenge. In addition, experiences of different network strengths that slow down the downloading of video watching and financial strains, and not being able to afford airtime to access the internet were also identified as challenges when using technology for learning. Other problems included instances when institutions upgrade technology systems and learners are not able to post comments or get responses from tutors, often resulting in learners not being able to get their assignments in on time. Other challenges using technology for learning were expressed as the availability and prompt delivery of hardcopy textbooks in order to complete assignments and research papers timeously, negative discussion postings that has an effect on the rest of the online community, the need for a well-marketed and integrated academic chat facility to enable learners to engage better, and an effective technical support system were expressed as concerns. Stated by L7 as,

...the way they [institution] have the technical support system setting up is something they [institution] have to refine a little bit...if they [institution] can include more detail instead of the automated response [when problems are reported]...

Using technology for learning and for uses outside the academic environment, concerns were expressed on a more social level expressed as,

Technology has a lot of distractions...yes...they [students] can learn, but on the internet is a lot of distractions, e-mails, Facebook...They [students] spend more time doing those things rather than learning...(T2)

The challenges in using technology for adult education is embedded in the following aspects that are discussed below, namely adjusting to changes in technology, the practical application of learned theory, netiquette, assessment without direct supervision, technology learning not

fit for all, and the matter of inferior or superior qualification when using technology in learning.

**a. Adjusting to changes in technology**

Learning with technology not only has an impact on society and on the way adults receive information, but is about the rapid adjustment of learning material, teaching styles, accessibility, flexibility, support and the provision of quality learning, as is evident from participants' feedback that technology can change immediately, expressed as, '*...in online [learning] there is constant change. You may not know about the change and adjusting to change is a big thing for a person to deal with...*' (T3). For institutions to be able to deliver the quality of learning and to be sensitive to the demands of their learners, change is imperative. M1 said in this regard,

...we are constantly upgrading [technology]...because if you expect something static it is not what we [institution] have...we want to keep the quality of the learning first and foremost...and that could be costly in terms of people hours...but it [technology] is not like a static thing.

However difficult to predict technology futures in education, the focus has moved to how adult learners relate to and value technologies available to them. Beetham (2013:259-260) posits that a change in adult learning and teaching is inevitable where technology has shaped learning in the 21<sup>st</sup> century.

**b. Practical application of learned theory**

Educational environments that allow for interactive instruction and learning and are enhanced with practical hands-on application, 'provide a framework for successful acquisition of knowledge' (Ernst, 2008:47), as discussed in section 1.2. L7 spoke of this as the lack of practical experience to enhance theoretical knowledge,

...some people need their hands-on [experience]...something that is not necessarily going to thrive in the online environment... [because] certain types of fields still necessitate classroom instruction, particularly where you have to give injections or be in the kitchen for the instructor to be able to taste what you cook...but there are pieces of those...that may be able to be online and only certain pieces be taught in the classroom.

The best model for instruction should be developed to assist learners with the practical application to enhance their theoretical knowledge and tutors often have to find innovative ideas to assist learners on the technology platform. Within the traditional classroom tutors are able to provide models and other means to promote interactive instruction.

The establishment of virtual laboratories and the opportunities available when learning with a hybrid study approach (HSA) might be a workable solution. Participant L3 said in this regard,

...there is less practical in online...but with [name of institution] there is [practical online]...they [institution] connect to online labs [sic]...and I do my practical on that...you can modify...there is [sic] labs [sic], simulations...it simulates like real...everything for you...and the labs [sic] are real time environments...

However, just because it might be technologically possible to simulate a physical learning experience does not necessarily suggest it is the best way to teach.

### **c. Netiquette**

As part of the orientation process with learners on how to use a technology platform, the correct communication protocol is explained and a set standard of institutional and instructors' rules and regulations are laid down that applies to all using technology to communicate. Netiquette, as discussed in section 2.4.2 and supported by Pratt (2010:113) should be implemented to execute proper and effective communication, including spelling, grammar and punctuation. However, regardless of the orientation process and set rules to guide protocol when communicating online, concerns were expressed by learners,

The standard seems to be set very low to achieve full marks each week so it doesn't [sic] really do much to encourage quality discussions which I think is a pity. Some posts are nearly incomprehensible from typos and just poor editing and yet they will score the same amount of marks as students who put much more effort in. There are standard guidelines and rules to follow and the lecturer can contribute their own [rules] on top of that...we are required to be polite and tolerant of other students...not to be condescending or argumentative...to explain our reasoning if we disagree and to make effort to create discussion (L1).

It is evident that netiquette is strongly affected and influenced by its users. However, the evaluation of the quality of communication and discussions are managed by relevant subject tutors, which is ultimately responsible for quality communication.

**d. Assessment without direct supervision**

According to Irele (2013:496) and discussed in section 2.4.1, learning with technology offers far more sophisticated and advanced learner analytics than is possible in face-to-face learning. As learner platforms can be accessed by institutional management and external assessors, to determine the nature of activities and the quality of learning, concerns regarding assessments were expressed as,

Although students study online they have to come to an assessment centre where it is supervised...where you [student] log in at a certain time and they [students] do the online assessment with supervision. I think there is a very big problem in evaluating the learning event...the outcomes is very difficult to assess using one method. I have seen that it is possible for someone to have someone [else] help you every time that you are working...learning should not just be online assessment and participation and then a qualification, but should have controlled environments (T1).

With various assessment methods that are available on the technology learning platform, a controlled and supervised assessment at a central venue is needed to authenticate learners and eliminate issues of plagiarism.

**e. Technology learning not fit for all**

Learning with technology as described by participants in the study does not suit all types of learners for a variety of reasons. Technology learning could be a good match for some, but not for all, as not all people get the same social satisfaction from technology learning and need to have a physical environment to engage with others. One participant admitted, *'I need the teacher in front of me...because some of us learn better with a face-to-face instructor'* (T3).

It is further expressed that learners who are tutor-dependent, who lack self-discipline and self-direction, who are not organised and self-motivated, are found not to be a good match for learning with technology. Within the recruitment process and the initial orientation it is



possible to assess whether a learner is a good match for technology learning or not. One participant explains,

...with the recruiting process...we [institution] try to lay out the expectations and help the student recognise...is this a good match or not for online...there are a few ways we [institution] go about matching whether students are right for online...if a student does not do well whether it be because of technology or because of poor student practice or they just not ready for online or it's [sic] not a good match...it starts telling in their grades and their lack of engagement within the classroom... (M2).

It is evident from participants' feedback and from the results found in various studies discussed in section 1.2 that learning results proved highly successful where a face-to-face approach was supported with technology integration.

#### **f. Inferior or superior qualification**

The matter of inferior versus superior qualifications when learning with technology was expressed by a number of participants in the study. Obtaining a qualification when learning with technology is often seen as inferior to a qualification obtained in a face-to-face environment due to the lack of direct tutor supervision. This was expressed as a mind-set that has to change, especially when the same standards, the same learning materials and the same outcomes are assessed in learning with technology versus face-to-face instruction. Introducing new learning strategies is often experienced as substandard to tried-and-tested methods. L7 said,

...we [international students] went through a period like that...and it is not looked at anymore. But there was a time, especially when it [technology learning] was new and it wasn't [sic] recognised...people was still figuring out if you can really get everything from technology than you can get from traditional classes.

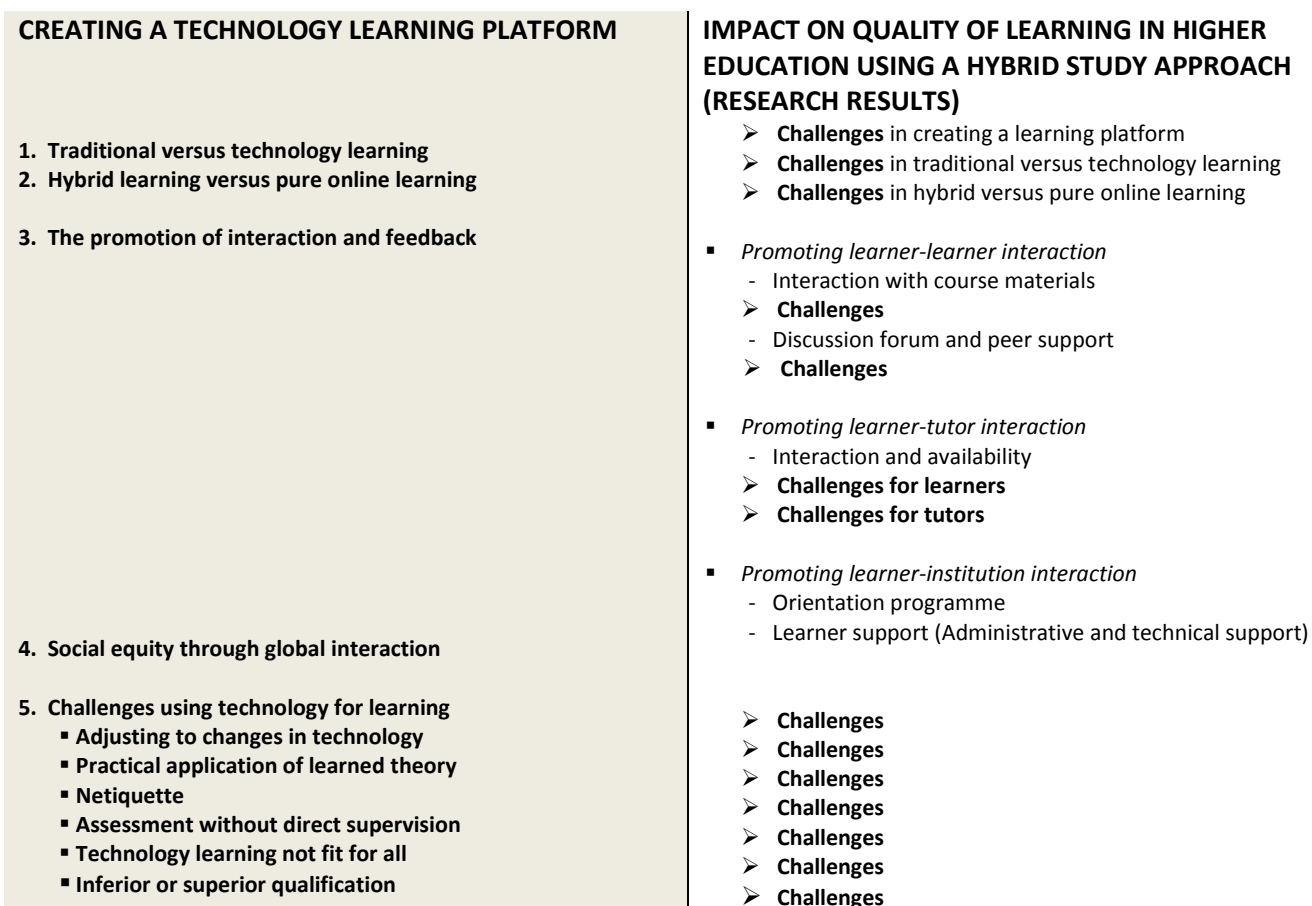
In asking participants how the challenge of inferior versus superior qualification when using technology to learn should be addressed, they suggested that introduction to learning with computers should start at a young age as learners often find it difficult when entering tertiary learning if they had not been exposed to technology learning earlier in the learning process. It is, however, clear that a new learning approach will take time to introduce and for people to adjust, as is evident from the following statement, '*...it takes time for people to see the quality of students [learning with technology] that graduate have the same knowledge and equivalent skills than those who took traditional classes...*' (L7).

Learning with technology is not an unfamiliar phenomenon globally, however limited research using a hybrid study approach is. This matter is discussed in section 1.1. The next section offers a summary of the research findings.

## 5.5 SUMMARY OF RESEARCH FINDINGS

Individual interviews, supplemented by the case study method through access to data from learners' and tutors' online learning platforms to assess the online learning of learners and supported by documents analyses, revealed that managing the quality of learning in higher education through the hybrid study approach (HSA) could be influenced by numerous factors. In order to facilitate and simplify an understanding of the diverse factors that could have an influence on managing the quality of learning in higher education using a hybrid study approach, a diagrammatic representation of influential factors accompanied by the challenges is presented in Figure 5.1 below.

