

**TEACHING DIGITAL NATIVES: INTEGRATING BLENDED LEARNING
IN CREATIVE DESIGN FOR FASHION**

**Submitted in fulfilment of the requirements for the
degree of Master of Applied Arts in Fashion at the
Department of Fashion and Textiles
Durban University of Technology**

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DECLARATION

Teaching Digital Natives: Integrating blended learning in Creative Design for Fashion

by

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Dissertation submitted in partial fulfilment of the requirements for the degree of Master in Applied Arts in Fashion at the Faculty of Arts and Design, Durban University of Technology.

I declare that this dissertation is my own work and has not been submitted for any other degree or examination at any other institution.

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ABSTRACT

Research suggests that current generation students are high-end users of emerging technologies, such as mobile devices and other new communication tools. The generation has been described as being “digital natives”, since their lives revolve around sophisticated modern technology. As a young educator appointed by the Department of Higher Education as a New Generation Academic Lecturer within the Department of Fashion and Textiles at Durban University of Technology (DUT), how do I harness the digital competencies within these “digital natives” in the teaching and learning context of Creative Design (I) for Fashion? In this report, I therefore present a conceptualisation of how blended learning could possibly be integrated into a Creative Design (I) classroom. This study has been developed through an action research methodology whereby the conceptualisation of the first stage of the action research was influenced by my observations as a lecturer, student feedback, theoretical frameworks and the reviewed literature. In this conceptualisation, Blackboard as a digital learning platform was integrated within the teaching and learning process of Creative Design (I) as a method for enhancing the cognitive, social and teaching presence within a Garrison Community of Enquiry and Problem Based Learning framework. This study therefore contributes towards innovations in teaching and learning using digital media in the Creative Design classroom at first year level within the Department of Fashion and Textiles.

Keywords: Blended learning; collaborative learning; higher education.

DECLARATION

I hereby confirm that this study is entirely my own original work, and where the work of others has been cited, it has been fully acknowledged and referenced.

I hereby also certify that this dissertation has not been submitted for a degree at any other university or institution, and that this is the first publication of this report.

I _____ (Full names) certify that this work is my own.

Signed at _____ (Place),

On this day _____ (Date).

DEDICATION

This dissertation is dedicated to my late Grandparents Mr S.J. and Mrs G.G. Mkhwanazi, for all the support they gave me. Thank you for supporting my mother in paying for my education and childhood needs in the absence of my father. I would not be here today if it wasn't for your investment in me.

You are both truly missed.

Love always.



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You never have to hear another master's degree story again, but you will be hearing about a doctoral degree story. 😊

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GLOSSARY AND DEFINITIONS

1. **Blackboard** – Founded in 1997 by two education advisors, Matthew Pittinsky and Michael Chasen, Blackboard Inc. is a Learning Management System (LMS) that provides powerful and easy-to-use systems for educational instruction, communication and assessment (Bradford *et al.* 2007).
2. **Blended Learning** – A combination of online and face-to-face instruction (Hanrahan *et al.* 2009; Howe and Strauss 2000; Barajas and Gannaway 2000; Gonzalez 2004).
3. **CELT** – The Centre of Excellence in Teaching and Learning at the Durban University of Technology.
4. **COI** – Community of Inquiry (online).
5. **VOIP** – Voice Over Internet Protocol.
6. **Collaborative learning** – An instructional approach whereby a small number of learners interact together and share their knowledge and skills in order to reach a specific learning goal (Aycock, Garnham and Kaleta 2002; Bonk *et al.* 2002a).
7. **Creative Design** – Creative Design is a subject within a Fashion and Textiles qualification. It is a design subject that is carried from first to third year.
8. **Data** – Information translated into forms that are efficient for movement and processing.
9. **“Digital Natives”** (Prensky 2001, 2005, 2010) – **“Net Generation”** (Oblinger *et al.* 2005) – and **“Millennials”** (Tapscott 2009; Jones *et al.* 2010) – These are three terms coined by authors and best describe the current generation of students. “Digital natives” are believed to have become net-savvy whilst being driven by a high need for self-expression. They lead fast-paced lifestyles motivated by rapid processing of information and are constantly pushing at boundaries with technology (Skiba and Barton 2006).
10. **FYSE** – DUT First Year Student Experience.
11. **ICT** – Information Communication Technologies

12. **Information Communication Technologies (ICTs)** – Modern communication tools and modern technologies such as the Worldwide Web/Internet, smart whiteboards, social media tools, and LMSs (Howie, Muller and Paterson 2005).
13. **Instagram** – Instagram is a photo and video-sharing social networking service owned by Facebook. Originally created by Kevin Systrom and Mike Krieger, and launched in October 2010 exclusively on iOS products (Waters 2014).
14. **LMS** – Learning Management System.
15. **NSSE** – National Survey of Student Engagement.
16. **PAR** – Participatory Action Research.
17. **PBL** – Problem-Based Learning.
18. **Pinterest** – Launched in March 2010, Pinterest has gained vast public and media popularity, and is currently one of the most popular social network in the United States following Facebook and Twitter, LinkedIn and Google+. Pinterest has key social networking features and is built around the activity of collecting digital images and videos. Pinterest has termed these activities “pinning”, as these pictures are pinned onto a pin-board in a form of a collection. Once a pin is created, other community members can add comments, like it, or re-pin it. Pinterest displays comments beneath the image in a comment stream, similar to that seen on other social media sites (Hall and Zarro 2012).
19. **Satisfaction** – An affective learning outcome indicating the degree of: (a) learner reaction to values and quality of learning, and (b) motivation for learning (Aycock *et al.* 2002).
20. **Social Presence** – The psychological degree to which a learner perceives their own online presence, and their connectedness with other learners (Aycock *et al.* 2002).
21. **Think Learn Zone** – A new term for Blackboard for the Durban University of Technology (DUT).
22. **Twitter** – A social media and microblogging service founded in 2006 and has more than 41 million users. Twitter allows users to tweet about any

topic within 140 words. Twitter has become a worldwide instant news feed tool (Kwak *et al.* 2010).

23. **VLE** – Virtual Learning Environment.

24. **WGSN** – Worth Global Style Network is a fashion forecasting website used by Fashion Design Academies and Retail co-operations for analysing current and future trends in fashion (McKelvey and Munslow 2009).

25. **Wi-Fi** – Wireless computer network.

26. **YouTube** – YouTube is one of most prominent user-generated content service providers, and also the world's largest video sharing service. YouTube has around 100 hours of video uploaded to its servers every minute, and over 6 billion hours of video watched each month by more than 1 billion unique monthly visitors. YouTube is also one of the most visited sites on the Web, and is currently the number 2 search engine used online, despite being first and foremost a video sharing service and not specifically a search engine (Buzzetto-More 2015).

CHAPTER ONE:

DIGITAL NATIVES AND BLENDED LEARNING EXPLAINED

1.1 INTRODUCTION

Research suggests that current students are high-end users of emerging technologies (Prensky 2001, 2005, 2010; Oblinger and Oblinger 2005), mostly in the form of mobile devices and other new communication tools (Tapscott 2009; Jones *et al.* 2010; Yong and Gates 2014). This generation has been described as “digital natives, since their living apparently revolves around the use of sophisticated modern technology (Prensky 2001; Autry and Berge 2011). It is thus important to harness the digital competencies of “digital natives” within the teaching and learning context. For the purposes of this study, I further explored the term “digital native” by defining this type of student in the glossary section above, and also by elaborating on their personal characteristics in this first chapter.

For this study, the integration of blended learning in Creative Design (I) for fashion as a method of enhancing learning for first year students during the fashion design process has been explored. The development of the study was achieved through the use of an action research methodology whereby the conceptualisation of the first stages of research were informed both by my observations as a lecturer, and the literature reviewed. Blackboard, a preferred learning management system (LMS) at the Durban University of Technology (DUT), was the digital platform utilised for the integration of blended learning methods in Creative Design (I); since this research aims to contribute to innovations in teaching and learning using digital media in the Creative Design subject at first year level in the Department of Fashion and Textiles at DUT.

1.2 AIMS

The aim of this study was to investigate how the inclusion of blended learning in Creative Design (I) can enhance learning for first year DUT students studying towards a National Diploma in Fashion by:

- designing a virtual learning environment (VLE) on Blackboard to create a collaborative learning space, aimed at connecting the cognitive, social and teaching presence for first year fashion students during the design process (Garrison 2007:62).

1.3 OBJECTIVES

In order to achieve the aims set out, the study needed to:

- Explore current teaching methods to enhance the learning for Creative Design (I) first year students during the fashion design process.
- Investigate issues associated with teaching Creative Design (I) using blended learning pedagogies.
- Evaluate the value of teaching Creative Design (I) using blended learning by means of VLEs.
- Contribute towards existing studies related to the use of blended learning within the Department of Fashion and Textiles at DUT.

1.4 RATIONALE AND BACKGROUND

My observations as a Creative Design Lecturer for first year students at the Department of Fashion and Textiles at DUT largely inspired this study. Over the past three years of teaching Creative Design (I) to first year students, I have noted certain fundamental shifts in teaching and learning which seem worth investigating; this being that there is increasingly a certain type of student who appears to be more technologically savvy enrolling at the university.

DUT is also encouraging educators to explore current teaching methods which embrace modern technologies. Based on observations, I set out to explore to what extent first year students enrolled in the Creative Design (I) classroom were modern students with an inherent interest in using technology as part of their learning process. Various international studies claim that students enrolling at universities currently may be categorised as digital natives, being born after 1980 during the rise of digital media (Palfrey and Gasser 2013).

Such studies also indicate that digital natives are students who tend to understand and construct knowledge by utilising technology to access information for learning (Brown 2005). The Centre of Excellence in Teaching and Learning at the Durban University of Technology (CELT) encourages educators to keep pace with new developments in teaching and learning. The department (CELT) also places great emphasises on the fact that there needs to be a progressive shift from traditional methods of teaching, and with new learning patterns emerging which embrace a constructivist approach needing to be welcomed (Brown 2005).

As a fashion industry professional, but also a young educator at university, I noted that current methods of instruction and learning for Creative Design (I) had not transformed in order to cater for these presumed digital native students with new learning needs. Having systematically observed first year students during Creative Design class time, I was able to make the claim that a certain number of first year students in Creative Design battle with understanding aspects of the basic principles and process of fashion design.

I was able to justify these claims based on the standard of work submitted during the first semester of Creative Design. Without any point of reference to what was learned, I was able to make the assessment that students battle to independently apply information taught in class to their design projects. How then could I assist students in remembering important aspects of the design process, and also how could they go about creating a learning space which

housed all Creative Design content? Could this virtual space be of any benefit to the learning of first year students in Creative Design, and would it improve their design projects in any way?

With these questions in mind, I identified room for improvement in learning within the course, because Creative Design students are often encouraged to use library and internet resources independently whilst conducting research for projects. However, these observations have led me to believe that first year students battle to source information related to research independently, even though they are briefed about how to do so in class. I therefore saw a need to integrate blended learning techniques in Creative Design (I) as a method of collaborative digital, cognitive and social presence in both its teaching and learning.

The introduction of Blackboard became ideal, as it was a preferred LMS at DUT, and because such a space would embrace both face-to-face and online teaching and learning methods, making it also an ideal blended learning platform. With this study I set out to validate the necessity for a Blackboard Creative Design classroom at first year student level, and the integration of various technologically-inclined learning media, such as Instagram, Pinterest, WGSN, and YouTube, which were also very useful for research being conducted.

Having practiced in the fashion industry for over eight years, I was able to state that understanding a design process is key to executing a design brief accordingly. It was imperative that key steps in the design process, such as: inspiration, identification, conceptualisation, refinement and modelling were included in order to visually communicate design concepts (Aspelund 2010). During my years in the fashion industry, technology played a defining part in executing these concepts, and was used mostly during the early stages of design, as those required extensive research related to fashion trends, inspiration and modelling. It is with this in mind that I set out to introduce

technology within Creative Design in the hope that it would answer the key and primary question, that of: How can blended learning be conceptualised and optimally applied in Creative Design (I) for Fashion?

My motivation for using blended learning was that it has gained vast popularity all over the world, especially in art and design education, because this method of teaching combines various delivery techniques and styles of learning. Also as an educator it was critical that my teaching and learning methods were in line with the South African Higher Education Policy of 2007 (Cross and Adam 2007). The Higher Education Policy states that that educators should explore technologically-inclined teaching methods (Hanrahan *et al.* 2009; Cross and Adam 2007).