<b>21<sup>st</sup> CENTURY LEARNING EXPERIENCES AND EXPECTATIONS</b>	<b>IMPACT ON THE QUALITY OF LEARNING IN HIGHER EDUCATION USING A HYBRID STUDY APPROACH (RESEARCH RESULTS)</b>
<ol style="list-style-type: none"> <li>1. Technology integration in everyday life</li> <li>2. Experiences and expectations</li> </ol>	<ul style="list-style-type: none"> <li>▪ <i>Time spent with technology</i></li> <li>▪ <i>Learners' experiences and expectations</i> <ul style="list-style-type: none"> <li>- Innovative and flexible learning</li> <li>- Meaningful, social and active participation</li> <li>- Self-directed and resourceful engagement</li> </ul> </li> </ul>
<ol style="list-style-type: none"> <li>3. Learning styles and personality types</li> </ol>	<ul style="list-style-type: none"> <li>▪ <i>Tutors' experiences and expectations</i> <ul style="list-style-type: none"> <li>- From tutor-directed to learner-centred approach</li> <li>- Tutoring skills and teaching styles</li> <li>➤ <b>Challenges</b> <ul style="list-style-type: none"> <li>- Tutor evaluation</li> <li>- Quality assessment and learner outcomes</li> </ul> </li> <li>➤ <b>Challenges</b></li> </ul> </li> <li>▪ <i>Institutional managements' experiences and expectations</i> <ul style="list-style-type: none"> <li>- Servicing a diverse audience</li> <li>- Evaluating online activities for effectiveness</li> <li>➤ <b>Challenges</b> <ul style="list-style-type: none"> <li>- Relationship to future employment</li> </ul> </li> </ul> </li> </ul>



**Figure 5.1: Representation of research results impacting on managing the quality of learning in higher education through a hybrid study approach.**

Figure 5.1 illustrates the findings of the research with the influential factors and challenges when managing the quality of learning in higher education by using a hybrid study approach. With regard to the diagram, the quality of learning in higher education is determined by two factors that represent the two themes of this study, namely, 1) 21<sup>st</sup> century learning experiences and expectations, and 2) creating a technology learning platform. Each theme has several categories and sub-categories. The themes, including the categories and sub-categories, each present challenges that impact on managing the quality of learning in higher education through a hybrid learning approach. These are now discussed further.

The first theme is influenced by three categories, namely, 1) technology integration in everyday life, which is again influenced by the time participants spend with technology, 2) the experiences and expectations using technology in learning is influenced by learners' experiences and expectations, accentuating influential factors such as innovative and flexible learning, meaningful, social and active participation and self-directed and resourceful

engagement of learners using technology in learning. Tutors' experiences and expectations include influential factors such as the move from a tutor-directed to a learner-centred approach, tutoring skills and teaching styles with emerging challenges involved. Institutional managements' experiences and expectations are influenced by factors such as serving a diverse audience, evaluating online activities for effectiveness, including the challenges and the relationship of technology learning for future employment, concluding with 3) learning styles and personality types.

The second theme, namely creating a technology learning platform, is influenced by challenges as illustrated in the five different categories. These are highlighted as 1) traditional learning versus technology learning, including the emerging challenges involved, 2) hybrid learning versus online learning, including the emerging challenges involved, 3) the promotion of interaction and feedback, highlighting learner-learner interaction and focusing on the challenges learners experience when interacting with course materials and the challenges learners experience with the discussion forum and peer support. The promotion of interaction and feedback in learner-tutor interaction focuses on the interaction and availability of tutors and the challenges experienced by learners and tutors are illustrated. The promotion of learner-institution interaction focuses on the implementation of an orientation programme and learner support that includes administrative and technical support. The next category is 4) social equity through global interaction, and the final category namely 5) the challenges using technology for learning with appropriate sub-categories illustrates the adjusting to changes in technology, practical application of the learned theory, netiquette, assessment without direct supervision, technology learning is not fit for all and technology learning as inferior or superior qualification.

Having presented the summarised research findings with an accompanying diagrammatical representation indicating the influential factors of managing the quality of learning in higher education through a hybrid study approach, a conclusion is presented.

## **5.6 CONCLUSION**

In this chapter, the research problem has been addressed as discussed in section 1.4. The chapter accordingly identified and presented various influential factors with accompanying challenges that impact on the quality of learning in higher education when using a hybrid

study approach. The researcher presented and indicated how data from the three data collection techniques were analysed and developed into themes, categories and sub-categories. From the emerging themes, the research findings were discussed using verbatim accounts of participant in the study. The next and final chapter provides a summary of the study, indicating the conclusions reached also focusing on possible areas for further research. The chapter provides possible recommendations and highlights the limitations to this study.

## **CHAPTER 6: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

*'...it is at this point in the research when the rubber hits the road...'* (Schutt, 2012:492).

### **6.1 INTRODUCTION**

The purpose of this chapter is to offer a summary of the research results as analysed from the research data presented in the previous chapter. The research problem investigated in this study is managing the quality of learning in higher education using a hybrid study approach (HSA). This study aimed to explore managing the quality of learning in higher education through technology integration using a hybrid study approach (HSA), with specific objectives as stated in section 1.5:

- The experiences of learners, tutors and institutional management using the hybrid study approach, and if
- using the hybrid study approach addressed the needs and expectations of learners, tutors and institutional management.

Therefore the aim of the study included an extensive literature review to determine the experiences and expectations of learners, tutors and institutional management using the hybrid study approach (HSA) and how the hybrid study approach (HSA) in higher education should be managed for quality learning. A holistic view of technology learning in higher education was provided in chapter one. Chapter two provided a literature study on technology integration in higher education and in chapter three a literature study of learning and new learning in adulthood followed. The qualitative research design and methodology were described in chapter four and chapter five provided the results of the research findings, which were presented in relation to the research question. In this chapter conclusions are drawn from the research results, limitations are identified and recommendations for further study are presented. The next section presents a summary of the literature study.

### **6.2 SUMMARY OF THE LITERATURE STUDY AND RESEARCH METHODOLOGY**

Chapter one started off by discussing the global revolution in the use of technology learning in higher education and the acknowledgement of the key role information communication

technologies (ITCs) have in promoting learning in South Africa. Many countries, including countries in Africa, have developed, revised and successfully implemented learning with technology. Despite the on-going research in learning with technology in South Africa, there is no directive leading the development and application of technology learning in the South African higher education. The reluctance of policy development and implementation of technology learning as an alternative pedagogic approach, when compared to developed countries, does not contribute to the exclusion of South Africa from the global economy.

Meeting the needs of the large number of youth who are neither studying nor working in a technology rich global environment, while also addressing the experiences and expectations of those learners who are studying, necessitated involvement to expand educational opportunities outside the current formal training institutions (section 1.1). The use of a hybrid study approach (HSA) was suggested. Such a method includes face-to-face delivery, using technology to enhance the learning and teaching experience (section 1.2). Assessing and managing the quality of learning in a hybrid study approach (HSA) was discussed in section 1.3. This discussion led to the main research problem, namely: How should the hybrid study approach (HSA) be used to manage the quality of learning in higher education (section 1.4)? The aim of the study was to explore the experience of learners, tutors and institutional management using the hybrid study approach (HSA) and if using the hybrid study approach (HSA) could possibly address the needs and expectations learners, tutors and institutional management have (section 1.5). A justification for the use of a qualitative research design and strategy were discussed, including the data collection methods, data analysis and interpretation, trustworthiness and ethical measures (section 1.6). A theoretical framework focusing on the hybrid study approach (HSA) as a collaborative and social constructivist theory, emphasising the need of active involvement, was presented as well (section 1.7). The definition of concepts were presented (section 1.8) with the structure of the study (section 1.9).

A more comprehensive literature review on technology integration using a hybrid study approach (HSA) was presented in chapter two. It focused on the need for reformation and improvement of training and education in the South African higher education context to enable curricula that is in harmony with international standards of academic quality, knowledge, expertise and skills needed in a changing global economy (section 2.1). The quality of learning on the micro-level was discussed, comparing traditional learning

environments versus 21<sup>st</sup> century learning environments (section 2.2). Management functions focusing on the micro-level of management to ensure quality learning were presented, addressing learning assessments and outcomes, tutor participation, learning styles and student support (section 2.3). Effective communication protocol (section 2.4) and the technology learning platform when using a hybrid study approach (HSA) were discussed (section 2.5).

The nature of learning and the adult learner was presented in an extensive literature study discussed in chapter three (section 3.1). Learning was presented as a process of getting to know new things, which implies change through active involvement in the world we live in. This matter was presented as it is seen through different learning theorists' lenses (section 3.2). Three different theories were discussed and presented to give insight into the ways adults prefer to learn and make sense of what they learn. Learning in the modern past, which includes the behaviourists' learning perspective, learning in more recent times, which includes the constructivists' learning perspective and the perspective towards new learning, which includes the social cognitivists' perspective was presented (section 3.3). New learning and newer approaches to learning that is more engaging, more effective and more appropriate to the present times and the imaginable future was presented, focusing on an all-encompassing way of learning as opposed to a one-size-fits-all learning approach (section 3.4). Technology has changed the face of adult learning and changed the process of learning for the adult learner, as 85% of 21<sup>st</sup> century professions involve technology (section 3.5). Meaningful learning (section 3.6) is seen as a highly individual act that is mainly initiated by the adult learner through experience, exploring and extending his/her own learning into meaningful learning experiences was discussed. Establishing learner-centred learning environments conducive for learning was presented (section 3.7). The differences among learners and how adult learners prefer to receive and present knowledge were discussed (section 3.8). The desire expressed by learners to learn in new ways, to evaluate their own progress and to be able to transfer knowledge into real life situations were presented (section 3.9) with a conclusion of the literature study (section 3.10).

### **6.3 SUMMARY OF THE EMPIRICAL INVESTIGATION**

The data emanating from the literature study presented in chapter two and chapter three provided a conceptual framework for the research study presented in chapter four and chapter



five, which was conducted to determine the impact of the main research problem within the qualitative paradigm from an exploratory perspective and involved an interpretative approach. Since the researcher's interest was to gain insight and understanding learners', tutors' and institutional management's perceptions, opinions, concerns and experiences in their real-world conditions when using technology learning through a hybrid study approach (HSA), the qualitative research design and strategy appeared appropriate. The researcher focused on the micro-level of managing quality of learning by assessing the 'learning' when learning with technology (section 4.3).

A multiple data source for data collection was used through assessing local and international literature, conducting individual interviews with twenty participants using the same technology platform and with experience in studying, tutoring or managing learning in a hybrid study approach (HSA) (section 4.3.1) and through the case study method, assessing the learning of learners through access to data from their online learning platforms (section 4.3.4).

Various ethical measures such as informed consent, anonymity and confidentiality, maintaining honesty and openness were considered throughout the study to ensure that participants' rights were protected to guide and assist the investigation (section 4.3.3). Data analysis was conducted according to the six steps presented (section 4.3.5). The data were analysed and evaluated to ensure trustworthiness and accuracy according to four elements identified by Lincoln and Guba (section 4.3.6).

The raw data collected from the three data collection methods were analysed and organised to identify and develop themes, categories and sub-categories (section 5.3). The main themes identified in the study were as follows:

- 21<sup>st</sup> Century learning experiences and expectations
- Creating a technology learning platform

After considering the research results of each theme, category and sub-category, specific conclusions were reached and discussed separately.

## **6.4 CONCLUSIONS OF THE STUDY**

Based on the findings from the literature review on managing the quality of learning in higher education using a hybrid study approach (HSA) and the findings of the empirical study, the research presented specific conclusions.

### **6.4.1 Conclusions from the literature study**

#### **6.4.1.1 Technology learning in South Africa**

The literature study conducted in section 2.1 confirmed the need for redress and reform of training and education in South Africa, especially with the integration of technology in higher education, which is in harmony with international standards of academic quality, knowledge, expertise and skills needed in a changing global economy. It is evident that the lack of a national technology policy and quality management policy in higher education has not been addressed as quickly and intensively as expected, and this contributes to the already explosive shortcomings experienced in the current educational system (section 1.1). The need to expand higher education opportunities outside the current formal educational institutions and to provide quality tertiary education through alternative offerings is evident (section 2.2.3). The literature revealed that technology interaction presented meaningful and significant learning when technology is used as a dynamic ingredient in the teaching-learning environment. Learning with technology as seen in a hybrid study approach (HSA) is, however, not taking a course and putting it on a computer (section 2.6).

#### **6.4.1.2 Manage quality learning on the micro-level**

It is evident from the literature study that quality learning on the micro-level, (accentuating quality learning of learners) when using technology to learn, to offer learning that is accessible, interoperable, durable, reusable and cost effective, could be highly effective (section 2.2). However, the need for customisation of learning content according to learners' capabilities, personalities, expectations and learning styles will have an impact on the quality of learning. Managing the quality of learning on the micro-level (section 2.3.1) when using technology to learn in a hybrid study approach (HSA) is influenced by institutional policies and procedures (section 2.3.1.1), successful curriculum management (section 2.3.1.2), which includes assessing learning and programme outcomes (section 2.3.1.2 (a)), tutor participation

and support (section 2.3.1.2 (b)) and learning styles for technology learning (section 2.3.1.2 (c)), a qualified tutor component (section 2.3.1.3) and effective student support (section 2.3.1.4).

#### **6.4.1.3 Effective communication for quality learning**

Outlined in the literature study (section 2.4) it is evident that communication is seen as the single most important success factor to prevent misunderstanding and a lack of information when using technology to learn. The literature study indicated that learning with technology demands more collaboration and communication between learner-learner, learner-tutor and learner-institution for guaranteed quality, which is not necessarily outlined in a policy to establish quality communication. From the literature study it is evident that learning with technology offers a far more sophisticated and advanced learner analytics than is possible in face-to-face learning (section 2.4.1; 2.5) and as new learning techniques develop, the assessment of both learner achievement and overall programme evaluation takes on an added importance to guide curriculum development, delivery, pedagogy, learning outcomes, evaluation of educational processes in general, learner support, cost effectiveness, institutional commitment and technology decisions (section 2.4.2).

#### **6.4.1.4 An adult learning approach**

From the literature study in section 3.1 it is evident that a one-for-all learning approach is not well-suited to the needs of society today and does not foster an all-inclusive learning approach. What adults want to learn, what is offered and the ways in which adults learn are determined to a large extent by the nature of the society at any particular time. The introduction of technology and the ready availability of information through technology have resulted in a society that expects immediate and recent results, as is evident from the literature study (section 3.2). It is furthermore evident that much learning occurred in a social environment and did not happen in splendid isolation. In a digital world where the amount of information is constantly changing and where there are life demands and other different roles adult learners need to fulfil, it is evident that adults intentionally search for educational settings that support their way of learning (section 3.3.2).

It was found that in adult learning the preference was towards self-directed learning, as adults are used to direct different aspects of their lives and that adult learning differed depending on the learning circumstances. It was demonstrated that where adult learners had little control over their learning and where learning was isolated and unsociable, the learning outcomes were less favourable, as opposed to learning approaches where learners had more opportunities to pace their learning according to their own capabilities and needs (section 3.3.2; section 3.3.2.7). It is evident that adult learners created knowledge from experience (section 3.3.2.1), adult learners collectively learned with and from one another (section 3.3.2.2) and created opportunities to construct their own knowledge (section 3.3.2.4) through collaborative learning and shared dialogue with their peers (section 3.3.2.3). It is evident that through transformative learning, adult learners think for themselves and take ownership to action their personal and social roles (section 3.3.2.5). It is apparent that the provision of technology in adult learning fosters lifelong learning, as it provides for consistency of content delivery, provides training in remote settings, eliminates travelling costs, enables tracking of learner progress, renders learner flexibility, provides for diverse learning needs, ensures greater retention and reduces instructional time (section 3.3.2.6). The way emerging technologies enables ubiquitous learning, any time any where, away from the classroom as the primary place of instruction and the tutor as the primary source of information was identified as new learning (section 3.3.2.8).

#### **6.4.1.5 A vision for new learning**

Noticeable from the literature study (section 3.3.1) are the accelerated rate of change and the urgency of dealing with social realities that is felt by adults; the fact that societies are hurrying to catch up with new learning and newer approaches to learning; the importance of exploring environments that are more engaging, more effective and more appropriate to the present-times and the imaginable futures (section 3.4). With the large and significant social transition due to globalisation and the acceleration of digital technology in education, it is evident that education should provide learners with the freedom to develop a range of options and choices in providing more than one view of the world. This would encourage active participation (section 3.4.1) and human beings rather than educational institutions should be the appropriate starting point (section 3.4.2).

From the literature study it is evident that new learning anticipates a different kind of learner that is characterised as learning by doing and learning by thinking, which includes action and cognition as opposed to traditional learning, which is individualized and cognitive. It is further evident that in new learning, practical, social collaborative learning and thinking is connected to conceptual change and a deep understanding that fosters critical thinking, problem-solving, innovative and creative learning, which again enables the learner to be responsive and versatile in a diverse and changing world (section 3.4.4). It is, however, evident that dependence on technology does not only apply to individuals, but goes for organisations and society at large (section 3.4.7). Evident from the literature study in new learning, a different kind of tutor that is characterised as tutors that regard themselves designers of social futures, tutors that search new ways to address learning needs, teaching learners concepts and skills to participate in society, to be self-regulated professionals, be evaluators of their effectiveness, researchers, social scientists and to be intellectuals in their own right (section 3.4.8).

## **6.4.2 Conclusions from the findings of the study**

The two main themes that appeared in the empirical study (table 5.1) were 21<sup>st</sup> century learning experiences and expectations and creating a technology learning platform.

### **6.4.2.1 21<sup>st</sup> Century learning experiences and expectations**

The data from the interviews conducted with learners, tutors and institutional management confirmed that new methods and ways to supplement and enhance positive learning experiences in higher education include the use of technology integration (see table 5.1). Technology integration, both inside and outside formal practices of work and study, including the amount of time spent on the computer per day, highlighted the invaluable, enhanced, diverse and complex technology saturated practices in everyday life (section 5.4.1.1). The experiences and expectations of learners, tutors and institutional management members using modern learning, which were not available in the past, were expressed in the added value technologies offer access to learning any time, any place, any way and were expressed as innovative, interesting and more relevant to the current ways society operates (section 5.4.1.2). How learners preferred to receive, process and retain information was highly dependent on their learning style and personality type and learning with technology showed a

positive correlation between learning style, knowledge retention and learning experiences (section 5.4.1.3), as is evident from the empirical investigation.

#### **6.4.2.2 Creating a technology learning platform**

The interviews with learners, tutors and institutional management conclusively proved that well-developed technology platforms provide user friendly tools to enhance quality learning. However, there is an acknowledgement that technology is in service of educational goals and that pedagogy is more important to quality than technology tools (section 5.4.2). Regardless of the various benefits and attractiveness experienced when learning with technology, it was found that many of the same qualities that are essential to successful traditional learning and teaching, also apply in the technology classroom (section 5.4.2.1). However, the empirical investigation showed that learners in hybrid learning conditions performed better than learners in pure online or exclusively face-to-face instruction (section 5.4.2.2) and that adult learning happened in a social context through social interaction with others where learning was collective and shared (section 5.4.2.3). It is further evident that technology and globalisation is shaping adult learning through international media technologies and the global circulation of ideas beyond geographical and institutional boundaries (section 5.4.2.4). Different technological and technical challenges were emphasised through all aspects of management and operation and were experienced not only by learners and tutors, but by institutional management as well (section 5.4.2.5). The challenges in using technology for adult education was embedded in the rapid changes in technology and adjusting to those changes (section 2.4.2.5 (a)), to find innovative ways to enhance learners' theoretical knowledge with practical applications (section 2.4.2.5 (b)), the quality of communication and discussions, including spelling, grammar and punctuation (section 2.4.2.5 (c)), the need for a controlled and supervised assessment at a central venue (section 2.4.2.5 (d)), that technology learning could be a good match for some, but not for all (section 2.4.2.5 (e)) and the fear that learning with technology was seen as an inferior qualification (section 2.4.2.5 (f)).

### **6.5 RECOMMENDATIONS**

The following recommendations derived from the research findings and the experiences learners, tutors and institutional management reported in this study.

### 6.5.1 The need to expand higher education opportunities

In a technology rich global environment, with particularly difficult economic times, incorporating a cost effective solution for higher education and adopting a quality system to fulfil the changing expectations in education, society and industry is inevitable (Herrington *et al.*, 2010:3). As discussed in section 1.1 it is evident that the experiences and expectations of learners in the 21<sup>st</sup> century is shaped by global pressures and competitiveness, especially with the integration of technology in learning, as discussed in section 2.1. The researcher recommends an earnest appeal to the Department of Higher Education and Training in South Africa to intensify consultative processes on the implementation of technology learning for higher education in South Africa, leading into a hybrid study approach, with the focus to:

- increase educational opportunities through technology
- recognise that global inclusiveness is good for economic development
- promote 21<sup>st</sup> century skills using technology in education
- change approaches to teaching and learning using technology in education
- develop a national technology and quality management policy when using technology in education

The findings in this study resulted in further recommendations for expanding higher education learning opportunities to address problems in the following ways,

- The shortage of and the cost to erect more academic higher education institutions in South Africa as opposed to learning any where, any time, any way (section 1.1)
- The high number of unemployed youth neither studying, nor working can be effectively accommodated when assisted via technology learning
- Printing, availability of and textbook costs could be accommodated via e-books
- Up to date and relevant subject matter could be adjusted in real time
- Student absenteeism, hostel accommodation and travelling costs could be eliminated
- Training and learning hours are flexible
- Today's millennial learners that grew up with technology versus academic engagement and success rates in traditional learning environments could be addressed

## **6.5.2 Growing areas in the hybrid study approach**

Assessing the quality of learning is vital to the success of a hybrid study approach (HSA). Data from participants' online learning platforms and from the interviews with learners, tutors and institutional management provides feedback on academic delivery. The following recommendations are offered with regard to growing areas identified in the hybrid study approach (HSA).

### **6.5.2.1 How to address technology challenges**

Learners that reside in remote areas are not always able to connect or upload assignments or get support from tutors. There are different network strengths that slow down the downloading of video watching and financial strains. Some participants are not able to afford airtime to access the internet. All these situations pose challenges when using technology for learning (section 5.4.2.5). Technology challenges not only affect learners and tutors, but also institutional management. The researcher recommends internet access as a fundamental human right, as was expressed in a global telephone and personal interview poll (section 1.1).

### **6.5.2.2 Establish practical laboratories**

Educational environments should allow for interactive instruction and learning and should be enhanced with practical hands-on application. Such an environment 'provides a framework for successful acquisition of knowledge' (Ernst, 2008:47) as discussed in section 1.2 and section 5.4.2.5 (b). The interview data confirmed the need for practical experience in certain academic programmes. The researcher recommends,

- The use of virtual laboratories and physical simulated experiences that is built into the learning platform.
- Including face-to-face instruction sessions to meet with learners in the hybrid study approach (HSA), could be useful for the practical training sessions.

### **6.5.2.3 Implement netiquette**

A set standard of institutional and instructional rules and regulations to guide the correct protocol should be implemented to ensure proper and effective communication, which includes spelling, grammar and punctuation (Pratt, 2010:113). Confirmed from the interview



data, learners are oriented on how to use the technology platform, since the correct communication protocol is explained (section 5.4.2.5 (c)). However, participants expressed concerns regarding effective netiquette in the interviews and on the learning platforms. The researcher recommends that curriculum developers include subject matter specifically related to netiquette, which also forms part of other credit bearing subjects. It is often experienced that rules and regulations are laid down, but does not necessarily guarantee implementation if a credit or other value is attached.

#### **6.5.2.4 Interaction on discussion forums**

Data from interviews with participants in this study confirmed that not all learners experience and or utilised the interaction on discussion forums fully, and/or does not experience the need to use the opportunities available on the technology platform related to social collaboration (section 5.4.2.3). When focusing on new learning as discussed in section 3.3.1, it is evident that human learning happens in a social context through social interaction with others where learning is collective and shared rather than an individual attempt (Paciotti, 2013:105). The researcher recommends,

- Having a curriculum design where getting together in a study cohort is compulsory for learners and where extra credit is offered for discussion postings to encourage learners to become actively involved and to interact.
- Offer a form of incentive through a treasure hunt that could be available on the technology platform to encourage interaction.