In a quest to enhance cognitive abilities of first year fashion design students and digital learning competencies during the design process, key theoretical frameworks, such as the Garrison Community of Inquiry (Garrison 2007:62) and Problem-Based Learning were explored (Savery and Duffy 2001). These were guided by the principles of a constructivist paradigm which hinges on the precept “how we come to know”.

Based on the fact that this study is underpinned by constructivist principles, it was fitting that an action research design was employed to plan and collect data. Action research tends to follow a path designated by the information collected, and this led me to discover certain findings, and also posit justifications and conclusions concerning the integration of blended learning techniques into Creative Design (I). The action research design adopted rested within a qualitative methodology, as my aim was to interrogate, deconstruct and decentralise traditional teaching and learning methods (McNiff and Whitehead 2010:21).

My argument for conducting the study was that students are often given links, resources and current technologies to use for learning during the design

process. However, based on my teaching experience, if the process is not facilitated by the educator or instructor during the research stages, the information given becomes easily forgotten and unused.

With this study, I set out to answer critical questions on the benefit, or lack thereof, of the integration of modern technologies in Creative Design (I) which have been facilitated through the use of the Blackboard interactive platform. I also set out to investigate the notion argued by authors, Palfrey and Gasser (2013), that students entering into university are digital natives.

I have kept in mind that this study was being conducted in South Africa, where there have been many heated debates regarding the labelling of South African students as being digitally native. Authors such as Thinyane (2010) have cautioned proclamations on the digital natives argument, and the use of technology for teaching and learning, stating that in a South African context, educators have had to be cautious with the implementation of ICTs in Universities, since most South African students only come into contact with technology in their first year of university.

1.4.1 A South African point of view

Some South African researchers contend that there is no evidence to support this digital native generational phenomenon in South Africa, and rather that it is only an elite group of students who appear to be digitally literate (Czerniewicz and Brown 2010; Jones and Shao 2011). In recent studies, research findings indicate that South Africa possesses two kinds of learners – “digital natives” and “digital strangers” – as growing up with digital media in South Africa seems to apply only to a relatively small portion of the population of the country (Czerniewicz and Brown 2010). Only 14.8 percent of South African households have access to a computer, by comparison with 75 percent in the United Kingdom and 70 percent in the United States of America (Czerniewicz and Brown 2010:861). However, although South African

students may appear to be “digital strangers” in computer based technology, they are not strangers to all digital technology, as most students have access to and experience in using a cell phone (Czerniewicz and Brown 2010:860).

The study’s first critical question sets out to address the problem of the definition and identification of digital natives within both a South African and global context. I took into consideration that not all first-year students in Creative Design (I) are proficient with technology, as assumed, because the Internet can be a new environment for many students (Bradford *et al.* 2007). Furthermore, first-year students do not all possess and have access to Wi-Fi, the Internet or a smart phone. Certain students will be limited by this lack of access, because they can only connect online whilst on DUT premises. It was imperative based on these acknowledgements that a range of teaching methods relating to digital preparedness therefore be applied.

My objective for this study is to contribute to the existing body of knowledge regarding blended learning within institutions of higher education, such as the studies conducted by Oellermann (2014:5) and Zoepke (2013) at DUT, which indicate that students believe that online classrooms provide them with a more positive learning experience.

1.5 CRITICAL RESEARCH QUESTIONS

I have used the following questions to guide the study. The study has been directed by investigating the primary research questions, which are:

- How can blended learning be conceptualised and optimally applied in Creative Design (I) for Fashion?
- How can the current generation of students be defined and identified?
- What learning theories can be applied to the teaching and learning of digital natives in order to enhance their learning in the Creative Design (I) classroom?

- In what ways can the implementation of blended learning improve the teaching and design practice of first-year Fashion Design students at DUT?

1.6 ASSUMPTIONS

Even if not all students at the Department of Fashion and Textiles at DUT have Internet access at home, the majority possess smartphones, and are able to access the internet via Wi-Fi in areas, such as libraries and computer labs, within any of the DUT campuses. During my observations in classroom interactions with some first-year fashion design students, many students relate well with technology using platforms such as Pinterest (pinterest.com 2016), and digital resources such as WGSN (wgsn.com 2016) for the Fashion Design research process.

Based on the views explored, the stance adopted for this study was that there is definitely a modern type of student enrolling at DUT every academic year, and this has been evident based on both my observations, and in practice. Thus, the possibility of investigating the existence of digital natives who have an inherent interest in using technology as part of their learning process in Creative Design (I) became imperative.

1.7 CONCEPTUAL FRAMEWORK

For this study, I explored conceptual frameworks which foster teaching, and learning methods which promote collaborative learning within environments encompassing each a social, cognitive and teaching presence.

In order to answer the critical questions posed, this study has been underpinned by the principles of a constructivist paradigm, employed to address teaching and learning activities which involve both myself and the learner (Biggs 1996:356). The use of a constructivist framework as a paradigm alongside Garrison's Community of Inquiry (Garrison 2007) and Problem-Based Learning theories (Savery and Duffy 2001) was an attempt to achieve greater and higher-level objectives in Creative Design (I) for Fashion (Biggs

1996:356). Binding all these theoretical frameworks together provided insight for understanding various teaching and learning styles, and also for collaborative learning environments and their characteristics which influence the intrinsic motivation students have for learning.

In this study, Garrison's Online Community of Inquiry (COI) model was used to address the social, cognitive and teaching presence in the facilitation of a blended mode of learning. Also, this theory would address the designing of the Blackboard Creative Design (I) online classroom, since it explores how first year students utilise "motivation, self-regulation, and thought to learn, [and] consequently expectations, beliefs, self-perceptions, goals and intentions shape and direct their behaviour" (Bandura 1989:2).

Thus, for this study the creation of a learning space which encourages human cognitive and social competencies was fundamental, as students understand a design process through social influences and perceptions. Fashion in this regard is a subject rooted in making social statements influenced by social realities (Bandura 1989:2; Burke 2011:11).

Modern media also have a great social impact on human reality, because they can sway experiences as aspects of the electronic era are adopted, and also serve to broaden human experiences and environments (Bandura 1989:22). With technology being the factor impacting on social behaviour, such as learning, it is this aspect of human behaviour which has underpinned the case for teaching and learning methods to be constantly reviewed and adapted.

1.8 LIMITATIONS

This study was faced with the following limitations:

- Limited access to computer labs with Internet access. The Creative Design (I) classroom does not have a smartboard and computers for students to use.

- The change-over in students from year 2016 to 2017, which created a repeat in data collection for Cycle One.

In response to the limitations, Internet sessions for participants in a designated computer lab were structured in an orderly timetable format to ensure that the fair and equal access required was provided for the study.

1.9 DELIMITATIONS

The study sample was delimited to first-year Creative Design students studying towards a National Diploma in Fashion at DUT, since the study attempted to enhance learning in a major¹ subject at this institution's Department of Fashion and Textiles.

1.20 ETHICAL CONSIDERATIONS

The success of this study was centred on the participation of first-year fashion design students. It was therefore imperative to conduct the study in an ethically correct manner, as humans are involved (Leedy and Ormrod 2005). The participants were not exposed to any physical harm during the course of the study.

As part of the study's ethical considerations, DUT guidelines for conducting such studies were followed. Students were all formally invited to participate in the study via a letter of information. Those who were interested in the study were recruited as participants for survey questionnaires, focus groups and interviews. These were voluntary surveys, and students could withdraw at any time. The information provided by students was regarded as highly confidential, and was used only for the purposes of this Masters in Applied

¹ Creative Design (I) is a major subject under the Department of Fashion and Textiles module descriptor as it possesses 16c HEQSF credits and a HEQSF level of 5. Creative Design (I) is also a compulsory subject.

Arts: Fashion dissertation study. Data provided by participants who chose to withdraw from the study was not used, and was later destroyed.

Students were allowed the option of refusing to answer any questions they did not want to answer, and were assured that this would in no way impact on their relationship with me. Course marks were also not in any way related to this study, and were thus not affected. Students that chose to withdraw from the study were not disadvantaged in any way in class activities, or in relation to lecturer-student subjectivities. There was no form of either formal or informal penalty applicable to this process.

1.21 SAMPLE POPULATION

First year DUT Fashion and Textile students were the sample identified for this study due to convenient access. A non-probability convenience sampling method² was employed in order to recruit participants for the study (Suen *et al.* 2014:1; Flick 2009:28). As this was a voluntary survey, I estimated a prospective sample size of ten participants per group; therefore, twenty participants altogether, as there were two groups of students at first year level sampled.

1.22 CHAPTER OVERVIEWS

Chapter One: Digital Natives and Blended Learning Explained

Chapter one explores the definitions and traits of digital native students. Also explored are the aims and objectives of the study which were intended to

² A non-probability convenience sampling method refers to those cases that are easy to access under given conditions (Flick 2009:28). In this regard, the first-year students were easily accessible, as the researcher was at the time their first-year Creative Design (I) lecturer. Additionally, the majority of students belonged to the current generation of digital natives under investigation.

enhance the teaching and learning outcomes for first year students in Creative Design (I) for Fashion

Chapter Two: A Blended Mode of Learning Demystified

In Chapter Two, I have explored literature on blended learning as a means of arguing for the benefits and against the drawbacks of a blended mode of learning. Also investigated is current literature on Blackboard as a contemporary LMS.

Chapter Three: A Blended Learning Enquiry

Chapter Three explores and orientates with the theoretical frameworks employed for the study, namely: constructivism (Richardson 2003:1624; Ally 2004:3), Garrison's Online Community of Enquiry, and Problem-Based Learning (Savery and Duffy 2001) as theoretical frameworks. These theories have been woven together to develop and apply a focused and measurable method of instruction suitable for the Creative Design (I) classroom (Mergel 1998:2).

Chapter Four: Research Method – Field work and Pragmatic Explorations

In order to execute the objectives set out for this study, a qualitative approach was adopted and used alongside an action research design, since this study focused on understanding the problem and developing an intervention with the individuals involved (Maree 2007:74). Two groups of first-year students across the 2016 and 2017 academic year were the sampled groups used to collect data for the study, due to convenience of access (Maree 2007:71; McNiff and Whitehead 2010).

In order to apply constructivist principles to the study, an action research design was employed to generate a theory and make meaning of a situation, whereby the development of the study relied on the responses of first year students in the Creative Design (I) class (Creswell 2009:6).

The study has charted four action-research cyclical processes whereby first-year Creative Design (I) students have followed a path designed based on their responses obtained through survey questionnaires, focus groups and interviews. An action research design was used to analyse student learning behaviours to determine improvements and changes (Maree 2007:71; McNiff and Whitehead 2010).

Chapter Five: A Blended Mode of Learning Enlightened

Based on research conducted and data collected, Chapter Five analyses the data, and evaluates the study findings relating to the drawbacks and benefits of incorporating blended learning into the Creative Design (I) classroom. Theoretical frameworks explored are also reviewed as part of the blended mode of learning conceptualisation in Creative Design (I) for Fashion students.

Chapter Six: Implications of A Blended Mode of Learning for Creative Design (I) for Fashion

The final chapter explores recommendations with regard to the research topic, and suitable theories and future prospects of integrating blended learning into fashion design modules, mainly in the Creative Design (I) course.

1.23 CONCLUSION

This chapter provides an overview of the study with regard to explorations relating to digital natives, literature relating to blended modes in teaching and learning, theoretical framework explorations, the data collection process, and the analysis of research findings.

Following on from Chapter One, I argue for blended learning as an important mode of learning for current Fashion students who appear to be digitally-motivated. The study's argument rests on the motivation that current students enrolling at DUT adapt better and are more susceptible to learning techniques that employ modern technologies.

Although studies differ in their views of digital natives, especially from a South African perspective, in the next chapter it is argued that the existence of a new generation of students entering the university who have a keen interest in merging technology with Creative Design (I) can thus significantly improve on their learning process. Various literature relating to blended learning, authentic learning environments, student engagement and the design process itself are therefore also therein interrogated.