#### **6.5.2.5 A final assessment at a local centre with direct supervision**

Obtaining a qualification when learning with technology is often seen as inferior compared to face-to-face learning, due to the lack of direct tutor supervision. However, the data from interviews with participants confirmed that learning with technology in a hybrid study approach (HSA) offers far more sophisticated and advanced learner analytics than is possible during face-to-face learning (Irele, 2013:496), discussed in section 2.4.1. With various assessment methods that are available on the technology learning platform, the need for a controlled and supervised assessment to validate authentication of students and to eliminate issues of plagiarism in assignments and final research papers as stated by participants, is needed (section 5.4.2.5 (d)). The researcher recommends,

- Having a final online assessment test at the end of each subject/course, scheduled on a set date for all learners taking that subject/course globally, to be done online and in real time with supervision and under controlled examination conditions, at either the local institution, a partner institution or identified assessment centre.

Successful learning should not only be assessed by quizzes, assignments, discussion posts and a research paper. In order to finally validate the quality of the learning and the quality of the qualification received, a controlled supervised assessment is recommended.

#### **6.5.2.6 Early development with technology**

The issue of inferior versus superior qualification when learning with technology was expressed by a number of participants in the study and was confirmed by the data from interviews (section 2.4.2.5 (f)). A change in mind-set is needed, especially since the same standards, the same learning materials and the same outcomes are assessed in learning with technology versus face-to-face instruction. The researcher recommends,

- An introduction to learning with technology should start at a young age as learners often find it difficult when entering tertiary education and have not been exposed to technology earlier in the learning process.
- Education on the value and quality of learning with technology with specific reference to a hybrid study approach (HSA) is recommended to inform prospective employers and other stakeholders in decision making positions.

Learning with technology is not an unfamiliar phenomenon globally. However, new learning approaches will take time to be introduced and it will take time for people to adjust.

### **6.6 RECOMMENDATIONS FOR FURTHER STUDY**

Based on this study, the following recommendations for further study are suggested:

- Little has been published on managing the quality of learning on the micro-level when using technology to learn and more of what has been said is on quality on a strategic management level (section 2.2).

- Further study on the development of a hybrid study model to manage the quality of learning in higher education is recommended.
- Based on the unavailability of a framework and policy guidelines for the use of technology in higher education, the researcher recommends a study for policy and procedures to be developed with the focus on a hybrid study approach (HSA).
- The necessity for a model assessing online activities for effectiveness needs exploration and investigation.
- Research on the quality management of tutor training when using technology to teach is recommended.
- There is need for a work-integrated quality management plan for final year learners studying through a hybrid learning approach when they are not employed full-time.
- The experiences and expectations of employers in the quality of learning with technology are recommended for further study.

## **6.7 LIMITATIONS OF THE STUDY**

Limitations of the study include the following:

- The viewpoints of learners, tutors and institutional management in this study, related to managing the quality of learning in higher education through a hybrid study approach (HSA) were presented, as such only their viewpoints were included for this study.
- Limited data was available on the use, implementation and facilitation of hybrid learning in higher education across the continent, and the researcher had to rely exclusively on international literature to draw conclusions for students in a South African context (section 1.1).
- This study focused on participants that represented only two higher education institutions and therefore the findings cannot be generalised to other higher education institutions using a hybrid study learning approach.

## **6.8 CONCLUSION**

This study is set out to explore the management of the quality of learning in higher education using a hybrid study approach (HSA). A qualitative research design and methodology was

used through individual interviews, which allowed the researcher to explore the experiences and expectations of twelve learner, five tutor and three institutional management participants regarding the quality of learning in higher education using a hybrid study approach (HSA). The research study adhered strictly to ethical principles and was evaluated for trustworthiness.

This study found that there is a need for redress and reform of training and education in South Africa, especially with the integration of technology in higher education. The findings from the empirical investigation largely concurred with the literature study that technology interaction presented meaningful and significant learning when technology is used as a dynamic ingredient in the teaching-learning environment. The study further established that the quality of the learning experience when using technology to learn in an accessible, interoperable, durable, reusable and cost effective manner, is highly effective when the learning content is customised according to learners' capabilities, personalities, expectations and learning styles. The literature study indicated that learning with technology demands more collaboration and communication between learner-learner, learner-tutor and learner-institution for guaranteed quality and that a one-for-all learning approach in adult learning is not well-suited for the needs of society today and does not foster an all-inclusive learning approach. Recommendations were presented with possible further recommended studies. In the last instance the limitations of the study were discussed.

## REFERENCES

- Abidin, M.J.Z., Rezaee, A.A., Abdullah, H.N. & Singh, K.K.B. 2011. Learning Styles And Overall Academic Achievement An A Specific Educational System. *International Journal of Humanities and Social Science*, 1(10):143-152.
- Akin, L. & Neal, D. 2007. CREST+ Model: Writing Effective Online Discussions Questions. MERLOT. *Journal of Online Learning and Teaching*, 3(2):191-201.
- Akyol, Z. & Garrison, D.R. 2010. Community of inquiry in adult online learning: Collaborative-constructivist approaches (In Kidd, T.T. & Keengwe, J. (eds). *Adult learning in the digital age*. New York: Information Science Reference. p. 52-66).
- Albergaria-Almeida, P., Teixeira-Dias, J.J., Martinho, M. & Balasooriya, C. 2012. Kolb's learning styles and approaches to learning: The case of chemistry undergraduates with better grades (In Lytras, M. & Novo-Corti, I. (eds). *Trends and effects of technology advancement in the knowledge society*. Hershey: PA. p. 152-167).
- Alberts, P.P., Murray, L.A. & Stephenson, J.E. 2010. Eight educational considerations for hybrid learning (In Wang, F.L., Fong, J. & Kwan, R.C. (eds). *Handbook of research on hybrid learning models: Advanced tools, technologies, and applications*. USA: IGI Global. p. 185-202).
- Allen, M., Omori, K., Burrell, N., Mabry, E. & Timmerman, E. 2013. Satisfaction with distance education (In Moore, M.G. (ed). *Handbook of distance education*. 3<sup>rd</sup> ed. Routledge. p. 143-154).
- Anon. 2010. Internet Access Is A Fundamental Right. BBC News, 8 March 2010. Available from: <http://news.bbc.co.uk/2/hi/8548190.stm> (Accessed 13 June 2013).
- Ashcraft, D., Treadwell, T. & Kumar, V.K. 2008. Collaborative Online Learning: A Constructivist Example. MERLOT. *Journal of Online Learning and Teaching*, 4(1): 109-117.

- Athanasou, J.A. 1999. *Adult educational psychology*. Katoomba: Social Science Press.
- Badat, S. 2010. *The challenges of transformation in higher education and training institutions in South Africa*. Available from: <http://www.dbsa.org/EN/About-Us/Publications/Documents/The%20challenges%20of%20transformation%20in%20higher%20education%20and%20training%20institutions%20in%20South%20Africa%20by%20Saleem%20Badat.pdf> (Accessed 14 September 2013).
- Beaudoin, M.F. 2013. Institutional leadership (*In Moore, M.G. (ed). Handbook of distance education*. 3<sup>rd</sup> ed. Routledge. p. 467-480).
- Beetham, H. 2013. Designing for learning in an uncertain future (*In Beetham, H. & Sharpe, R. 2013. Rethinking pedagogy for a digital age*. (2<sup>nd</sup> ed). Routledge. p. 258-281).
- Beetham, H. 2013. Designing for active learning in technology-rich context (*In Beetham, H. & Sharpe, R. 2013. Rethinking pedagogy for a digital age*. (2<sup>nd</sup> ed). Routledge. p. 31-48).
- Beetham, H. 2007. An approach to learning activity design (*In Beetham, H. & Sharpe, R. 2007. Rethinking pedagogy for a digital age*. Routledge. p. 26-40).
- Betts, K. 2009. Online Human Touch (OHT) Training & Support: A Conceptual Framework To Increase Faculty Engagement, Connectivity, And Retention In Online Education. Part 2. MERLOT. *Journal of Online Learning and Teaching*, 5(1):29-48.
- Betts, K. & Sikorski, B. 2008. Financial Bottom Line: Estimating The Cost Of Faculty/Adjunct Turnover And Attrition For Online Programs. *Online Journal of Distance Learning Administration*, 11(1). Available from: <http://www.westga.edu/~distance/ojdl/spring111/betts111.pdf> (Accessed 14 June 2013).
- Biggs, J. & Tang, C. 2011. *Teaching for quality learning at university*. C. McGraw-Hill.

- Blackmore, J. 2013. Social justice in education (In Irby, B.J., Brown, G., Lara-Alecio, R. & Jackson, S. (eds). *The handbook of educational theories*. IAP-Information: Age Publishing Inc. p. 1001-1009).
- Boddy, D. 2005. *Management. An introduction*. Edinburgh: Pearson Education Limited.
- Bogdan, R.C & Biklen, S.K. 2007. *Qualitative research for education. An introduction to theories and methods*. 5<sup>th</sup> ed. USA: Pearson Education Inc.
- Bryant, L.C., Vincent, R., Shaqlaih, A. & Moss, G. 2013. Behaviorism and behavioral learning theory (In Irby, B.J., Brown, G., Lara-Alecio, R. & Jackson, S. (eds). *The handbook of educational theories*. IAP-Information: Age Publishing Inc. p. 91-103).
- Burke, K. 2007. Human Rights And The Rights Of A Child: A Panoramic View. *Globalisation, Societies and Education*, 5(3):333-349.
- Burton, W.H. 1963. Basic principles in a good teaching-learning situation (In Crow, L.D. & Crow, A. (eds). *Readings in human learning*. New York: McKay. p. 7-19).
- Bush, T. 2006. *Theories of educational management*. Available from: [http://cnx.org/contents/be980fed-98a0-4330-adba-e148507ca0fe@1/Theories\\_of\\_Educational\\_Manage](http://cnx.org/contents/be980fed-98a0-4330-adba-e148507ca0fe@1/Theories_of_Educational_Manage) (Accessed 30 March 2014).
- Bush, T. 2007. Educational Leadership And Management: Theory, Policy And Practice. *South African Journal of Education*, 27(3):391-406.
- Carroll, J.A.F.I. 2007. Effectiveness Of Student-Centered Learning Strategies In Online Composition Course. MERLOT. *Journal of Online Learning and Teaching*, 3(4):466-480.
- Check, J. & Schutt, R.K. 2012. *Research methods in education*. USA: SAGE Publications Inc.

- Cho, H., Gay, G., Davidson, B. & Ingraffea, A. 2007. Social Networks, Communication Styles, And Learning Performance In A CSCL Community. *Computers and Education*, 49(2):309-329.
- Clayburn, P. 2011. How do I learn? Let me count the ways: Learning styles and strategies (In Middleton-Brosche, T.A. & Feavel, M. *Successful online learning. Managing the online learning environment efficiently and effectively*. Jones and Bartlett Publishers. p. 13-22).
- Collins, R.A. 2011. The role of learning styles and technology (In Wang, V.C.X. (ed). *Integrating adult learning and technologies for effective education: Strategic approaches*. Hershey: PA. p. 153-169.
- Collis, J. & Hussey, R. 2009. *Business research: A practical guide for undergraduate and postgraduate students*. 3<sup>rd</sup> ed. London: Palgrave Macmillan.
- Confrey, J. 1990. What Constructivism Implies For Teaching. *Journal for Research in Mathematics Education Monographs*, 4:107-122.
- Conole, G. 2007. Describing learning activities. Tools and resources to guide practice (In Beetham, H. & Sharpe, R. *Rethinking Pedagogy for a Digital Age*. Routledge. p. 81-91).
- Conrad, R.M. & Donaldson, J.A. 2012. *Continuing to engage the online learner*. San Francisco: Jossey-Bass.
- Conti, G.J. 2009. Development Of A User-Friendly Instrument For Identifying The Learning Strategy Preferences Of Adults. *Teaching and Teachers Education*, 25(6):887-896.
- Coogan, T.A. 2009. Exploring The Hybrid Course Design For Adult Learners At The Graduate Level. MERLOT. *Journal of Online Learning and Teaching*, 5(2):316-323.



- Corbin, J. & Strauss, A. 2008. *Basics of qualitative research*. 3<sup>rd</sup> ed. California: SAGE Publications Inc.
- Council on Higher Education. 1997. *Higher Education Act 101 Of 1997. Governance of Public Higher Education Institutions*. Available from: [http://www.che.ac.za/documents/d000004/Higher\\_Education\\_Act.pdf](http://www.che.ac.za/documents/d000004/Higher_Education_Act.pdf) (Accessed 17 March 2013).
- Council on Higher Education. 2006. ICT's And The South African Higher Education Landscape. *Higher Education Monitor*. (5:31-34). Available from: [http://www.che.ac.za/media\\_and\\_publications/higher-education-monitor/higher-education-monitor-5-icts-and-south-african](http://www.che.ac.za/media_and_publications/higher-education-monitor/higher-education-monitor-5-icts-and-south-african) (Accessed 16 June 2013).
- Council on Higher Education. 2010. Access and throughput in South African Higher Education: Three case studies. *Higher Education Monitor*. (9:1-6). Available from: [http://www.che.ac.za/sites/default/files/publications/Higher\\_Education\\_Monitor\\_9](http://www.che.ac.za/sites/default/files/publications/Higher_Education_Monitor_9). (Accessed 23 August 2013).
- Council on Higher Education. 2010. Annual Report 2009-2010. Available from: [http://www.che.ac.za/media\\_and\\_publications/publications/annual\\_reports](http://www.che.ac.za/media_and_publications/publications/annual_reports) (Accessed 16 June 2013).
- Council on Higher Education. 2012. Green Paper for post school education and training. Available from: [http://www.che.ac.za/media\\_and\\_publications/draft-legislation/dhet-green-paper-post-school-education-and-training](http://www.che.ac.za/media_and_publications/draft-legislation/dhet-green-paper-post-school-education-and-training) (Accessed 25 February 2013).
- Cox, T. 2008. Learning Styles And Students' Attitudes Towards The Use Of Technology In Higher And Adult Education Classes. *Institute for Learning Styles Journal*, 1(Fall):1-13. Available from: <http://www.auburn.edu/~witteje/ilstrj/Journal%20Volumes/Fall%202008%20Volume%201%20PDFs/Learning%20Styles%20Higher%20Ed%20and%20Adult.pdf> (Accessed 14 March 2014).

- Cranton, P. 2005. Learning styles (In English, L. (ed). *International encyclopaedia of adult education*. New York: Palgrave MacMillan. p. 362-366).
- Creswell, J.W. 2012. *Educational research, planning, conducting, and evaluating quantitative and qualitative research*. 4<sup>th</sup> ed. Boston: Pearson Education Inc.
- Darlaston-Jones, D., Pike, L., Cohen, L., Young, A., Haunold, S. & Drew, N. 2003. Are They Being Served? Student Expectations Of Higher Education. *Issues in Educational Research*, 13(1):31-52. Available from: <http://www.iier.org.au/iier13/darlaston-jones.html> (Accessed 26 February 2012).
- Davis, G. 2011. (4 December 2011). Blade cuts new cloth. *Sunday Tribune*, p. 27.
- Davis, J., Harding, L. & Mascle, D. 2011. Digital connections and learning styles (In Management association, information resources. *Virtual Communities: Concepts, methodologies, tools and applications*. 4 Volumes. IGI Global. p. 1321-1339).
- De Clercq, M., Galand, B. & Frenay, M. 2014. Learning processes in higher education (In Gijbels, D., Donche, V., Richardson, J.T.E. & Vermunt, J.D. (eds). *New perspectives on learning and instruction. Learning patterns in higher education. Dimensions and research perspectives*. London and New York: Routledge. p. 141-162).
- Dede, C. 2011. Emerging technologies, ubiquitous learning and educational transformation (In Kloos, C.D., Gillet, D., Crespo García, R.M., Wild, F. & Wolpers, M. (eds). *Towards ubiquitous learning, 6<sup>th</sup> European conference on technology enhanced learning held in Italy*. Conducted by EC-TEL 2011. Verlag Berlin Heidelberg: Springer.
- Department of Education. 2003. Draft White Paper on e-education. Transforming learning and teaching through ICT. Available from: <http://www.gov.za/documents/white-paper-e-education-transforming-learning-and-teaching-through-information-and> (Accessed 16 June 2014).

Department of Higher Education and Training. 2011. Budget Vote Speech by Deputy Minister of Higher Education and Training. Available from <http://www.gov.za/department-higher-education-and-training-budget-vote-speech-deputy-minister-prof-hlengiwe-mkhize-mp> (Accessed 20 June 2013).

Department of Higher Education and Training. 2011. Budget Vote speech by Minister of Higher Education and Training. Available from <http://www.politicsweb.co.za/politicsweb/view/politicsweb/en/page71656?oid=238379&sn=Detail> (Accessed 20 June 2013).

Desmedt, E. & Valcke, M. 2004. Mapping The Learning Styles 'Jungle': An Overview Of The Literature Based On Citation Analysis. *Educational Psychology*, 24(4):446-464.

Devaney, L. 2012. *Four keys to creating successful e-learning programs*. Available from: [www.eschoolnews.com](http://www.eschoolnews.com) (Accessed 15 March 2012).

Doering, A. & Veletsianos, G. 2008. Hybrid Online Education: Identifying Integration Models Using Adventure Learning. *Journal of Research on Technology in Education*, 41(1):101-119.

D'Onofrio, A. & Bowes, K. 2007. Hybrid instruction 101: It's in the design (In Bastiaens, T. & Carliner, S. (eds). *Proceedings of world conference on e-learning in corporate, government, healthcare, and higher education*. Chesapeake: VA AACE.

Drucker, P.F. 1986. *Management, tasks, responsibilities, practices*. New York: Truman Talley Books. E.P. Dutton.

Drucker, P.F. & Wartzman, R. 2010. *The Drucker lectures. Essential lessons on management, society and economy*. Available from: <http://0-lib.myilibrary.com.oasis.unisa.ac.za?ID=277630> (Accessed 9 April 2013).

Dyke, M. 2009. An Enabling Framework For Reflexive Learning: Experiential Learning And Reflexivity In Contemporary Modernity. *International Journal of Lifelong Education*, 28(3):289-310.

- Dzvimbo, K.P. 2011. *The African virtual university*. Available from: [http://www.elearning-africa.com/eLA\\_Newsportal/?s=peter+dzvimbo&x=8&y=6](http://www.elearning-africa.com/eLA_Newsportal/?s=peter+dzvimbo&x=8&y=6) (Accessed, 15 June 2013).
- eLearning Africa News Portal. 2008. Changing universities with ICT – An eLearning case study from Botswana. Conference proceedings of the 3<sup>rd</sup> eLearning Africa conference held in Ghana. Available from: [http://www.elearning-africa.com/eLA\\_Newsportal/changing-universities-with-ict-%e2%80%93-an-elearning-case-study-from-botswana/](http://www.elearning-africa.com/eLA_Newsportal/changing-universities-with-ict-%e2%80%93-an-elearning-case-study-from-botswana/) (Accessed 15 June 2013).
- eLearning Africa News Portal. 2011. *AVU launches online open education resources portal*. Conference proceedings of the 6<sup>th</sup> eLearning Africa conference held in Tanzania. Available from: [http://www.elearning-africa.com/eLA\\_Newsportal/102/](http://www.elearning-africa.com/eLA_Newsportal/102/) (Accessed 15 June 2013).
- Ernst, J.V. 2008. A comparison Of Traditional And Hybrid Online Instructional Presentation In Communication Technology. *Journal of Technology Education*, 19(2):40-49.
- Evans, J.R. 2011. *Quality management, organization, and strategy*. 6<sup>th</sup> ed. South Western: CENGAGE Learning.
- Farmer, L. 2010. Adult learners and their development in the information society (In Victor, C.X. (ed). *Integrating adult learning and technologies for effective education: Strategic approaches*. Hershey: PA. p. 82-100).
- Farmer, L.S. 2010. Adult learners and their development in the information society (In Wang, V.C.X. (ed). *Integrating adult learning and technologies for effective education: Strategic approaches*. Hershey: PA. p. 82-100).
- Farmer, L. S. 2011. How adults learn through information technologies (In Wang, V.C.X. (ed). *Encyclopedia of information communication technologies and adult education integration*. Hershey: PA. p. 17-36).

- Franklin, B. 1750. BrainyQuote.com. Available from:  
[http://www.brainyquote.com/quotes/authors/b/benjamin\\_franklin.html](http://www.brainyquote.com/quotes/authors/b/benjamin_franklin.html) (Accessed 24 September 2014).
- Fredrickson, R., Kunlap, K. & McMahan, S. 2013. Cooperative learning theory (*In* Irby, B.J., Brown, G., Lara-Alecio, R. & Jackson, S. (eds). *The handbook of educational theories*. IAP-Information: Age Publishing Inc. p. 199-210).
- Globokar, J.L. 2010. *Introduction to online learning. A guide for students*. California: SAGE Publications Inc.
- Goetsch, D.L. & Davis, S.B. 2010. *Quality management for organizational excellence: Introduction to total quality*. 6<sup>th</sup> ed. Prentice Hall.
- Graf, S., Kinshuk., Zhang, Q., Maguire, P. & Shtern, V. 2012. Facilitating learning through dynamic student modelling of learning styles (*In* Isaias, P., Ifenthaler, D., Kinshuk., Sampson, D.G. & Spector, J.M. (eds). *Towards learning and instruction in web 3.0 advances in cognitive and educational psychology*. Springer. p. 3-16).
- Graf, S., Lin, F., Kinshuk., & McGreal, R. 2012. *Intelligent and adaptive learning systems: Technology enhanced support for learners and teachers*. Hershey: PA. IGI Global.
- Griesel, H. & Parker, B. 2009. *Graduate Attributes. A baseline study on South African graduates from the perspectives of employers*. Available from [http://www.saqa.org.za/docs/genpubs/2009/graduate\\_attributes.pdf](http://www.saqa.org.za/docs/genpubs/2009/graduate_attributes.pdf) (Accessed 21 March 2013).
- Griffith, M. & Wong, L. 2010. Empowering adult learners through blog: An Australian case study (*In* Kidd, T. & Keengwe, J. (eds). *Adult learning in the digital age. Perspectives on online technologies and outcomes*. Hershey: New York. p. 13-22).
- Gurba, K. 2011. *Quality measures, human factor and failures of e-learning*. Conference proceedings of The Higher Education International Conference. Beirut: Lebanon. (p. 1-14).

- Gwebinkundla, Q. 2010. (7 November 2010). We have a battle in the pipeline. *Sunday Times*, p.7.
- Haggard, E.A. 1963. Learning a process of change (In Crow, L.D. & Crow, A. (eds). *Readings in human learning*. New York: McKay. p. 19-27).
- Hanna, D.E. 2013. Emerging organizational models in higher education (In Moore, M.G. (ed). *Handbook of distance education*. Routledge. p. 684-694).
- Harvey, L. & Bowers-Brown, T. 2003. *The employability of graduates: cross-country comparisons*. Conference proceedings of the Department for Education and Skills (DfES) Research Conference 2003. Nottingham. Department for Education and Skills.
- Heckman, R. & Annabi, H. 2005. A Content Analytic Comparison Of Learning Processes In Online And Face-Face Case Study Discussions. *Journal of Computer-Mediated Communication*, 10(2):00. Available from <http://jcmc.indiana.edu/vol10/issue2/heckman.html> (Accessed 12 June 2013).
- Henrich, A. & Sieber, S. 2009. Blended Learning And Pure E-learning Concepts For Information Retrieval: Experiences And Future Direction. *Information Retrieval*. 12(2):117-174.
- Herrington, J., Reeves, T.C. & Oliver, R. 2010. *A guide to authentic e-learning*. New York & London: Routledge. Taylor & Francis Group.
- Hijón-Neira, R., Velázquez-Iturbinde, A. & Rodríguez-Martin, J. 2010. Model for an interaction assessment strategy in hybrid learning including web 2.0 resources (In Wang, F., Fong, J. & Kwan, R. (eds). *Handbook of research on hybrid learning models: Advanced tools, technologies and applications*. p. 450-465).
- Hollow, D. & ICWE. 2009. E-Learning In Africa: Challenges, Priorities And Future Direction. Available from:

<http://www.gg.rhul.ac.uk/ict4d/workingpapers/Hollowelearning.pdf> (Accessed 14 June 2013).