CHAPTER TWO: A BLENDED MODE OF LEARNING DEMYSTIFIED

2.1 INTRODUCTION

In this chapter, the argument is made for teaching methods which promote cognitive, social and digital collaboration in Creative Design (I) for first-year fashion students during the design process. I have explored various literature regarding blended learning pedagogies to contend the benefits of each of the blended learning methods in design education, debates in educational technologies, and VLEs as an important method of instructional delivery. In order to conceptualise the most suitable blended learning mode of instruction for Creative Design (I), a VLE had to be explored to act as a catalyst for learning during the design process for fashion students.

Face-to-face instruction was combined with online instruction, and various technologically-inclined media through Blackboard – a LMS acting as a vehicle for sharing, collaborating on and storing information for learning (Bradford *et al.* 2007). The aim of integrating Creative Design (I) with an online learning space was to create an educational experience with a sense of community, where ideas could be distributed and students could share a common purpose of enquiry whereby they are able to benefit from each other (Garrison 2007:63).

There has been much debate on the development of well-elaborated national policies for ICTs in education within an African context. Despite the several approaches utilised to set up education-specific ICT policies in South Africa, the overwhelming sense is that very few policies exist, and where they do, they remain vague and make very little reference to effective implementation (Howie, Muller and Peterson 2005:4).

The creation of an authentic learning environment was intended to establish a social, cognitive and teaching presence through the employment of an e-

learning framework, in hopes of encouraging conception, reflection, action, critical thinking when designing (Garrison 2007:61). The literature reviewed not only explores blended teaching and learning modes, methods of generating student engagement during the learning process, and different types of learners, it also reveals a definition of current students who have been defined and dubbed by authors as “digital natives”.

Literature has defined current students entering university as being; assertive, self-reliant, curious, and frequently seeking and creating new information, with a high need for free self-expression, as they are fierce, independent and emotionally and intellectually open (Skiba and Barton 2006). With access to easy knowledge, digital natives wish to appear more mature than their peers, as this generation of students lead fast-paced lifestyles motivated by the rapid processing of information, and constantly push boundaries with technology in order to open up new worlds for themselves (Skiba and Barton 2006).

Given the clearly-defined characteristics of these modern students, it was imperative that my own teaching methods were reviewed, since this generation of students requires learner-centric methods of learning, where the learning environment is tailored, option-rich, and engaging, and the educator is viewed as both a mentor and facilitator (Brown 2005).

With the probable rise in digital native student populations at universities, it is considered ideal that there should be a gradual shift from traditional methods of teaching which are exclusively face-to-face, and where an educator simply passes down information to a student, towards more constructivist-learning techniques which encourage student-teacher engagement, collaborative learning and self agency. This trend is seen because contemporary students tend to concentrate on understanding and constructing knowledge, utilising digital discovery methods to access knowledge for learning (Brown 2005). Present-day students tend, moreover, to understand and construct knowledge by utilising available technologies to access information for learning (Brown

2005). Thus, a fundamental change is predicted in the way young people “communicate, socialise, create and learn” (Helsper and Eynon 2010:1).

At DUT’s Department of Fashion and Textiles, teaching methods are constantly revised in order to accommodate new learner profiles. The Department of Fashion and Textiles module descriptor encourages educators to engage in various teaching and learning approaches, and new technologies in order to accommodate differing student backgrounds and experiences.³

This research is based on the assumption that most first-year students enrolling at universities are digital natives with new learning needs. Although South African students have been quoted as being “digital strangers” with regard to computer-based technology, they are not strangers to all digital technology, as some have access and experience in using cellular telephones (Czerniewicz and Brown 2010:860). A thorough survey relating to the digital competencies and literacies of first-year students within the Creative Design (I) classroom at DUT was therefore conducted to test this hypothesis and the findings in this regard are further explored in Chapters Four and Five of this study.

The exploration of blended learning is an attempt to achieve pedagogical richness, broader access to knowledge, social interaction and personal agency in DUT’s Creative Design (I) course (Osguthorpe and Graham 2003:231). Enriching students’ educational experiences is associated with facilitation using technology, as this creates collaboration between peers and instructors – thereby enabling active engagement in learning (Kuh *et al.* 2005:86). Works in blended learning pedagogies have additionally been explored in order to better argue for and against the value, drawbacks and benefits of a blended method of teaching and learning in education generally,

³ Quoted from the Department of Fashion and Textiles module descriptor.

and design education in particular, in order to conclude a sound theory suitable for teaching blended learning in Creative Design (I) for Fashion at DUT.

The need to implement ICTs in the workplace and universities is said to be due to the shrinking half-life of knowledge, which is defined as the time between when knowledge is gained and when it becomes obsolete (Gonzalez 2004). To remedy this shrinking half-life of knowledge, organisations have been required to develop new methods of deploying instruction, and an effective solution has been found in blended learning (Gonzalez 2004). I have explored blended learning, as this is fast gaining popularity in universities all over the world, and has been quoted as being a solution for bridging the dwindling digital learning half-life knowledge gap of students at universities (Gonzalez 2004).

In South Africa, topics on blended learning methods and student readiness are still being explored and reviewed. However, a blended mode of learning is recommended by the South African Department of Education's Higher Education Policy of 2007 in stating that blended learning platforms should be explored in order to discover those teaching and learning benefits which meet the needs of contemporary students (Cross and Adam 2007). This is a method of instilling industry-preparedness, life-long learning and on-the-job competency.

2.2 A BLENDED MODE OF LEARNING ENLIGHTENED

One of the most persuasive factors which has influenced the integration of modern technologies into the teaching and learning of Creative Design (I) has been the ever-changing profiles of students entering the university; especially when having observed that teaching methods in Creative Design (I) have not evolved over the years to accommodate such modern-day techno-savvy learners.

As previously stated, the literature studied identifies a new type of student entering university, who is believed to be net savvy, whilst also being driven by a high need for self-expression (Skiba and Barton 2006). These students appear to lead fast-paced lifestyles, motivated by a rapid procession of information (Tapscott 2009), and prefer learning tasks involving the use of visual digital media (Palfrey and Gasser 2013).

Authors have hailed these students as being digitally-inclined, and coined various terms to describe them, amongst which are “digital native” (Prensky 2001, 2005, 2010), “net generation” (Oblinger *et al.* 2005), and “millennial” (Tapscott 2009; Jones *et al.* 2010).

Based on the studies reviewed and observations performed, it became evident that my own teaching methods as educator at the university needed to be reviewed in order to accommodate the diverse natures and learning needs of contemporary students. It was therefore decided to incorporate modern technologies in the Creative Design (I) class as a method of exploring the blended methods learning approach.

2.2.1 Debates on modern technologies within teaching and learning

The South African Higher Education Policy, cited in Cross and Adam (2007), has identified a need to address teaching and learning methods, and a blended mode of learning has hence been prescribed as an instrumental technique to bridge the digital and learning gap amongst students (Cross and Adam 2007). Blended learning – a combination of online and face-to-face instruction – has gained vast popularity all over the world, especially in Arts and Design education, because this method of teaching combines various delivery techniques and styles of learning (Hanrahan *et al.* 2009, Howe and Strauss 2000; Barajas and Gannaway 2000; Gonzalez 2004).

Authors Kerres and De Witt quote the term “blended learning” as vague, carrying no real meaning, especially as such activities are not necessarily

supported by a specific framework, thus making it challenging to find the right mix for an effective blended learning arrangement to be achieved (2003:1). In this case, however, a blended mode of learning simply means that the Creative Design (I) subject will be enhanced with a technological component, and classes conducted according to traditional scheduled meeting times in the classroom are not reduced (Caulfield 2011: 3).

The integration of blended learning in the Creative Design (I) classroom was not intended to act as a substitute for existing teaching and learning. It was intended as a method of enhancing existing teaching and learning techniques, to generate student engagement which encourages reflection on learning and improves the metacognitive process. Blended learning was therefore integrated with the Creative Design (I) course to enrich its teaching and learning processes (Kerres and de Witt 2003:1).

In blended learning studies conducted at DUT by Oellermann (2014:5) and Zoepke (2013), their findings reveal that students believe that online classrooms had given them a more positive learning experience.

Certain studies appear to disagree with the generalisation that most students are digital natives that are inclined to using modern technologies for learning. A study conducted in Australia on first year students and their perception of the use of technology for learning reveals that there was little empirical evidence provided in order to support any claims made about contemporary students being digital natives (Kennedy *et al.* 2008:4).

According to Kennedy *et al.* (2008:4), it is an assumption that all first-year students enrolling at universities possess digital native characteristics, are homogenous, and have a “sophisticated knowledge and understanding of technology” (Kennedy *et al.* 2008:4). Kennedy *et al.* argue that simply because students utilise technology such as cellular telephones in their everyday lives

does not necessarily warrant an overhaul of teaching and learning methods in the higher education sectors (Kennedy *et al.* 2008:4).

Blended learning is more than just a teacher logging onto and using the Internet in the classroom. That would in fact make it no different to using an overhead transparency, playing a video, or even writing something on a board. Blended learning combines face-to-face learning with distance delivery systems, whereby the Internet can be effectively used (Osguthorpe and Graham 2003). Blended learning experiences, however, go beyond merely showing a website page to learners in a classroom, but is rather centred on teaching methodologies-pedagogies which evolve according to the unique needs of learners (Osguthorpe and Graham 2003).

Authors Kerres and de Witt (2003), support claims that blended learning has to be a “spontaneous endeavour that has to accommodate changing situational demands”. Blended learning can be a combination of different web-based technologies, a combination of various pedagogical approaches, or a combination of instructional technology with real job tasks which aim to improve on overall learning transfer (Driscoll 2002).

Blended learning – also known as “hybrid learning” – has been regarded as a third generation of distance education systems, with correspondence learning and distance education making up the first two generations of one-way learning methods with regard to instructional delivery (So and Brush 2008:319).

A key blended learning strength is that the blend maximises the best advantages of face-to-face learning alongside the use of multiple asynchronous and synchronous technologies to deliver learning (So and Brush 2008:319). The main ingredients which make up an effective blended learning environment are: (a) learning activities; (b) students; and (c) instructors. The acclaim given to blended learning as a saving grace for

bridging the learning and digital gap from teaching to learning for current students has been opposed by some researchers who contend that students have difficulty adjusting to blended learning environments (Aycock, Garnham and Kaleta 2002; Bonk *et al.* 2002a).

In research conducted by Aycock *et al.* (2002), their findings reveal that poor student time management skills, rather than the use of modern technologies in class, was a significant obstacle to their learning. Thus, it is imperative that in a blended learning pedagogy, parts are required to be well-integrated in order to decrease any unnecessary and ineffective cognitive load from the learning processes used. These findings imply that turning classrooms into blended learning spaces will not necessarily provide students with flexible and interactive learning. However, a great deal of analysis of learners, settings and technologies still need to be undertaken (Aycock *et al.* 2002).

A beneficial Virtual Learning Environment (VLE) for Creative Design (I) must take into consideration key ingredients which allow for the instructor, student and peers to collaborate, engage and share learning information. The environment has to become a space which incorporates: (a) collaborative learning; (b) a social presence; and (c) learning satisfaction (Figure 2-1) (Aycock *et al.* 2002). The presence of a VLE and use of increased technology was aimed at improving the dimensions of existing teaching and learning relationships and increase engagement by drawing the student and instructor closer together (Aspden and Helm 2004:245). Three dimensional virtual worlds can potentially make a major contribution to design education as a constructivist learning environment, as illustrated in Figure 2-1 (Gul, Gu and Williams 2008:578).

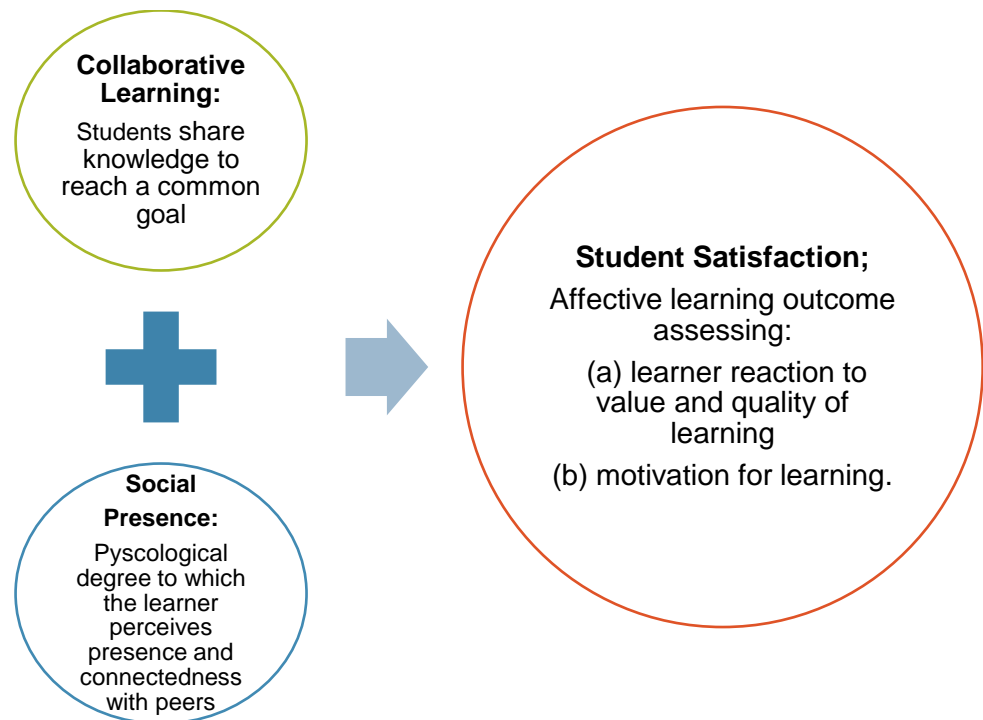


Figure 2-1: A Blended Mode of Learning for Creative Design (I)

(Sources: Aycock, Graham and Kaleta, 2002; Bonk *et al.* 2002a).

In summary, the foundation of blended teaching and learning is built upon creating a student-centric environment wherein the instructor's primary role is to encourage students to become active seekers versus spoon-fed learners (Caulfield 2011:7). In an educational setting, the environment must attract attention and promise new knowledge (Malone 1981; Vockell 2010). This can be achieved by stimulating the sensory curiosity of students through the use of technology to arouse their interest (Deitz 2004; McGuinness 2006; Amabile 1996). Therefore, creating a fundamentally stimulating environment for Creative Design (I) students is seen as imperative.

2.3 CREATING EFFECTIVE AUTHENTIC LEARNING SETTINGS THROUGH VIRTUAL LEARNING ENVIRONMENTS

VLEs based on standard e-learning platforms like Blackboard are aimed at supporting usual and traditional educational modes of instruction, such as lecture-based courses and learning activities; e.g. testing, examining, essay

submissions and discussions (Devetakovic, Arsic, Nikolic, Petrusevski and Mitrovic 2011).

For this study, I examined the application of a Blackboard-based VLE supporting Creative Design (I) students, a specific educational module in their fashion design education. The implementation of instructional technology community hence lies at the centre of a theoretical shift from a behaviourist to constructivist framework, a move which addresses the growing divide between formal modes of learning and real-life learning (Herrington and Oliver 2000:1).

The implementation of blended learning in the Creative Design (I) classroom for fashion through the use of a DUT-recommended LMS (Blackboard) was the method used for encouraging a student-centric environment whereby first year students could be agents of their own learning.

According to Jones (2010), it is imperative that we re-address our understanding of how students form learning experiences and construct knowledge in light of continuing technological advances and greater utilisation of virtual environments. An understanding of student interaction with courseware, and how they construct knowledge, was therefore paramount to the success of this study (Jones 2010). In an attempt to enhance learning, students were provided with the opportunity to explore and manipulate the environment, as well as for discourse amongst each other; this enabled clear direction in designing the Creative Design (I) VLI for Fashion students using the Blackboard system (Dickey 2003).

Blackboard as a blended learning platform, along with other technological aids, was used as a method for encouraging learning during the critical phases of the design process. In fashion education, receiving a brief, researching, sourcing fabrics, and design development all form an integral part of the overall design process (Burke 2011:15).

Tasks and design projects that were normally accomplished through a traditional method of learning were piloted on Blackboard in order for students to engage not only with the instructor, but also with each other in order to collaborate, reflect and explore. Based on student feedback received during the data collection process, I was able to design a learning path based on the opinions and suggestions of first year students using Blackboard. This was a paramount process, since intrinsic motivation became vital during the brainstorming stages of the design process, because the main focus is on generating ideas (Amabile 1996).

The employment of ICTs into the Creative Design (I) classroom was to encourage and promote a constructive, student-centred and effective learning environment for first year fashion students during the design process. In an educational setting, the environment must attract attention and promise new knowledge. This can be achieved by stimulating the sensory curiosity of students through the use of technology to arouse their interest (Malone 1981; Vockell 2010).

The Blackboard LMS explored offered learning benefits such as increased facilitator availability, quick feedback, improved communication, and tracking and skill building for first-year students studying towards a Fashion qualification (Bradford *et al.* 2007). Blackboard as used in design education is mainly for self-study, and can be used as a tool to inspire creative discussion between educators and learners where creating a platform for students to think independently is key (Sonvilla 2009:108). Table 2-1 highlights the tools used in the Creative Design (I) Blackboard classroom, and the objectives and learning outcomes expected from the environment.

The use of technology in class did not alter the relationship between students and educator, since whichever technique and technology was utilised, the learning solely depended on the skill of the educator and student's motivation to learn (Cowan 2011:3). During this blended learning integration, students

had a role and responsibility to play towards their own learning. Students were given project and assignment instructions in class during the Creative Design (I) contact time, and also on Blackboard through a design brief. They had to understand, memorize and learn, and as their educator it was therefore my responsibility to motivate, demonstrate clarify, and reinforce learning using the Blackboard VLE interface utilised (Martinez and McGrath 2014; Cowan 2011).

The learning and assessment tasks performed on Blackboard had to be aligned to curriculum objectives to improve the results of the instruction (Biggs 1996:350). Additionally, various teaching and learning activities were applied both face-to-face and in the virtual classroom as a system of promoting learning activities such as: lectures; tutorials; peer-controlled activities; self-controlled activities; learning partners; and diaries (Biggs 1996:355).

As the study employed a constructivist approach, it was necessary to introduce various teaching and learning activities involving both the educator and learner, since there was a greater chance of achieving higher level objectives than using one teaching method only, such as lecturing (Biggs 1996: 356). According to Reeves, Herrington and Oliver (2002: 565), for learning activities to trigger the highest order of thinking and authenticity, they need to: have real world relevance; comprise of complex tasks that students need to investigate and examine over a period of time using a variety of resources; and provide opportunities for collaboration and reflection in projects. The identified learning activities were explored in the Creative Design (I) classroom. This was the method used to enhance learning during the fashion Creative Design (I) process (Biggs1996: 356, Reeves *et al.* 2002: 565).

The incorporation of ICTs such as Blackboard is highly encouraged in Art and Design education (Bradford *et al.* 2007), and Blackboard can be utilised as a vehicle of enhancing learning amongst Design students, since it provides an online LMS with learning benefits (Hanrahan *et al.* 2009). The incorporation of this educational technology was thus intended to provide additional strategies

which address environmental and educational challenges faced by students and educators at higher educational institutions (Jaffer, Ng'ambi and Czerniewicz 2007).

ICTs can and do play a vital role in education, such as by providing a “catalyst for rethinking teaching practice”; developing graduates and citizens required in an information society; improving educational outcomes; and enhancing teaching and learning (Jaffer, Ng'ambi and Czerniewicz 2007; South African Department of Education 2001). These objectives are all in alignment with the graduate attributes for the Department of Fashion and Textiles, which aims to develop and produce competent, work-ready lifelong learners.

Virtual worlds have the potential to make major contributions to design education as a constructivist learning environment, because they offer increased learning opportunities for both cognitive and constructivist learning processes (Gul, Gu and Williams 2008). Three-dimensional virtual worlds impact primarily the creative, mindful, collaborative and constructive dimensions of learning, as new technologies offer the digital student opportunities of learning through new strategies, such as peer collaboration and interpersonal discourse across multiple platforms and media (Spady 2001; Jones 2010).

An example of a key benefit of using Blackboard took place during a VLE conference in art and design education whereby a live stream presentation was conducted by Brown (2009) in a Blackboard “virtual classroom”, which supports real-time virtual interaction between teacher and student. The LMS allowed delegates to hear and see various content, such as video clips, slides and websites, although the audience could not actually see the instructor.

During this presentation Brown (2009) posited that a benefit of the Blackboard VLE is that the focus is not on the educator or the instructor, but solely on the content being presented. Brown (2009) endorses this by stating that most

educators support the concept of student-led educational practices, and online teaching creates more opportunities to de-emphasize the educator as the “authority”, and refocuses their importance in order for teacher knowledge, student interaction and contact issues to have equal importance in the educational process. Brown (2009) concludes by stating that the teacher becomes a catalyst for education, as opposed to being its primary source of information.

In summary, virtual learning worlds offer the opportunity for experimentation without real world repercussions, they offer opportunities to “learn by doing”, or “experiential learning”, and the ability to personalise the learning environment (Dede 1995). To achieve a successful VLE, one should positively effect learning through increased engagement, increased interaction, knowledge retention, and thereby positively affect the perceived experience for learning outcomes (Evans *et al.* 2013; Dede 1995).

2.4 CURRENT AND KEY ETHICAL DEBATES IN EDUCATIONAL TECHNOLOGIES

Authors state that it should not be assumed that the process of globalisation will bring about a homogenising effect on worldwide educational policy. In essence, each country should be considered differently from the others, as there is no single path that all countries must follow regarding the use of technologies for teaching and learning (Howie, Muller and Peterson 2005:5).

However, there is an existing global structure for the informational society which affects all countries in one way or another (Howie, Muller and Peterson 2005:5). Furthermore, the reality that within the Southern African region a “digital divide” exists, and that this needs to be taken beyond rhetorical assumption is evident, as it is also evident that there is a greater divide between those “who have” and those that “have not” than is found elsewhere (Howie, Muller and Peterson 2005:5).

The South African Department of Higher Education has been under great pressure to meet social transformation and the skills needs of the new South Africa since government identified the implementation and use of ICTs for teaching and learning as a priority in 2001 (Kistan 2002, Jaffer, Ng'ambi and Czerniewicz 2007). The e-Education Policy in the South African Department of Education's White Paper 1.1 of 2003 states that with South African managers, teachers and learners in general, these further education and training groups have to be ICT-capable, which means they must be able to use ICTs confidently and creatively in order to develop the skills and knowledge they require as lifelong learners in order to achieve personal goals, and be full participants in the global community by 2013 (South African Department of Education, 2004:17).

These objectives are in line with the DUT Department of Fashion and Textiles graduate attributes: to produce students that are lifelong learners. The Department of Fashion and Textiles' educators are encouraged to use various teaching aids, especially technologically-enhanced techniques which could potentially enhance student learning.

Much attention has been focused on technologically-enhanced learning in the hope that this can be a remedy to the educational challenges South Africa faces. According to the South African Department of Education's White Paper on Education and Training (1995), there is great focus on outcomes-based education, developing problem-solving skills, and providing a creative environment in which new learning methods are harnessed to produce knowledge. In addition, the integration of technology into educational strategies is aimed at advancing the country's ability to adopt new technologies in order to facilitate its growth and development (Department of Education 1995).

The education sector has been affected by this change, mainly where ICT tools such as e-learning have been implemented in order to address modern student

needs (Barajas *et al.* 2007: 1). The argument such as the one surrounding digital natives and the implementation of ICTs needs to be profoundly examined before a complete overhaul of curricula, as in a South African context authors have opposing views on the topic.

Prensky (2001, 2005, 2010) declares that with the change in the type of students enrolling in universities, educators need to review their curricula and pedagogical models in order to cater for this modern student population with new learning needs (Thinyane 2010:1). I am aware that in a developing country such as South Africa, one of the many features of apartheid was that educational modes in South Africa were funded and separated according to race, where for instance most private modes had funding to establish the necessary infrastructure for obtaining ICTs (Howie, Muller and Paterson 2005). Based on this skewed pattern of modes with access to ICTs prior to first year at university (Thinyane 2010:407; Howie, Muller and Paterson 2005), a survey relating to digital literacies and demographics was employed to determine digital natives and digital strangers within the Creative Design (I) classroom.

In Africa, the Worldwide Web has emerged as a key place of innovative instructional modalities as higher education faces critical challenges in meeting the new demands of the twenty-first century, with its ever-increasing international population growth (Darkwa and Mazibuko 2000). The number of people seeking education at primary, secondary and tertiary levels will increase and educational institutions in Africa especially are not expanding fast enough to accommodate the projected numbers (Darkwa and Mazibuko 2000).