Irele, M.E. 2013. Evaluating distance education in an era of internationalization (In Moore, M.G. (ed). *Handbook of distance education*. Routledge. p. 493-506).

Jacobs, M., Vakalisa, N.C.G. & Gawe, N. 2011. *Teaching-learning dynamics*. 4<sup>th</sup> ed. Cape Town: Pearson Education South Africa (Pty) Ltd.

Jaggars, S.S. 2013. Online learning in community colleges (In Moore, M.G. (ed). *Handbook of distance education*. Routledge. p. 594-608).

Johnson, B. & Christensen, L. 2004. *Educational research. Quantitative, qualitative, and mixed approaches*. 2<sup>nd</sup> ed. USA: Pearson Education Inc.

Johnson, B. & Christensen, L. 2012. *Educational research. Quantitative, qualitative, and mixed approaches*. 4<sup>th</sup> ed. California: SAGE Publications Inc.

Johnson, D.W. & Johnson, R.T. 2009. Energizing Learning: The Instructional Power Of Conflict. *Educational Researcher*, 38(1):37-51.

Kalantzis, M. & Cope, B. 2008. *New learning. Elements of a science of education*. New York: Cambridge University Press.

Kalantzis, M. & Cope, B. 2012. *New learning. Elements of a science of education*. 2<sup>nd</sup> ed. Cambridge University Press.

Kandiko, C. B. & Mawer, M. 2013. *Student expectations and perceptions of higher education*. London: King's Learning Institute.

Kearsley, G. 2013. Management of online programs (In Moore, M.G. (ed). *Handbook of distance education*. 3<sup>rd</sup> ed. Routledge. p. 425-436).

Kegan, R. 2000. What 'form' transforms? A constructive-developmental perspective on transformational learning (In Mezirow, J. & Associates (eds). *Learning as*

- transformation: Critical perspectives on a theory in progress.* San Francisco. Jossey-Bass. p. 35-70).
- Knowles, M.S., Holton, E.F. & Swanson, R.A. 1998. *The adult learner. The definitive classic in adult education and human resource development.* 5<sup>th</sup> ed. USA. Butterworth-Heinemann.
- Knowles, M.S., Holton, E.F. & Swanson, R.A. 2012. *The adult learner. The definitive classic in adult education and human resource development.* 7<sup>th</sup> ed. USA. London and New York: Routledge.
- Koen, C. 2007. *Postgraduate student retention and success: A South African case study.* Available from: [www.hsrcpress.ac.za](http://www.hsrcpress.ac.za) (Accessed 11 June 2013).
- Kroon, J. 2004. *General Management.* Cape Town: Kagiso Tertiary.
- Lanning, J., Martin, R. & Villeneuve-Smith, F. 2008. *Employability skills examined.* London: Learning and Skills Network.
- Letseka, M. 2009. University drop-out and researching (lifelong) learning and work (In Cooper, L. & Walters, S. Learning/Work. *Turning work and lifelong learning inside out.* HSRS Press. p.88-105).
- Littlemore, S. 2011. *Higher Education Must Prepare For Growing Student Expectations.* Available from: <http://www.guardian.co.uk/higher-education-network/higher-education-network-blog/2011/mar/25/great-expectations> (Accessed 8 June 2013).
- Lu, H., Jia, L., Gong, S. & Clark B. 2007. The Relationship Of Kolb Learning Styles, Online Learning Behaviours And Learning Outcomes. *Education Technology & Society*, 10(4):187-196.
- Lupplicini, R. 2013. Education for a digital world: Current challenges and future possibilities (In Lupplicini, R. & Haghi, A.K. (eds). *Education for a digital world.* Apple Academic Press. p197-206).



- Mabizela, M. 2005. *The business of higher education*. Available from: <http://www.hsrcpress.ac.za> (Accessed 8 June 2013).
- Makoe, M. 2012. Teaching Digital Natives: Identifying Competencies For Mobile Learning Facilitators In Distance Education. *South African Journal for Higher Education*, 26(1):91-104.
- Marshall, M.N. 1996. Sampling For Qualitative Research. *Family Practice*, 13(6):522-525. Available from <http://fampra.oxfordjournals.org/content/13/6/522.full.pdf+html> (Accessed 19 March 2013).
- Materu, P. 2007. *Higher education quality assurance in Sub-Saharan Africa. Status, challenges, opportunities, and promising practices*. Washington: The World Bank.
- Martyn, M. 2003. The Hybrid Online Model: Good Practice. *Educause Quarterly*, 26(1): 18-23. Available from <http://www.educause.edu/EDUCAUSE+Quarterly/EQVolume262003/EDUCAUSEQuarterlyMagazineVolum/157231> (Accessed 15 June 2012).
- Mayes, T. & de Freitas, S. 2013. Technology-enhanced learning (In Beetham, H. & Sharpe, R. 2013. *Rethinking Pedagogy for a Digital Age*. 2<sup>nd</sup> ed. Routledge. p. 17-30).
- Mayes, T., Morrison, D., Mellar, H., Bullen, P. & Oliver, M. 2009. *Transforming higher education through technology-enhanced learning*. York: The Higher Education Academy. Available from: [http://www.heacademy.ac.uk/resources/detail/learningandtech/transforming\\_he\\_through\\_technology\\_enhanced\\_learning](http://www.heacademy.ac.uk/resources/detail/learningandtech/transforming_he_through_technology_enhanced_learning) (Accessed 12 November 2013).
- Mcgregor, D. (3 April 2012). New plans for higher learning. *Daily Dispatch*, p. 6.
- McLeod, S. A. 2008. *Bruner - Learning Theory In Education - Simply Psychology*. Available from: <http://www.simplypsychology.org/bruner.html> (Accessed 20 October 2013).

- McMillan, J.H. & Schumacher, S. 2010. *Research in education: Evidence-based inquiry*. 7<sup>th</sup> ed. Boston: Pearson Education Inc.
- Merriam, S.B., Caffarella, R.S. & Baumgartner, L.M. 2007. *Learning in adulthood. A comprehensive guide*. San Francisco: John Wiley & Sons Inc.
- Mezirow, J. & Associates. 2000. Learning to think like an adult: Core concepts of transformation theory (In Mezirow, J. & Associates. (eds). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco: Jossey-Bass. p. 3-33).
- Moallem, M. 2007. Accommodating Individual Differences In The Design Of Online Learning Environments: A Comparative Study. *Journal of Research on Technology in Education*, 40(2):217-245.
- Moleke, P. 2010. The graduate labour market (In Letseka, M., Cosser, M., Breier, M. & Visser, M. (eds). *Student retention & graduate destination: Higher education & labour market access & success*. Cape Town: Human Sciences Research Council.
- Moore, M.G. 2013. *Handbook of distance education*. 3<sup>rd</sup> ed. Routledge.
- Mossavar-Rahmani, F. & Larson-Daugherty, C. 2007. Supporting The Hybrid Learning Model: A New Proposition. MERLOT. *Journal of Online Learning and Teaching*, 3(1):67-78.
- Mouton, N., Louw, G.P. & Stydom, G.L. 2013. Present-Day Dilemmas And Challenges Of The South African Tertiary System. *International Business & Economics Research Journal*, 12(3):285-300.
- Naidu, A., Joubert, R., Mestry, R., Mosoge, J. & Ngcobo, T. 2008. *Education management and leadership. A South African perspective*. Oxford University Press.
- Naidu, S. 2013. Instructional design models for optimal learning (In Moore, M.G. *Handbook of distance education*. 3<sup>rd</sup> ed. Routledge. p.268-281).

- Napier, J.R. 2009. *Job Hunt 3.0*. Available from:  
<http://www.convergemag.com/workforce/Job-Hunt-30.html> (Accessed 23 June 2012).
- Narayan, R., Rodriguez, C., Araujo, J., Shaqlaih, A. & Moss, G. 2013. Constructivism-constructivist learning theory (In Irby, B.J., Brown, G., Lara-Alecio, R. & Jackson, S. (eds). *The handbook of educational theories*. IAP-Information: Age Publishing Inc. p. 169-183).
- Naroozi, B. & Haghi, A.K. 2013. Distance learning, virtual classrooms, and teaching pedagogy in the internet environment (In Luppicini, R & Haghi, A.K. (eds). *Education for a Digital World*. Apple Academic Press. p.119-132).
- Naroozi, B. & Haghi, A.K. 2013. The development and applications of e-learning technology standards (In Luppicini, R. & Haghi, A.K. (eds). *Education for a digital world*. Apple Academic Press. p.1-23).
- Naroozi, B. & Haghi, A.K. 2013. Web-based training: Design and implementation (In Luppicini, R. & Haghi, A.K. (eds). *Education for a digital world*. Apple Academic Press. p.83-97).
- Naroozi, B. & Haghi, A.K. 2013. Distance learning, virtual classrooms, and teaching pedagogy in the internet environment (In Luppicini, R. & Haghi, A.K. (eds). *Education for a digital world*. Apple Academic Press. p.119-132).
- OECD (Organisation for Economic Co-operation and Development). 2011. *OECD skills strategy. Towards an OECD skills strategy*. Available from:  
<http://www.oecd.org/dataoecd/58/27/47769000.pdf> (Accessed 2 June 2011).
- Oliver, R. Harper, B., Wills, S., Agostinho, S. & Hedberg, J. 2007. Describing ICT-based learning designs that promote quality learning outcomes (In Beetham, H. & Sharpe, R. *Rethinking pedagogy for a digital age*. Routledge. p. 64-80).
- Olson, M.H. Hergenhahn, B.R. 2013. *An introduction to Theories of Learning*. 9<sup>th</sup> ed. USA: Pearson Education Inc.

- Paciotti, K.D. 2013. Cognitivism (In Irby, B.J., Brown, G., Lara-Alecio, R. & Jackson, S. (eds). *The handbook of educational theories*. IAP-Information: Age Publishing Inc. p. 105-113).
- Pashler, H., McDaniel, M., Rohrer, D. & Bjork, R. 2009. Learning Styles: Concepts And Evidence. *Psychological Science in the Public Interest*, 9(3):105-119.
- Parsons, J. & Beauchamp, L. 2012. *From knowledge to action: Shaping the future of curriculum development in Alberta*. Canada: Alberta Education. Available from: <http://education.alberta.ca/department/ipr/curriculum.aspx> (Accessed 12 February 2014).
- Pedró, F. 2010. *The need for a systematic approach to technology-based school innovation in OECD 2010. Inspired by technology. Driven by pedagogy. A systematic approach to technology-base school innovations*. Available from: <http://www.oecd.org/publishing/corrigenda> (Accessed 8 June 2013).
- Perold, H. 2012. Opening the doors of learning? Viewing the post school education and training landscape from a youth perspective (In Perold, H., Cloete, N. & Papier, J. (eds). *Shaping the future of South Africa's youth. Rethinking post-school education and skills training*. African minds. p. 177-195).
- Pratt, K. 2010. Faculty training and mentoring at a distance: Learning together in the virtual community (In Luppicini, R. & Haghi, A.K. (eds). *Cases on digital technologies in higher education: issues and challenges*. Hershey: PA. Information Science Reference. p111-125).
- Punch, K.F. 2011. *Introduction to research methods in education*. London: SAGE Publications Inc.
- Quinton, S. 2012. Rethinking learning in the 21<sup>st</sup> century (In Bell, G., Warwick, J. & Galbraith, P. (eds). *Higher education management and operational research. Demonstrating new practices and metaphors*. The Netherlands: Sense Publishers. p. 65-78).