ICTs in education have been severely underutilised in the sub-Saharan Africa region. However, there have been pioneering efforts in the use of ICTs in higher education which have led to tremendous growth in countries such as Botswana, Madagascar, Namibia, South Africa, Tanzania and Zimbabwe. Furthermore, other countries such as Cote d'Ivoire, Togo, and the Congo

(Democratic Republic of Congo) have joined the e-learning movement by establishing pilot virtual learning programmes (Darkwa and Mazibuko 2000). E-learning offers various advantages over traditional face-to-face educational system, such as: a) access to virtual higher educational classrooms; b) new interactive pedagogical techniques that offer more hands-on learning opportunities, self agency, and less reliance on repetition and memorisation; c) the sharing of knowledge with peers in various places situated globally (Darkwa and Mazibuko 2000).

The Creative Design (I) classroom envisioned for the study was to be a blend of face-to-face learning and technology, the objective was to offer balanced benefits for first-year students that promote student engagement, reflection and motivation for learning during the Creative Desig (I) process through both traditional methods of learning and through the Blackboard VLE. Thus, the research question arose: To what extent can the incorporation of the Blackboard as a LMS be said to benefit the learning of first year students during the Creative Design (I) process for Fashion? The following section addresses the benefits and drawbacks of using Blackboard, a LMS recommended by DUT as a vital catalyst for learning.

2.5 EXPLORING EDUCATIONAL TECHNOLOGIES (BLACKBOARD) AS A CATALYST FOR CREATING BALANCED LEARNING

Founded in 1997 by education advisors Matthew Pittinsky and Michael Chasen, Blackboard is a LMS that provides powerful and easy-to-use systems for educational instruction, communication and assessment (Bradford, Porciello, Balkon and Backus 2007:1). In a survey conducted by Patterson (2004) Valparaiso University Scholar of Law student perceptions on the use of this technology was that it assisted them to become more organised, learn and absorb material, and untangle the course's content with more ease. Students maintained that they found working with the technology more interesting. Other benefits of Blackboard include: (a) increased availability, (b) a system that facilitates quick feedback, (c) improved communication, (d) tracking, and (e)

skill building. There are various advantages and disadvantages to using Blackboard, and all factors must be explored in order to achieve an engaging student environment and increased learning benefits (Table 2-1 and 2-2).

Table 2-1: Advantages of the Blackboard Learning Management System
(Bradford, Porciello, Balkon and Backus 2007:1)

Advantages - Blackboard Learning Management System	
Increased availability	<ul style="list-style-type: none"> • Blackboard can be accessed through the internet anywhere, anytime. • Students are able to access and retrieve key learning materials such as: assignments, lecture notes, slides, internet hyperlinks, and audio-visual slides. • Assignments can be submitted by students as soon as they are completed.
Quick feedback	<ul style="list-style-type: none"> • Instructor-orientated feedback and automated feedback in the form of instant grading can be provided once a student completes an assessment through the use of Blackboard Test Manager. • Surveys and tests can be completed, submitted and graded confidentially.
Improved communication	<ul style="list-style-type: none"> • This is achieved through: (a) announcements – a function available as soon as students have logged on and ensures that students are current, (b) discussions – asynchronous discussions via the LMS develops collegiality amongst students and also acts a means for support, (c) virtual classroom – a synchronous environment supporting text-based chat which allows live interaction amongst participants, and (d) email – provides instructor(s) the ability to send email to either individuals or groups (Bradford, Porciello, Balkon and Backus 2007:1). • Also provides students with the ability to send direct email to instructor(s).
Tracking	<ul style="list-style-type: none"> • Instructor(s) are able to track student access and usage on courses, posts and content loaded. Students are also able to track their own progress through the Grade Centre.

Skill building	<ul style="list-style-type: none"> • Blackboard assists with organisation and time management skills as the LMS includes a calendar. • The instructor is able to load announcements and posts using the Home Page. All start and end dates are normally included and appear as reminders in the Blackboard classroom.
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Some of the Blackboard LMS drawbacks include; (a) it is difficult to learn, (b) options are restricted by requiring particular operating systems, (c) system inefficiencies, (d) cost.

Table 2-2: Disadvantages of the (Blackboard) Learning Management System (Bradford, Porciello, Balkon and Backus 2007:1)

Disadvantages - Blackboard Learning Management System	
Hard to learn	<ul style="list-style-type: none"> • According to Bradford <i>et al.</i> (2007), Blackboard can be difficult to learn, even though it has been promoted as an easy-to-use system. • It can be time-consuming and inflexible. • Students are not always proficient with technology as assumed. • Internet can be an unfamiliar environment for many students.
Options restricted to particular operating systems	<ul style="list-style-type: none"> • Blackboard provides additional features to companies and universities running on a Microsoft NT server, limiting creativity technology speaking, as instruction is confined to a restrictive platform. • Fixed platform for instruction.
Blackboard system inefficiencies	<ul style="list-style-type: none"> • Significant costs and technological impacts of wasting bandwidth with portal-based systems, especially when materials must be downloaded in order to view them. • Dependence on server portal solutions is always subject to network problems. • The adherence to portal-based systems such as Blackboard is, in essence, teaching students with archaic technology.

Cost	<ul style="list-style-type: none"> Technologically-inclined higher education learning systems and telecommunications such as Blackboard are estimated to cost universities seven billion dollars, with an estimated monthly subscription cost starting at two hundred thousand dollars.
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In summary, blended modes of teaching and learning through the use of a LMS such as Blackboard add value in a classroom. However, it is imperative that digital preparedness is incorporated into the teaching and learning strategies prior to the commencement of its integration.

The following section explores Blackboard, which can be employed as an educational catalyst for learning in a blended learning environment.

2.6 THE BLACKBOARD ICT IN RELATION TO LEARNING STYLES AND STUDENT PERCEPTIONS

Current realities, and the fast growth of users generating online content have introduced a multiplicity of methods for publishing and accessing instructional resources, and educators have been globally encouraged to harness contemporary modalities for learning in order to engage today's digital learner (Buzzetto-More 2015:55). In this regard, Blackboard becomes a key digital platform to explore teaching and learning, because it also interlinks with various other digital and social platforms, such as Twitter, Blogs, YouTube, Wikipedia and Pinterest.

Studies have investigated the use of digital platforms for learning in universities and different opinions appear across both South African and International spheres. Other studies reveal that the incorporation of ICTs in education does not have many learning benefits, whereas in a study conducted by authors Lackovic, Kerry, Lowe and Lowe (2017:47), findings reveal that the incorporation of social media tools such as Twitter as learning tools for first-year students does not add much benefit to their learning. Furthermore, mobile

devices were found to rarely be used for academic studies, and students found some social media platforms to be overexposing and intimidating (Lackovic *et al.* 2017:47).

A study by authors Kennedy, Krause, Judd, Churchward and Gray (2006) conducted at the university of Melbourne reveals a positive perception of students and their use of ICTs for learning, where only first-year students born after 1980 were surveyed on the basis of cross-examining their perceptions on the use of ICTs for modern learning.

Kennedy *et al.*'s (2006) study findings reveal that a majority of students have mobile phones which they use for phoning and texting, and that the most common computer-based activity undertaken was the use of email. Emerging computer-based technologies were being embraced by a smaller but significant group of students, which included: a) blogs for reading, commenting and maintaining, b) file sharing for music and photos; c) social networking; d) Voice Over Internet Protocol (VOIP) telephony; and e) web-conferencing (Kennedy *et al.* 2008:3).

Students were positive about the incorporation of ICTs in support of their studies. The activities identified were: (a) using Blackboard for general study purposes; (b) searching for information; (c) general course administration; (d) communicating through SMS and instant messaging; and (e) using a LMS to access course-related materials (Kennedy *et al.* 2008:3).

The use of ICTs in education is with the aim of encouraging multimedia learning, creating student engagement, and creating rich educational experiences for online learners. Tools like YouTube, a web-based video service which is one of the most visited sites on the Internet, and is currently the number two search engine globally (Buzzetto-More 2015:56) hence becomes an important aspect of a blended learning classroom.

YouTube offers free access to educational videos and materials which can be used by both educators and learners for teaching and learning (Buzzetto-More 2015). This web-based video service has become popular as well as familiar to the present generation of digital learners. It is evident that the need for incorporating ICTs in classrooms is not only to keep up with modern technologies, but as a means to offer, and cater for various teaching methods using modern learning media and materials in order to accommodate current students who may have new learning needs.

The quality of learning rests on several factors and dynamics, such as meeting student needs, their learning styles and preferences, and what needs to be done in order to enhance their learning experience. In establishing these things, the first critical step is to analyse student learning styles (Ugur, Akkoyunlu and Kurbanoglu 2011:20).

This study therefore not only sets out to explore the incorporation of blended learning into the Creative Design (I) classroom, but moreover to examine student views on the implementation of a virtual learning classroom based on their own learning styles. The learning techniques and resources implemented needed to accommodate various types of learners, such as: reader learners; reflective learners; visual learners; and kinaesthetic learners (Bonk 2006).

It is also critical that the chosen method of classroom instruction acts as an educational catalyst for learning by, encouraging engagement, collaboration, reflection and cognition. According to authors, Bonk (2006), and Fleming and Baume (2006), there are four types of learner, which have been defined as “read, reflect, display and do”. These learning styles stem from the ever-changing nature and significance of education; therefore, a higher order in thinking skills is required, such as the introduction of affective learning environments (Brown 1981).

Amongst the above-mentioned learners, the first type of learner is the “reader learner”, who is an auditory and verbal learner, and who prefers words, written language and spoken explanations. Learners that fall under the read and write category tend to be avid readers and copious note-takers, and are good with essays (Fleming and Baume 2006).

Blackboard allows for the instructor to meet the needs of the reader learner through various learning materials such as: lecturer notes; audio recordings; animations; learning activities; case studies; and video clips which can be loaded onto the Creative Design (I) Blackboard classroom. These learning materials can include learning materials developed by the instructor for their particular subject.

The **reflective learner** tends to be an observational student who tends to observe, view and watch in learning (Fleming and Baume 2006). This type of student tends to want to see the answers proven (Fleming and Baume 2006). The instructor may use the Blackboard system to meet these student needs through the explanation of specific requirements and the use of sample responses, since the reflective learner likes to view things from different perspectives and make careful judgments.

The Blackboard discussion forum will allow reflective learner students to perform research on unlimited topics, make judgments and elaborate on discussions posted by either instructors or students.

A **visual learner** often learns from display and prefers, diagrams, flowcharts, timelines, pictures, films and demonstrations to understand new information (Fleming and Baume 2006). The animations, video clips, audio recordings, web-links and pictures embedded within the Creative Design (I) Blackboard classroom assist in meeting this type of learner's needs.

The last type of learner learns mostly from tasks that involve doing. This student can also be seen as a tactile, or kinaesthetic, learner. **Kinaesthetic learners** are “hands-on”, learn best when discovering, and tend to understand information best through its tactile input (Fleming and Baume 2006). According to Bonk (2006), this learner enjoys stimulation, roleplaying, creative movements, dramatization and hands-on projects.

The instructor is able to meet students’ learning needs through the use of Blackboard, such as by using course editor learning activities, case studies, crossword puzzles, hangman, sequencing, and matching piece exercises via either online or offline links.

A VLE such as Blackboard can be a learning space catering for students with diverse learning styles and needs, and which also encourages collegiality, reflection and collaboration amongst the proponents. Regarding Blackboard, most of the tools have been mentioned and explored in the Creative Design (I) classroom as methods for the enhancement of learning (Table 2-1).

Based on the advantages and disadvantages of Blackboard as a LMS presented in Tables 2-1 and 2-2, an induction session in its use was conducted with first year students during Creative Design (I) class times, in order to introduce the VLE to students. Students were also introduced to its tools, its layout and its functions. The integration of Blackboard in the Creative Design (I) course can hence largely be regarded as an attempt to encourage student engagement, collaboration and reflection through the use of the LMS’s discussion forums, journals and learning videos.

Table 2-3 presents an objectified proposed plan for Creative Design (I) Blackboard-based online classroom outcomes. The different sections and tools have been customised to suit specifically Creative Design (I) learning needs.