- Raemdonck, I., Meurant, C., Balasse, J., Jacot, A. & Frenay, M. 2014. Exploring the concept of self-directedness in learning (*In* Gijbels, D., Donche, V., Richardson, J.T.E. & Vermunt, J.D. (eds). *New perspectives on learning and instruction. Learning patterns in higher education. Dimensions and research perspectives.* London and New York: Routledge. p. 78-101).
- Robbins, S.P., DeCenzo, D.A. & Coulter, M. 2013. *Fundamentals of management.* 8<sup>th</sup> ed. Pearson Education Inc.
- Robbins, S.P., DeCenzo, D.A. & Wolter, R. 2013. *Supervision today!* 7<sup>th</sup> ed. Pearson Education Inc.
- Rogers, A. & Horrocks, N. 2010. *Teaching adults.* 4<sup>th</sup> ed. England: Open University Press. McGraw-Hill.
- Schunk, D.H. 2008. *Learning theories: An educational perspective.* 5<sup>th</sup> ed. New Jersey: Pearson Prentice Hall.
- Schutt, R.K. 2012. *Investigating the social world: The process and practice of research.* 7<sup>th</sup> ed. Canada: SAGE Publications Inc.
- Schwartz, N.H. & Schmid, R.F. 2012. Using technology to foster meaningful learning environments (*In* Kirby J.R. & Lawson, M.J. (eds). *Enhancing the quality of learning.* Cambridge University Press. p. 228-247).
- Shelly, G.B., Gunter, G.A. & Gunter, R.E. 2010. *Integrating technology and digital media in the classroom.* 6<sup>th</sup> ed. CENGAGE Learning.
- Shelton, K. 2011. A Review Of Paradigms For Evaluating The Quality Of Online Education Programs. *Online Journal of Distance Learning Administration*, 14(1). Available from <http://www.westga.edu/~distance/ojdla/spring111/betts111.pdf> (Accessed 14 June 2013).

- Simonson, M. & Schlosser, C. 2013. Institutional policy issues (*In Moore, M.G. (ed). Handbook of distance education. 3<sup>rd</sup> ed. Routledge. p. 437-466).*
- Smedley, J. 2012. Managing e-expectations (*In Bell, G., Warwick, J. & Galbraith P. (eds). Higher education management and operational research. Demonstrating new practices and metaphors. The Netherlands: Sense Publishers. p. 97-108).*
- Smith, G. & Kurthen, H. 2004. Hybrid online face-face courses: A sociological analysis (*In Nall, J. & Robson, R. (eds). Proceedings of world conference on e-learning in corporate, government, healthcare, and higher education. Chesapeake: VA AACE.*
- Smit, P.J., Cronjé, G., De J. Brevis, T. & Vrba, M.J. 2007. *Management principles. A contemporary edition for Africa. 4<sup>th</sup> ed. Cape Town: Juta & Co.*
- Stanford-Bowers, D.E. 2008. Persistence In Online Classes: A Study Of Perceptions Among Community College Stakeholders. MERLOT. *Journal of online learning and teaching, 4(1):37-50.*
- Stansbury, M. 2011. *Five Things Students Say They Want From Education.* Available from: <http://www.eschoolnews.com/2011/07/28/five-things-students-say-they-want-from-education/3/?> (Accessed 23 October 2013).
- Starkey, L. 2012. *Teaching and learning in the digital age.* Oxon: Routledge.
- Stebbins, R.A. 2001. *Exploratory research in the social sciences. What is exploration.* Thousand Oaks. CA: SAGE.
- Stewart, D.P. 2008. Classroom Management In The Online Environment. MERLOT. *Journal of online learning and teaching, 4(3):371-374.*
- Strong, R., Harvey, R. & Robinson, A. 1995. Strengthening Student Engagement: What Do Students Want (And What Really Motivates Them)? *Educational Leadership, 53(1):8-11.* Available from <http://www.ascd.org/publications/educational->

leadership/sept95/vol53/num01/Strengthening-Student-Engagement@-What-Do-Students-Want.aspx (Accessed 14 March 2012).

Sturges, D.L. 2011. Effective online courses in business administration: Expanding course design to activate diverse learning styles (*In* Wankel, C. & Law, J. (eds). *Streaming media delivery in higher education: Methods and outcomes*. Hershey: PA. p. 237-246).

Tapscott, D. & Williams, A.D. 2010. Innovating The 21<sup>st</sup>-Century University: It's Time! *Educause Review*, 45(1):16-29.

Taylor, E. 2007. An Update Of Transformative Learning Theory: A Critical Review Of The Empirical Research (1999-2005). *International Journal of Lifelong Education*, 26(2): 173-191.

Tesar, M. & Sieber, S. 2010. *Managing blended learning scenarios by using agile e-learning development*. In Proc. IADIS International Conference E-Learning. (Vol. 2).

Tricker, T. 2005. *Student Expectations - How Do We Measure Up?* Available from: <http://inter-disciplinary.net/ati/education/ioe/ioe2/tricker%20paper.pdf> (Accessed 26 February 2012).

U.S. Department of Education, Office of Planning, Evaluation and Policy Development, 2010. *Evaluation of evidence-based practices in online learning. A meta-analysis and review of online learning studies*. Washington D.C. Available from: <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf> (Accessed 12 June 2013).

Van Coller, H. (30 July 2012). Op soek na die waarheid. *Volksblad*, p.6.

Van Damme, D. 2000. European Approaches To Quality Assurance: Models, Characteristics And Challenges. *South African Journal of Higher Education*, 14(2): 10-19.

- Van Dyk, J. 2012. *The Network Society*. SAGE Publications Inc.
- Van Rensburg, G.H. 2002. *Learning styles: Implication for higher education*. PhD. South Africa: University of South Africa.
- Vithal, R. & Jansen, J. 2010. *Designing your first research proposal*. Claremont: Juta & Company Ltd.
- Vosniadou, S. 2001. *How children learn. Educational practices series 7*. Available from: <http://www.ibe.unesco.org> (Accessed 12 February 2014).
- Watson, J. & Gemin, B. 2009. *Promising Practices In Online Learning. Management And Operations Of Online Programs: Ensuring Quality and Accountability*. Available from: [www.inacol.org/.../promisingpractices/iNACOL\\_PP\\_MgmtOp\\_0423...](http://www.inacol.org/.../promisingpractices/iNACOL_PP_MgmtOp_0423...) (Accessed 20 June 2012).
- Wesch, M. 2007. *A vision of students today*. Available from: [www.youtube.com/watch?v=dGCJ46vyR9o](http://www.youtube.com/watch?v=dGCJ46vyR9o) (Accessed 25 May 2012).
- Zaidah, Z. 2007. Case Study As A Research Method. *Jurnal Kemanusiaan*, bil, 9 June 2007. Available from [http://eprints.utm.my/8221/1/ZZainal2007-Case\\_study\\_as\\_a\\_Research.pdf](http://eprints.utm.my/8221/1/ZZainal2007-Case_study_as_a_Research.pdf) (Accessed 24 March 2012).
- Zijdemans-Boudreau, A., Moss, G. & Lee, C.G. 2013. Experiential learning theory (In Irby, B.J., Brown, G., Lara-Alecio, R. & Jackson, S. (eds). *The handbook of educational theories*. IAP-Information: Age Publishing Inc. p. 115-123).
- Zumthor, P. nd. BrainyQuote.com. Available from: <http://www.brainyquote.com/quotes/quotes/p/peterzumth542972.html> (Accessed 24 September 2014).



## Appendix A: Permission letter from host institution

November 19, 2013

Ms. Silna Van Tonder  
P.O. Box 11191  
BLOUBERGRANT  
7443

Dear Ms. Van Tonder:

### PERMISSION TO CONDUCT RESEARCH WITH [REDACTED]

Your application to conduct research entitled: **MANAGING THE QUALITY OF LEARNING IN HIGHER EDUCATION THROUGH THE HYBRID STUDY MODEL**, with [REDACTED] has been approved. The conditions of the approval are as follows:

1. The researcher will make arrangements concerning the research and electronic interviews through [REDACTED]
2. Access to the [REDACTED] learning platform will be limited to the postings and submissions only to the participants proposed by Harrison College and should be used discreetly and treated as confidential.
3. The institution, staff and learners in the study are not identifiable in any way from the results of the research.
4. Your research and interviews will be limited to the participants you have proposed and approved by the Director of International Partner Relations.
5. Please note that participants are under no obligation to participate or assist you in your investigation.
6. Upon completion of the research, a full report of the findings and recommendations must be submitted to [REDACTED]

Thank you for your interest in [REDACTED]

Sincerely,

[REDACTED]  
**Director of International Partner Relations**  
[REDACTED]

## Appendix B: Permission letter from partner institution

T: [REDACTED]  
F: [REDACTED]  
info@ [REDACTED] co.za  
www [REDACTED] co.za

22 November 2013

Ms. S. van Tonder  
PO Box 11191  
**BLOUBERGRANT**  
7443

Dear Ms. van Tonder

### PERMISSION TO CONDUCT RESEARCH AT [REDACTED]

Your application to conduct research at [REDACTED] refers. Permission is hereby granted for you to carry out your research study titled: 'Managing the quality of learning in higher education through the hybrid study model (HSM)'. In the execution of your study we would like to request the following:

- [REDACTED], the management staff, tutors and learners should not be identifiable in any way from the results of the study.
- Neither the management members of staff, nor tutors and/or staff are obligated to participate or assist in your study.
- The research be limited to the period requested.
- The study not interferes or interrupts the official teaching and learning programmes.
- Arrangements concerning interviews are self-organised and regulated.
- Your study and interviews be limited to the specified participants proposed.
- A report on the findings and recommendations of your study is submitted on completion.

Should you need any further information or clarification of the above please do not hesitate to enquire.

Yours faithfully

[REDACTED]  
CHIEF EXECUTIVE OFFICER

## Appendix C: Informed consent form

Mobile: +27 [REDACTED]  
Office: +27 [REDACTED]  
E-mail: silna@[REDACTED].co.za

P.O. Box 11191  
Bloubergrant  
7443  
2 December 2013

Attention: XXXXX

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Dear XXXXX

I want to thank you for agreeing to participate in this study, which will commence in the second term of the 2014 academic year. The title of my study is: ***Managing the quality of learning in higher education through the hybrid study model (HSM)***. This form outlines the purpose of the study and provides a description of your involvement and rights as a participant. The purpose of this study is to:

***Determine how, technology integration based on the hybrid study model (HSM) influences the quality of learning for post school learners, tutors and institutional management.***

The data will be collected by means of personal individual interviews and observation. Study participants include two management staff members, two tutors and ten learners, who will be interviewed using individual interviews with open-ended questions. Each interview and the observation will last about forty five minutes. Interviews and observations will be transcribed and voice recorded and the transcriptions of interviews and observations will be provided to participants for justification of the research report. Limited access to participants' online postings and discussion forums is requested for the duration of the study only in order to enable the coordination of data. You are encouraged to ask any questions at any time about the nature of the study and the methods that I am using. Your suggestions and concerns are important to me and you are free to contact me at any time at the telephone numbers or e-mail address listed above.

My final research report will be made available to all research participants so that they can gain a better understanding of how learning with technology integration through the hybrid study model (HSM) influences the quality of learning. I also guarantee that the following conditions will be met:

1. Participants' right to anonymity and confidentiality during the collection of data is guaranteed and no comments will be ascribed to any participant by name in any written document or verbal presentation. No data from the interview that might identify a participant to a third party will be revealed.
2. Participants are not by any means forced to participate in the study and can exit at any point.
3. A copy of the interview questions is attached.

I have read the information presented in the information letter on the study entitled: ***Managing the quality of learning in higher education through the hybrid study model (HSM)***. I have had the opportunity to ask questions regarding this study and have received satisfactory answers to my questions. I am aware that I have the option of allowing my interview to be audio recorded to ensure an accurate recording of my responses. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

**Participant name** : \_\_\_\_\_  
**Participant signature** : \_\_\_\_\_  
**Researcher name** : Ms. Silna van Tonder  
**Researcher signature** : \_\_\_\_\_  
**Date** : \_\_\_\_\_

Finally, I would like to thank you for taking the time in considering my request and I look forward to your reply.

## Appendix D: Interview schedule for learners

1. Besides your studies, for what else do you use the computer?
  - How much time do you spend on the computer per day?
  - How much time do you spend on studies per day?
  - How much time did you have to spend on studies before you started using your computer for your studies?
2. Why did you choose to enrol for studies using technology?
3. Is your learning style different to when you did not use technology in your studies? Explain.
  - What do you think of using computers for post-school studies?
4. What do you think are the needs/expectations of students in the 21<sup>st</sup> century?
5. Tell me about your personal experiences related to using technology to study.
  - Platform experiences.
    - Positive and negative
  - Interaction with the course material.
    - Formal and non-formal subjects
  - Interaction with and feedback from other students.
  - Interaction with and feedback from tutors.
  - Interaction with and feedback from the institution.
    - General administration issues
    - Student support
6. Do you think learning with technology might benefit you in future employment? Explain.