Table 2-3 Blackboard (Learning Management System) tools explored to stimulate learning 2016 (Adapted from Blackboard 2016).

a) Content Folder: Creative Design (I) Learner Guide, Creative Design (I) Briefs, Technical Drawing content, WGSN Fashion Trends and Reference Guide, and Plagiarism Policy	
Objective	Desired learning outcome
<ul style="list-style-type: none"> Loading this learning material on Blackboard was a method of assisting students to gain easy access to information 	<ul style="list-style-type: none"> Unlimited access to knowledge Personal agency
b) Announcements: Project dates, change of class venues and reminders	
Objective	Desired learning outcome
<ul style="list-style-type: none"> To alert students of any new material, briefs, tests or assignments 	<ul style="list-style-type: none"> Unlimited access to knowledge Personal agency
c) Discussion Forum: Project discussions, engagement, new ideas, general comments and feedback	
Objective	Desired learning outcome
<ul style="list-style-type: none"> To encourage healthy debate and knowledge-sharing Discussion and review with peers Instant feedback 	<ul style="list-style-type: none"> Social interaction Student-centric environment Collaboration and engagement with peers Idea sharing and brainstorming with peers and instructor
d) Web-Links: Channel students to relevant learning websites to keep up to date with fashion industry happenings. Guide students to key websites such as Vogue.co.uk/com, WGSN and Trend Tablet for design projects	
Objective	Desired learning outcome
<ul style="list-style-type: none"> Provides access to current fashion ideas, shows and trends 	<ul style="list-style-type: none"> Stimulating curiosity Reflection
e) Journal: Document work, keep log on design steps and processes	

Objective	Desired learning outcome
<ul style="list-style-type: none"> To encourage reflection through documented and saved work/ portfolios Pinterest was used to capture concepts and inspiration through a virtual pin-board instead of a physical mood board YouTube was used to record the design process and its inspiration 	<ul style="list-style-type: none"> Reflection on design process Stimulate visual vocabulary Stimulate curiosity Personal agency Creation of virtual portfolio Instant Instructor feedback on work journal
f) Blog: Documentation of design processes undertaken, a method of journal-keeping	
Objective	Desired learning outcome
<ul style="list-style-type: none"> Students used blogging as a technique for reflection and documenting the design process 	<ul style="list-style-type: none"> Personal agency Creation of virtual portfolio
g) Online Tests; Assesses work learnt.	
Objective	Desired learning outcome
<ul style="list-style-type: none"> To assess knowledge gained during class 	<ul style="list-style-type: none"> Quick feedback and results
h) Surveys	
Objective	Desired learning outcome
<ul style="list-style-type: none"> Surveys are a means of gathering information from students and are not graded; all student responses remained anonymous 	<ul style="list-style-type: none"> Feedback on student perceptions using Blackboard and other technological media.
i) Lesson Plan	
Objective	Desired learning outcome
<ul style="list-style-type: none"> An informative tool that gives students a step by step guide on the Creative Design (I) lesson weekly. The lesson plan outlines a clear scheme of work objectives and learning 	<ul style="list-style-type: none"> Instant feedback Student agency Collaboration Reflection Direction and calendar dates Time planning

<p>outcomes, and also offers learning materials needed for the duration of the lesson.</p> <ul style="list-style-type: none"> Students are able to complete the work online and submit to receive feedback 	
J) Social Media; Pinterest, YouTube, Instagram, Twitter, Facebook	
Objective	Desired learning outcome
<ul style="list-style-type: none"> Social media tools can be incorporated into projects to encourage visual vocabulary. Using images to communicate design ideas is key during the fashion design process 	<ul style="list-style-type: none"> Stimulating curiosity Research Engagement

(Source: Adapted from <https://thinklearnzone.dut.ac.za/> 2016)

If the technological social media already discussed are used strategically alongside Blackboard, they could potentially benefit the types of learners addressed, both inside and outside the classroom. It is then critical that the instructor has a solid understanding of the various types of learners and their learning styles. Furthermore, the instructor must be able to unpack student learning needs in order to design both online and offline classroom learning environments.

The role of the instructor is to create an engaging environment which promotes learning for students by actively engaging online, uploading learning materials for classes and starting creative discussions for learners using available Blackboard tools. It is also critical that instructors be more technologically savvy than students being taught, as Blackboard has a wide variety of tools which can be used to simplify learning and reduce teaching workload. However, one cannot use an LMS if it has never been properly navigated, explored and engaged with prior to it being employed for use during learning. In conclusion, well-informed instructors remain vital, as they are the drivers in seeing a blended learning process through to its fruition.

2.7 TEACHING ONLINE AND OFFLINE COURSES – THE ROLE OF ONLINE FACILITATORS

It is imperative that the first-year student VLE offers content and materials that inspire creativity, collegiality and collaboration amongst students. The Blackboard LMS allows for an instructor to accomplish effective online teaching principles (Bradford *et al.* 2007:6).

According to authors (Bradford *et al.* 2007:6), there are seven key principles deemed to be “good practice” which instructors should familiarise themselves with in order create an engaging online space for students. I have considered the seven principles of good instruction from Bradford *et al.* (2007), which can be summarised as:

- 1) Encourage student faculty contact – The instructor should provide clear guidelines for learners. By using the syllabus tool on Blackboard, the instructor can document policies on communication, including “netiquette”, delivery of course assignments and the provision of feedback (Bradford *et al.* 2007).
- 2) An instructor’s role is also to encourage cooperation amongst students – Well-designed assignments often facilitate such meaningful cooperation. This can be achieved by posting assignment schedules with expected requirements from students, explaining the role of the instructor, and providing grading rubrics and sample discussions. All of these components assist by facilitating student understanding of instructor expectations. Furthermore, the discussion forum promotes social interaction, and critical thinking concepts are applied (Bradford *et al.* 2007).
- 3) Encourage active learning by incorporating assignments on Blackboard using the assignment manager tool, Drop Box and the discussion forum – The instructor can encourage active learning by posting expectations or objectives within the syllabus or on the discussion forum. The discussion board thus becomes a forum for students to post questions to the instructor and one another, thereby creating a sense of partnership and class community.

- 4) Instructors are able to deliver quick responses in providing feedback (Bradford *et al.* 2007) – Instructors give mainly prompt information and acknowledgement feedback. Information feedback can easily be provided through the grade centre and discussion board, as these are Blackboard's primary communication systems. Students often require prompt responses from instructors, and acknowledgement feedback is one way of creating a sense of online class community (Bradford *et al.* 2007),
- 5) Emphasis is placed on time tasks take to be completed – Online courses need to have specific deadlines, and this can be emphasised through the Blackboard syllabus, since it offers course policies on attendance, participation and late assignments. The software's announcements section can also be used to set timelines, and acts as a constant reminder. According to Pickett and Shea (2005), establishing time parameters on projects is good online instructional design and organisation as it communicates high expectations through challenging tasks, sample cases, and praise for quality work.
- 6) Promotes effective use of available tools – Blackboard provides tools which allow room for the instructor to assign challenging tasks, present sample cases and provide prompt feedback, both individually and publicly (Bradford *et al.* 2007). An example of a required standard of work may be posted onto the discussion forum, or posted separately into a folder to which students can be referred. Posting a sample of expectations is a form of good instructional design, as this can lead to engagement and interaction, thereby building a feeling of student ownership (Pickett and Shea 2005).
- 7) Allowing students freedom of topic choice – There are diverse ways of learning by allowing students to choose topics, and this incorporates diverse views from online courses. In this way, when topics and discussions are posed students may be required to think about them, and ask and answer questions. In this way students are encouraged to research topics and areas of interest. This is because each student may be required to present a different view regarding their experience of the topic under discussion.

Fostering class community starts with engaging in supportive contact and interaction (Bradford *et al.* 2007). If the instructor guidelines presented above are accordingly incorporated into Blackboard classrooms, the Blackboard LMS can be regarded as a useful tool in encouraging learning and reflective thinking, and also in creating engagement between instructors, students and peers (Bradford *et al.* 2007). There have been various debates and discussions on the use of technology, and the incorporation of ICTs into learning.

As reviewed in the above sections, various authors have been surveyed, their views presented, and conclusions on the advantages and disadvantages of the use of ICTs and LMSs for effective student learning have been posited.

2.8 STUDENT ENGAGEMENT EXPLORED

In order to make sense in teaching and learning, things have to be named and placed into distinctions and categories. This practice of placing information into categories is what must be done in order achieve the best environment of learning in a classroom. This is not an irrational impulse, but a tool for thought, which is used for the same reason we carve turkey with and knife and write a book in chapters (Shulman 2002).

In these categories and systems rest the very principles that guide learning motivation and student engagement, which is called a taxonomy. The use of a taxonomy acts as a guide to further understand the needs, perceptions and influences of students in learning. Such a taxonomy was applied to students' teaching for Creative Design (I) for Fashion as a blended learning guideline.

The principles used for this action research study are a blend of the original Taxonomy of Educational Objectives devised by Benjamin Bloom (Schulma 2002:38), and is a taxonomy generally used as a guide in the creation of any new taxonomy, such as the Shulman (2002:38) taxonomy. I have used these

two taxonomies as reference, since they are in line with a constructivist perspective adopted for this study.

In order for the blended learning classes targeted to depict characteristics of student engagement, seven key principles of learning categorized by Shulman (2002:38), were employed. These include: (a) engagement and motivation; (b) knowledge and understanding; (c) performance and action; (d) reflection and critique; (e) judgement and design; (f) commitment and identity; and (g) new arrangements and motivation. These principles summarise that learning begins with student engagement, which in turn leads to knowledge and understanding.

The principles from Shulman (2002) mean that from the moment when a person understands, they become capable of performance and action. Also, student application of critical reflection on their design practice and its understanding may lead to a higher order of thinking. First-year students will obtain the ability to exercise judgement in the face of uncertainty, and generate designs in the presence of constraints and unpredictable situations (Shulman 2002: 38).

Shulman (2002) also states that when judgements are thus exercised, there is the possible development of a learner committing to a decision or judgement. Once commitment is made, they become capable of understanding their human values, such as faith, love, their own doubts and their scepticism. Internalising those feelings contributes in turn to their identities, and thence these new commitments make new engagements both possible and necessary (Shulman 2002). These feelings can therefore be viewed as opportunities or invitations which motivate learning.

2.8.1 Student engagement and motivation for learning

According to Strydom and Mentz (2010), producing quality graduates for the twenty first century is heavily associated with a deeper understanding and

improvement of student experiences in the South African higher education system. If higher education in South Africa aims to improve on the learning it provides, then it needs to focus on research-driven approaches, such as student engagement, as more than a decade of higher educational research has identified three key ingredients for student success, which are: academic preparation, motivation, and student engagement (Kuh *et al.* Whitt 2005).

College student development research indicates that the amount of time and energy devoted by students to educational activities is the single best predictor of their successful learning and personal development (Kuh *et al.* 2005). The seven principles of good student practice, however, need to be followed in order to achieve such results, namely: student faculty contact; cooperation amongst students; active learning; prompt feedback; time on task; high expectations; and respect for diverse talents and ways of learning (Kuh *et al.* 2005).

Another factor important to student learning is that of institutional learning environments which are inclusive and affirming, and wherein learning objectives are clearly stated and communicated (Kuh *et al.* 2005). All these elements are key to student satisfaction and development. According to the South African Survey of Student Engagement compiled by Strydom and Mentz (2010), student engagement is defined by two key factors: (a) what students do regarding time and energy devoted to educationally purposive activities; and (b) what institutions do, by which it meant the extent to which institutions employ effective educational practices to encourage how to do the right thing.

2.8.2 Influencing factors of engagement and motivation for learning

There are several configurations of effective educational practices key to fostering student engagement. These were identified in the National Survey of Student Engagement (NSSE) conducted by Kuh *et al.* (2005), and include: levels of academic challenge; active and collaborative learning; student interaction with faculty members; enriching educational experiences; and

supportive campus environments. These categories are closely related to the desired outcomes of learning at universities which are explained as follows (Kuh *et al.* 2005):

- A level of academic challenge – Challenging students with intellectual and creative work is central to their learning and educational quality.
- Active and collaborative learning – This is based on the premise that students learn more when they are deeply involved in their education and have opportunities to think and apply their learning in various settings. When students engage with peers in collaborative and complex projects, they acquire problem-solving skills.
- Student interaction with faculty members (educators) – The more contact students have with their instructors the better, as through interaction teachers become role models, mentors and guides for continuous lifelong learning.
- Enriching student educational experiences – Which includes the learning of others culture and the use of new technology.
- Supportive campus environment – Such environments should cultivate positive working and social relations amongst all groups involved.