## Appendix E: Interview schedule for tutors:

1. Besides teaching, for what else do you use the computer?
  - How much time do you spend on teaching/assessing/interaction with students per day?
2. How do you feel about alternative methods of teaching?
  - Teaching post-school learners using technology
3. Is your teaching style different to when you did not use technology in your teaching? Explain.
  - What set of skills would you say is needed to teach with technology?
4. What do you think are the needs/expectations of students in the 21<sup>st</sup> century?
5. Tell me about your personal experiences when using technology for teaching.
  - Platform experiences
    - Positive and negative
  - Interaction with and feedback from students.
  - Interaction with and feedback from the institution.
    - General administration issues
6. What are the difficulties that you experience in managing technology based learning?
  - Preparation of the learning event
  - Facilitation
  - Supporting the students
  - Ensuring of accessibility for students
  - Evaluating the learning event
7. Tell me about the assessment methods in technology learning and if/how are they different to traditional methods?
8. Does online teaching include multiple ways of assessing student learning? Explain.
9. Do you think technology learning might benefit students for future employment? Explain.

## Appendix F: Interview schedule for management

1. What was the rationale for the institution's decision to offer technology learning?
2. What criteria does the institution use to ensure that student's level of skill meets the requirement to study online?
  - What skills should a prospective learner have?
3. What do you think are the needs/expectations of students in the 21<sup>st</sup> century?
4. How are the activities offered online evaluated for their effectiveness in meeting the student's needs?
5. What methods has the college developed to evaluate effectiveness in producing student learning outcomes?
  - Tell me about the support and counselling offered to students.
6. Tell me about communication at the college. Is it clearly understood, widely available, current communication - that takes into consideration the needs of students enrolled in technology used programmes?
  - Interaction and feedback mechanisms
7. Tell me about the management and/or administration when using technology for teaching and learning.
  - Platform experiences
    - Positive and negative
  - Delivery of content
    - Suitability of tutors
    - Monitoring and supervising of tutors
    - Reporting system and review
    - Technology services to ensure that the needs of staff responsible for teaching are met
8. Do you think technology learning might benefit students for future employment? Explain.

## Appendix G: Transcribed interview with L6

4 June 2014

I: ***L6, thank you for agreeing to participate in this study.***

L6: No problem.

I: ***L6, besides for your studies for what else do you use the computer?***

L6: Uhhh...well I use it for work....ja...and for social reasons...also for projects at work.

I: ***How much time do you spend on the computer per day?***

L6: Uhhh...I spend round about 8 hours I think. Ja. Lets say 8 to 10.

I: ***And on studies?***

L6: Ok...it depends...its...because...it is funny you ask this question because I was looking at how much I currently...well about 2 hours... or 3 to 5 hours per week depending on my assignments and research...if I take 2 courses simultaneously I spend like 10 hours a week.

I: ***L6 if you compare traditional learning with technology learning. Do you now spend more time or less time on your studies using technology?***

L6: More time. Uhhh...because everything is electronic, everything is technology called media, so I research faster. You really on the platform, do research. Uhhh...the research is actually quick. It quick because you just gets everything online and just...the platform working it online so it could be quicker.

I: ***Why did you choose to enroll for studies using technology?***

L6: Ok...Time. So I have X amount of hours in the day and some of those hours I have to sleep, the rest I work and if I'm not working, I socialize and have some personal projects of my own which are projects etc. And I need time to...all in all it ....I use a lot of hours and then I still have to educate myself. If I have had to go to an institution and classes it would just take up so much of my time whereas ....by if I need to do a project or I need to do an assignment I need to log on I get to see the videos and I can carry on and do what I need to do ....it just the time factor. It is still demanding but I can slot it in and I can handle the demand according to my ...my...hours and my place...ja...

I: ***What effect has technology in your studies had on your learning style if you compare yourself and the way you learnt traditionally comparing to now?***

L6: Uhhh....yes...I guess I ....I actually learnt to research faster and more effectively with the online course. Uhhhmm....ja...that would probably be it. My research is faster and more accurate.

I: ***Do you think it is because you are more self-disciplined and there is more self-direction?***

L6: Uhhhmmm....ta...ta...ta...I have to think about this one. Ja...I am more self-disciplined. Possibly to a degree because ....ja...I guess...for me personally not dealing a lot into... a schedule I find I have ....I kind of like that. If you like something you have more like a passion for it. However there is one area that my style has changed and ...you know when you look



at your peers when you are all...uhmm... also online you never really get to see them...uhm...so now what I...they actually pass you information...they pass you research leg and that is another form of how I find my research to give it differently or my learning experience differently. I did not have that before so it is something new. So definitely the peer interaction.

I: ***So what do you think of using computers for post school learning?***

L6: That is fantastic...its...that is the way...ja... It works for me absolutely.

I: ***What do you think are the needs/expectations of students today?***

L6: Uhh...students today...I believe...want to have access to material and knowledge pretty much at your fingertips you know. I think they rely a hell of a lot on technology and what I'm finding more and more is that they actually become more academic because of technology because they can ...continuously talk towards their peers, their demands, their studies about research as oppose to non-computers, non-technology, so the proliferation of technology I think also give a proliferation to academic advancement among youngsters. Knowledge is right there and then.

I: ***L6, tell me about your personal experience related to technology. How do you experience the online learning platform? Some positive and negative experiences?***

L6: Uhhh....the positive aspects...or just generally...uhh...I think on a positive note it is fantastic because it is...all your studies are built in so when you log in everything is right there. Click on your course and see what you need to do etc. I think that the quizzes get marked instantaneously the assignments are very easy it is not complicated. I think negative is the bringing the gap between your peers. There should be some form of an integrated academic chat or academic area.... Whereby something....there is something like that but it's not marketed that great on these platforms that you can engage better with your peers and really find out a bit more. And I also think that the grades ...uhhh...it is sometimes not professed ...there should be some form of take that your grades will be available next month end and you can start seeing a bit of a grades or chart site. I know that [name of platform] does have it but sometimes it is a buggie and it does not really work. There should be like an errors send...bam...bam...bam...this is how you do it...etc

I: ***Do you say it is the user friendliness?***

L6: Uhh...no the academic enhancements on it. To make things easy for your students so they can see their progress. So really actually academic enhancements. Ja....

I: ***L6 tell me about your interaction on how you experience your course material?***

L6: Uhh...its I think materials it's like a basic...well sorry...it's not always basic. It's there and it's efficient to do your assignments etc and I think it is great...uhh...because they always post links where you can get additional information and that is very important and the actual tutorials are good I don't find the material online any different to the material you will get for a non- online education ja.... Textbooks are great. You get an e-book and that's great. I prefer the e-book because I have two monitors so my laptop I connect to the monitor so on one monitor I can see my textbook and the other monitor I can have my windows word page or I can have questions that I am answering so I can switch between and copy and paste and look at the textbook, get quotes from it, switch between I have a tablet open I can go to my table when someone phone me. I don't need the....I don't think I will ever go back to using that.

- I: ***And if you don't have the e-book?***
- L6: Well...if there is no e-book available I will get the actual print copy. But then the university needs to provide that or give me and tell me where to get it. That is their responsibility.
- I: ***Still on your personal experience relating to technology, your interaction and feedback from other students, your peers, tell me your personal experience on that?***
- L6: Ok...so...let's say there is a discussion you get to read other people's discussions. In their discussion some of them give links in their research they have done and that could have been a research link I have missed...I missed one or never saw I could have been really important which they had in their discussion....and I think wow... I find the discussion really interesting. Then you have a look and see where that person got their research and look if I could see it. An absolute benefit.
- I: ***L6, how is the netiquette of people on the platform? Do they show some technology etiquette when they do postings?***
- L6: I think there is always room for improvement...typos indeed...but...constructive criticism is important. When criticizing give a solution and be polite and acknowledge that, that person took time and thought to write a post. All in all – I think the approach for netiquette should be how can I learn from my peers and help them diplomatically
- I: ***Seeing that there are other students on the platform. Do you link with student international?***
- L6: Uhhh... is generally academic but there are times when curiosity is always there. And you ask like what [country] you in are ....and that is great....it's fascinating... and the cultural differences.
- I: ***L6, and you feedback and interaction with your tutors. How do you experience that?***
- L6: Uhhh....some tutors are really amazing and...uhh...I guess you get some tutors that are just very clinical. Uhhh....I prefer to non-clinical ones. There are two types. I guess when tutors really care....they are really interested and understanding....uhhh...not the standing...uhh... that they don't have to be hypocritical....they...that is excellent. It just goes beyond your studies. There is the extra care. That differentiate the clinical ones.
- I: ***Do you find it difficult to build that type of relationship with your tutor. Because you can't see him online?***
- L6: You see....I don't need the physical connection. What's good enough is for me to get a question or an assignment answer an assignment upload it and a few days later look at the ....or a day later look at the response and the feedback. And that feedback is really enough for me not to see the person.
- I: ***Your interaction with the institution. Regarding general administrative matters and student support. How did you experience that?***
- L6: Uhhh...it is always good...it is always a 24hour turnaround time I mean ....that's the service they have. It is always quick it is always fast....obvious sure at times they get inundated with requests and it takes a little bit longer...You do get constant e-mails coming in....to let you know the summer classes or winter classes or whatever is starting soon....ja...

- I: ***What effect if any, could technology learning have in future employment? What do you think?***
- L6: Ok...well I do ...uhhh....if you think technology learning could do yes ...but then again it is only to a group of people.... that maybe ....those that do not have access to computers is a great up. I think they have technology learning just like online learning ....I think there will once they pick up they will have a better ...uhh...feel for computers and probably a better feel for technology than the ones that did'nt....But then again....it depends.
- I: ***What do you think of the hybrid study approach? Attending classes and having technology to learn?***
- L6: This is an interesting one – I think it might have to do with age. See – if you are fresh out of school and go straight into tertiary education I feel the class interaction at a physical level is important for your character and it teaches you engaging with your peers. The question is how much physical engaging is needed – I would think twice a week is sufficient. However if you are older – like in my situation, I feel I do not need peer engagement at a physical level as I have developed already in this area.
- I: ***L6 is there anything you want to share with me regarding online learning, the future or anything else?***
- L6: You know what...and I think it's a mindset or...you need to get out of it ....if you do online education....people deem it as a little bit inferior to going to class education....it comes with a ...tradition and ...I think the old school....and it's not! It's the same what I do. If the material is the same, the academic level is the same and the questions the same and the way you need to answer it and how you research is the same there should be no difference....I think.
- I: ***How do you bridge that gap you think?***
- L6: I guess it should start from a young age maybe....you know from growing up with technology ...if you don't and you are maybe 30 ....and you just have to get on with it...but the degree online and attending ....classes like now....there are definitely people that look at the online degree as a little bit of an inferior degree.
- I: ***Why?***
- L6: It's a mindset. It's an old school mentality. And everything has got to be look at as the same thing, the same institution that is being issuing the degree...ja...
- I: ***Well thank you L6 for you input it is much appreciated.***

## Appendix H: Interaction on discussion forum between two learners.

[+] Directions #

Describe a product that uses penetration pricing strategy and one that uses skimming price strategy. Explain why you think each product uses these pricing strategies.

In order to receive full points for the discussion questions you MUST post your answer to the proposed question by Wednesday of each week, and respond to two of your peers by Sunday 11:55 PM Eastern Time. Please refer to your instructor's guidelines on required length of your response.

RE: Discussion - Week 8

8/15/2014 0

good example toothpaste companies are always marketing a new and improve toothpaste to consumers at a discounted price or coupon at a lower price. Once the consumers like the product and start purchasing the product at regular price the companies increase the payment. Good example of penetration pricing strategy.

[+] Directions #

Describe a product that uses penetration pricing strategy and one that uses skimming price strategy. Explain why you think each product uses these pricing strategies.

In order to receive full points for the discussion questions you MUST post your answer to the proposed question by Wednesday of each week, and respond to two of your peers by Sunday 11:55 PM Eastern Time. Please refer to your instructor's guidelines on required length of your response.

RE: Discussion - Week 8

8/15/2014 0

Companies set price according to what the market will bear and to make a reasonable profit. Some pricing strategies of companies are more permanent in nature like your toothpaste refills, while other pricing moves are used temporarily like the refills.