2.8.3 Engagement through the use of technology

According to Kuh *et al.* (2005) and Deneen (2010), technology has become an integral part of student learning as it is increasingly being used globally to facilitate learning. If expedited correctly, this can increase collaboration between peers and instructors, which can actively engage students in their learning. Technology can moreover be used to create a motivating learning environment, since it provides opportunities for educators to meet the needs of students with various learning styles through the use of multiple available media (Beeland 2002).

2.8.4 Motivation for learning through creative environments

One of the many factors which have influenced the incorporation of blended learning in Creative Design (I) for Fashion is an attempt to achieve a student engagement-driven environment in the hope of enhancing learning by evoking creativity, and also a concomitant understanding of the fashion design process (Forehand 2010; Dewey 1997).

It is crucial and logical that the objective of incorporating technology into education should be to develop creative abilities, since creativity is already inherently associated with advances in technology (Peterson 2001:7). According to Amabile (1996), creativity is greatly impacted by motivation, which in turn influences student engagement during the Creative Design (I) process.

In fashion education, receiving a brief, researching it, sourcing fabrics and design development form integral parts of the design process (Burke 2011:15). Intrinsic motivation becomes vital during the brainstorming stages of this process, because the main focus here is on generating ideas (Amabile 1996).

In an educational setting, environments must attract attention and promise new knowledge. This can be achieved by stimulating the sensory curiosity of students through the use of technology to arouse their interest (Malone 1981; Vockell 2010; Deitz 2004; McGuinness 2006; Amabile 1996). As an instructor, I set out to create a fundamentally stimulating environment in the Creative Design (I) classroom as a method of motivating students in their learning. How then is it established what motivates student learning and creativity? In order to design a suitable environment for learning a deeper understanding of students' motivations for learning must first be obtained.

Intrinsic motivation is motivation by students to engage in activities primarily for their own sake – purely because the activity itself is involving, interesting, satisfying or personally challenging (Amabile 1996). People who are

intrinsically motivated are more likely to produce creative work than those who are not. McIntyre (1996) argues however that from research conducted, findings reveal that extrinsic motivation is the factor which most arouses creativity.

Extrinsic motivation relies on external and socially-mediated incentives, such as deadlines, evaluations, competition, surveillance or rewards to engage in creative activities (McIntyre 1996). In a study conducted by Eisenberger and Selbst (1994), findings indicate that if high creative performance is required and is associated with some sort of reward, such as better marks, this unintentionally increases self-determination and competence and, in some instances even resulted in intrinsic enjoyment.

Extrinsic motivation is moreover not the only core motivator for creativity, as in some instances creativity is likely to decrease if projects have more extrinsic motivation factors attached (Amabile 1996). Amabile (1996) affirms that extrinsic motivation, such as rewards, sometimes reduced intrinsic interest in the task by dividing attention, whereby the purpose of the task becomes lost. Overall, Amabile (1996) has stood firm in her statements saying that people who are intrinsically motivated are more likely to produce more creative works than people primarily motivated by extrinsic factors.

In order to achieve the highest order of thinking, the learning environment and tasks have to encompass certain intrinsic and extrinsic characteristics that motivate learning and creativity amongst students. In essence an activity is said to be intrinsically motivated if people engage in it for its “own sake”, and therefore engage in it neither for receipt of a reward such as money, or for their own heightened status (Malone 1981). According to Malone (1981), such environments or tasks have to be fun, interesting, captivating, appealing and intrinsically motivating.

Table 2-4 summarises Malone's (1981) characteristics for an intrinsically motivating environment, which are: challenges, fantasy and curiosity:

Table 2-4: Characteristics of an intrinsically motivated environment adapted from Malone (1981)

Intrinsic Motivation		
Characteristic	Guidelines for the environment design.	Applications in CD (I)
Challenging	<ul style="list-style-type: none"> Activities should be structured. Clear criteria for performance; one should be able to evaluate how well and how badly students are doing. Provide feedback. Activity must have a broad range of challenges. 	<ul style="list-style-type: none"> this is in line with Creative Design (I) as all activities in design start with a design brief that sets out clear timelines and requirements. In this regard a marking rubric is key. Marking rubrics are always included in the Creative Design (I) briefs. In Creative Design (I) students received prompt feedback in design projects during class consultations and also on the Blackboard discussion forum, email and online journals. In a Creative Design (I) brief, students to partake in a series of design activities, such as researching inspiration, conceptualising design ideas, online fashion trend research, sourcing imagery, sketching. However, only the students partaking in the study documented their design process on a Blackboard online journal or blog.
Fantasy	<ul style="list-style-type: none"> This motivational aspect has to do with themes or fantasies which students 	<ul style="list-style-type: none"> This example is in line with current methods being used in Creative Design (I) to evoke creativity and design imagination; first-years are encouraged to embark in artistic

	embody. Disneyland is an archetypical example of an intrinsically motivating environment that draws much of its appeals from the fantasies it evokes.	research journeys, such as visiting design and art museums, physical and online art spaces such as Trend Tablet, peruse online through Fashion Shows using WGSN, attend Fashion Week shows, visit botanical gardens and historical museums. This is with an aim to channel fantasy and evoke excitement, and in turn intrinsically motivate students to design creative garments.
Curiosity	<ul style="list-style-type: none"> One of the most important features of the environment is that it needs to continuously arouse and satisfy students' need for curiosity, novelty, complexity, element of surprise and incongruity. 	<ul style="list-style-type: none"> With every new Creative Design (I) project, students are expected to research and design according to trending fashion themes. This is a good method of arousing curiosity as an in-depth amount of research, mainly online and historic reference research, has to be done in order to produce novel designs and seasonal collections.

The study's design process was in line with these recommended environment design factors, since fashion design places great emphasis on innovation, being a skill nurtured in different ways, such as by thinking differently and having different approaches to tasks (McKelvey and Munslow 2011:1).

Table 2-4 contains suggestions for methods which can nurture brainstorming, review and reflection, analogies and knowledge transfer during the design process (McKelvey and Munslow 2011:1). Also, a series of visual exercises can be performed in order to encourage the thinking of fashion designers during the design process (McKelvey and Munslow 2011:1). These above-mentioned key characteristics of a good intrinsically-motivating environment are key to the process of design; curiosity, fantasy and challenge. Educators

have to factor these elements in, because designers rely on their experience, knowledge, imagination and creativity in order to find solutions to design problems (Dazkir, Mower, Best, Pedersen 2013:394).

In this section it has been established that the environmental characteristics as highlighted are key in order to arouse intrinsic motivation for design, and I am aware that student engagement and motivation are disparate concepts. Student engagement is concerned with peer collaboration, enriching educational experiences, the learning environment, and teacher-to-student relationships. Motivation is established through a feeling of enthusiasm, and by engagement with it, and these are interconnected during creative activities, mainly during the design stage process, and also its subsequent assessment. Thus, any adoption of new teaching methods such as blended learning needs to be conceptually in line with these two concepts of student motivation and engagement.

2.9 THE DESIGN PROCESS EXPLAINED

The design process can be defined as a form of problem solving, with inspiration being an integral part of the process (Eckert, Stacey and Clarkson 2000). Designers are able to draw inspiration from anything tangible such as objects, and intangible such as abstract concepts regarding phenomena (Eckert, Stacey and Clarkson 2000). The design process is a series of steps or stages that a designer utilises to solve design problems, such as: inspiration, identification, conceptualisation, exploration and refinement, definition or modelling, communication and production (Aspelund 2010).

Finding inspiration begins in the earlier stages of the design process, whereby intrinsic motivation is key in the beginning stages of design in order for students to produce their best work. Below are reviewed key factors which play an integral part in motivation during the early stages of design:

The first key factor is inspiration – inspiration plays an important role in creativity and innovation. Sources of inspiration are a form of knowledge and are crucial to creativity, as these elements determine how a designer uses the principles of design (Halskov 2010). According to Aspelund (2010) inspiration for the design process can be found anywhere, and designers should be encouraged to look for inspiration using different media. Additionally, in order to produce new and creative ideas, designers have to constantly seek new sources of inspiration and new methods of interpretation (Mete 2006).

Critical thinking is an integral part of sourcing design inspiration. Authors Matthew and Gabb (2000) reinforce this in stating that students' critical thinking is enhanced by providing them with a range of influences such as film, historic references, literature and art. Fashion design students are, moreover, also found to use "themes" as a source of design inspiration (Mete 2006). Findings reveal that where students were given a specific source of inspiration, such as nature or historical culture, they performed better in terms of overall requirements and creative levels by comparison to those that were not provided with such specific design themes (Mete 2006:282). A large portion of the first year Creative Design (I) syllabus consists of design projects achieved through storyboards. Creative Design (I) projects are always themed according to historical fashion references for future fashion trends. This is a method of giving student research direction and indications for design inspiration.

Once students have acquired their creative theme, they then embark on research for design inspiration. Through research and observation, designers are able to acquire important design knowledge, gather background information and find sources of inspiration (Mete 2006). Extensive research is therefore key to the design process, as this keeps designers acquainted with contemporary developments (Eckert 1997). Research findings reveal that students usually do not use suitable research methods; however, it is still important that educators equip learners with sufficient sources for research prior to commencement of any design project (Martin and Guerin 2007).

With regard to research, students have become highly reliant on the Internet. Educators are advised that they should nevertheless prescribe good research materials and reliable internet sources for students to use prior to commencement of design projects (Brown 2008; Freeman and Capper 1999:3). In Creative Design (I) students are given a detailed design brief at the start of every new project, and with the integration of blended learning students could also access their design brief on the Creative Design (I) Blackboard classroom. This is accompanied by a detailed lesson plan with time schedules, recommended learning materials, links to websites, YouTube feeds, examples of work, learning outcomes and objectives. Using the Blackboard lesson plan, the instructor is able to attach direct web-links for fashion trend sources which students need to research their inspiration.

There are different approaches to teaching design students, and it has been stated that allowing students freedom to choose is one of the many important factors which benefit learning in art and design fields (Shreeve, Sims and Trowler 2010). According to authors, Shreeve, Sims and Trowler (2010), learning occurs when students are left to freely approach projects from their own points of interest when assigned a specific work process or product. However, design students are expected to embark on their own creative development for designing projects through exploration and experimentation, which in turn may lead to ambiguity in the design environment (Shreeve, Sims and Trowler 2010).

Research shows that first year design students usually doubt their own skills and abilities, which in turn makes the whole process of design frustrating (Trigwell 2002). Teaching design can be achieved through various approaches. However, design education is one of the few fields that is fundamentally centred on student-focused approaches by comparison to other disciplines in higher educational sectors (Trigwell 2002).

In Creative Design (I), DUT students were guided through their design process using class briefings, and both offline and online consultation sessions using Blackboard emails, discussion forums, blogs and online journals during the course of the study. The educator also needed to leave enough room for students to independently explore their own design thought processes, and whilst conducting this study, I took into consideration that learning in such an open-ended environment could present a challenge for beginner students. For this reason, learning design methods, as well as the value of research, played a significant role in achieving successful design outcomes for the targeted student groups (Dazkir, Mower, Best and Pedersen 2013:394).

In summary, there are many sources of inspiration that can be used during the design process, and these can be drawn on by designers to find inspiration. When should I as an educator therefore implement learning techniques in Creative Design (I) which can assist novice designers with drawing on the necessary sources of inspiration?

2.10 CONCLUSION

Will the incorporation of these interventions that incorporate online and traditional teaching and learning approaches assist in improving student cognition, engagement, creativity, critical thinking and reflection during the Creative Design (I) teaching and learning process?

Guided by key taxonomy principles, I identified educational theories which would assist in achieving the study's stated teaching and learning objectives. There are definitely possible challenges in integrating a blended mode of learning at a first-year level, since not all students are technologically proficient at this stage.

In order to accommodate the various learning styles of learners, three theories guided the implementation and integration of the blended learning mode which was executed using the Blackboard VLE. I adopted a constructivist theory as

the foundation for this study (Caulfield 2011:12; Aycok, Garnham and Kaleta 2002). Garrison's Community of Inquiry (2007), which is a key e-learning theory was used, alongside Problem-Based theory (Savery and Duffy 2001) as support structure to the adopted constructivist view. This was necessary, since the study included both traditional and current methods of teaching and learning.

As a foundation for the next chapter, it was important that I demystify blended learning in the teaching and learning context in the current chapter, because this type of learning can yield many positive results relating to student motivation and engagement.

The theories explored in Chapter Three enlighten on the benefits and drawbacks of blended learning. These have assisted in acting as guiding principles in creating an online space, and also in facilitation of the traditional Creative Design classroom model. Chapter Three thence explores the practicality, mysteries and misconceptions of currently-employed educational theories and their successful implementation in the blended learning classroom.

CHAPTER THREE:

A BLENDED LEARNING INQUIRY – THEORETICAL FOUNDATIONS

3.1 INTRODUCTION

This research set out to explore the conceptualisation and application of blended learning in Creative Design (I) for Fashion at DUT.

This chapter informs on the paradigm and theoretical frameworks used in order to investigate the problem for the study, answer the critical questions presented, and guide in the planning, implementation and collection of data during the cyclical action research process. This chapter is aligned with the research methodology chapter which follows, since the constructivist paradigm and theoretical frameworks identified influenced the process whereby the data was collected and analyses implemented. In this study I argue for a constructivist philosophical view as the best-suited perspective to be adopted, alongside an action research design.

The principles of the constructivist perspective have guided and shaped my understanding of how students come to understand how knowledge is generated, formulated and applied. Also, the theoretical frameworks identified have guided the general investigatory teaching and learning process.

A constructivist perspective has thus informed my overall direction on the integration and implementation of blended learning techniques in Creative Design (I), with my objective being to improve the teaching and design practices of first-year Fashion students at DUT. By doing this, understanding is generated when interaction with the environment takes place, and since cognitive encounters are the primary stimuli for learning, these then regulate the nature of what is being learnt (Caulfield 2011:12; Aycock, Garnham and Kaleta 2002). I have aligned these principles with an action research design which has allowed the interaction between theoretical and practical knowledge to be studied in a real-world physical situation.

The use of an action research design has allowed interaction between the application and development of my professional knowledge and that of their students (Maree 2007:125). The decision to adopt traditional learning methods in Creative Design (I) to augment current teaching and learning modes was with the aim of creating an authentic learning space in which to encourage student self agency when engaging in learning. In this way, students could embark on an investigatory mental process during the design stage which encouraged them to interact with various environments whilst conducting research, thereby creating an evolution in knowledge through their social negotiation and evaluation of the viability of their individual understanding of their design project (Savery and Duffy 2001; Rorty 1991; von Glaserfeld 1989).

I adopted constructivism as a philosophical paradigm, since it was considered important to understand how blended learning can be conceptualised and optimally applied in Creative Design (I) for Fashion. A constructivist worldview informed my understanding of how students generate knowledge, and also their motivating factors when generating particular kinds of knowledge. Important principles such as; understanding of cognitive motivations, social expectations and motivations for thinking were required to be understood in order to corroborate the suitability of incorporating blended modes of teaching in the classroom.

As an educator, I needed to understand the cognitive motivations of students, and their social expectations in learning in terms of how they think, and also the motivations behind such thinking. It is important that the blended learning opted for also challenges students to apply critical thinking during their design process, and constructivist theory has thus informed answering of the question of “how” with regard to this type of learning.

How do students learn? During the Creative Design (I) process for Fashion, students often engage in extensive research in order to understand a design

brief better and generate designs. Throughout this time, environmental, teaching, social and cognitive stimuli have to be present in order for students to produce work that encompasses all design brief requirements. My aim was to develop a learning space which promotes student engagement and that is driven by a cognitive, teaching and social presence.

I employed guiding principles from both e-learning and problem based learning theory in order to achieve certain Creative Design (I) learning outcomes, such as critical thinking and reflection. This was the approach adopted in finding the most suitable method of learning facilitation. A problem-based learning theory – a constructivist instructional model – was used alongside a Garrison Community of Inquiry framework, which directed the facilitation and design of an online classroom (Savery and Duffy 2001). I knitted these theoretical frameworks together in order to discover the most suitable pedagogy for blended learning, for design project tasks and also for the Creative Design (I) online space.

Employing a constructive paradigm addressed the cognitive and social process of learning (Riegler 2005; Snowman and Biehler 2000), while Problem-Based Learning (PBL) guided the teaching and learning instruction suitable for a blended learning classroom. An Online Community of Inquiry (COI) guided the designing of the Creative Design (I) VLE on Blackboard based on student feedback. Integrating Blackboard with Creative Design (I) was thus also an attempt to encourage self agency amongst students by creating a learning community which embraces the social, cognitive and teaching presence needed in order to create a collective, creative, and productive learning domain for first-year students (Garrison 2007:62).

To investigate the problem and collect data, a qualitative approach was employed alongside an action research design. A participatory action research design suitable for executing the study was identified, as I wished to focus on exploring and understanding learning problems that students encounter during

learning. This intervention was developed with students' assistance through feedback on surveys, focus groups and interviews (Maree 2007:74). I applied an action research approach through a constructivist perspective to the study, whereby students were involved as part of the research since its beginning stages. The action research cycles have relied on the responses of first year students where they have followed a path designed based on their responses through survey questionnaires, focus groups and interviews. (Creswell 2009:6).

In adopting a constructivist approach, I introduced various teaching and learning activities involving both myself and the students. A learning approach that is associated with facilitation and which uses technology, such as in blended learning, promises results by achieving pedagogical richness, broader access to knowledge, social interaction and personal agency within first year design students (Osguthorpe and Graham 2003:231). The benefits of implementing a collaborative teaching and learning space were that some higher-level objectives could thereby be achieved (Biggs 1996: 356), along with the enrichment of student educational experiences and collaboration between peers and instructors, creating active engagement in learning (Kuh *et al.* 2005: 86).

3.2 EPISTEMOLOGICAL STANCE ADOPTED FOR THE STUDY

For this study, I have employed a philosophical-epistemological approach, as they have maintained the first and second principles of constructivism: that knowledge is not passively received, but built up by the cognising subject (Table 3-1). Also, cognition adapts, and serves the organisation of imagination, rather than how the relation between concepts is discovered (Riegler 2005).

An epistemological perspective has additionally provided me with an understanding of what it means to "know". A constructivist perspective rests mainly on the principles that truth and meaning do not exist externally outside the Creative Design (I) space, but are however created by student interaction

within the learning space (Gray 2009:18). This means that students do not necessarily discover meaning, regardless of how they construct the knowledge they have acquired; and thus, each student constructs their own meaning in different ways, even in relation to sharing the same experiences.



Figure 3-1: Relationship between the study's' adopted epistemology, theoretical perspectives, methodology and research methods (adapted from Gray 2009:17)

The adoption of the COI principles, whereby a social, teaching and cognitive presence are taken into consideration, was crucial to the implementation of blended learning for Creative Design (I), since often the process of design in fashion is concerned with individual perspectives and interpretations, and fashion design is heavily associated with social influences (Burke 2011).

In order to begin the design process, students are given a brief, which outlines learning outcomes, marking criteria, and overall design requirements, such as styles, silhouettes, colours and textiles (Burke 2011:16). This beginning phase of design requires brainstorming and critical thinking (problem solving skills). During the inspiration and conceptualisation stage in Creative Design (I), students often have to tap into their own social worlds. Fashion has been dubbed as being a reflection of society, an art form, and even an expression of identity (Burke 2011:11). During the inspiration phase, students are encouraged to reflect on their own personal life experiences and creativity, as at this stage a person engages on a journey of imagination in order to breathe life into their designs (Aspelund 2010:18). Blackboard as a VLE allows for students to engage with each other, and with research tools during their projects. Tools such as journals, blogging and discussion boards can assist in enabling the design process when students are tapping into their imagination.

I have adopted a critical inquiry perspective for this study, undertaking a meta-process of investigation which has enquired into currently-held values of students and my own teaching values and learning assumptions made for this study. I have also attempted to challenge certain conventional social structures relating to teaching and learning with the Creative Design (I) subject. The perspective adopted has invited both myself and participants to discard what can be regarded as “false consciousness”, in order to develop new ways of understanding as a guide to effective action (Gray 2009:25).

I have also integrated modern teaching methods aligned with my own educational beliefs and values into the Creative Design (I) course. The action

research method employed guided the review and exploration of unconventional learning methods in order to drive improvements and change in the Creative Design (I) classroom (Maree 2007:71; McNiff and Whitehead 2010). With the employment of a blended learning classroom, students were enabled to become agents of their own learning, and a sense of community was created through a shared classroom on Blackboard – a space devised by students guided along a path that was designed based on their own responses through survey questionnaires, focus groups and interviews conducted.

3.3 EDUCATIONAL THEORIES AND FOUNDATION FOR ONLINE LEARNING

Some studies have argued that the mode of delivery is key to successful student learning while others have contested this, stating that the method of instruction is key, and not so much the delivery mode (Ally 2004). Chapter Two explored arguments regarding ICTs whereby authors emphasise that specialised delivery technologies can be efficient tools which provide timeous access to learning materials. However, some literature (Ally 2004) as revealed that ICTs are treated more as merely vehicles for delivering information, which does not necessarily improve student learning.

Studies on media reveal that students gain significant benefits when learning from modern audio-visual media by comparison to conventional methods of instruction (Clark 1983;1994). With the reviewing of literature, I realised that the environment, content and mode of delivery all have a crucial influence on how students engage in their learning. It is also important that prior to creating content and a learning environment, understanding each student's learning style and preferences is important to create authentic learning activities.

Bonk and Reynolds (1997) emphasise the importance of engaging learning environments, expressing that in order to promote a higher order of thinking on the Internet, online learning must create challenging learning tasks which allow students to make reference to old and new information, acquire

meaningful knowledge and use meta-cognitive abilities. Hence it is more the instructional method and not so much the technology that influences such learning.

Kozma (2001) deviates from this notion in maintaining that the choice of medium does in fact have a great influence on learning, since certain ICTs such as computers are needed to bring real-life demonstrations and simulations to learners, because they possess certain learning attributes. As expounded on in Chapter Two, learning environments will not engage students if they are not designed according to sound design principles. The Blackboard Creative Design (I) online learning space hence needed to have high levels of effective authenticity, interactivity and collaboration (Ring and Mathieux 2002).

To address the critical questions for this study, this chapter discusses the foundation of the educational theories which affect balance blended learning pedagogies, and the design of effective online learning materials. Also explored are models used for the designing of an online space based on appropriate educational and e-learning theory.

3.3.1 A constructivist mode of learning

Constructivism, which is not a specific pedagogy but a philosophical view on how we come to “know”, has been adopted for this study. Constructivism has become a preferred recommended theory in teaching and learning within education, since it acts as a guiding principle for both teaching and learning. Founded by developmental and cognitive psychologist Jean Piaget in the early 1900s, the constructivist theory is based on the premise that we are born with the ability to associate experiences with learning (Caulfield 2011:12; Aycok, Garnham and Kaleta 2002).

As a constructivist, I was able to recognise that learning is influenced by our interaction with the environment, and that what is learned cannot be separated from how it is learned (Savery and Duffy 2001; Richardson 2003; Ally 2004).

Also, understanding is a function of the content, context, activity and goals of the learner (Savery and Duffy 2001; Richardson 2003; Ally 2004), and much of the knowledge we construct is closely related to whom we socially interact with within our environment. Thus, it is through structured dialogue that we begin to construct knowledge (Caulfield 2011:12; Aycok, Garnham and Kaleta 2002).

According to Vygotsky (1978), a Russian psychologist who is considered a social constructivist, our ability to construct knowledge is based on early cognitive developmental stages whereby the teacher guides us while we are in the “zone of proximal development” (Vygotsky 1978). This zone can be defined as a gap between what a child can achieve, and what can be achieved through problem solving with the guidance of an adult or with peers (Vygotsky (1978).

At first-year level, students enter university with very little or no knowledge of what is expected from them in the Creative Design (I) course. As a lecturer, it is also my duty to provide guidance to them on the necessary principles of design. As a constructivist, I had to ensure that certain principles underpinned this research, such as understanding that students create knowledge from engaging with the environment, and that they have to explore, engage and collaborate in order to create meaning and generate new knowledge.

In order to develop early cognition in students in Creative Design (I), I employed modern smart tools, such as the document camera. When using the document camera for design demonstrations, one is able to: (a) record the session and load it onto Blackboard as a tutorial video; (b) project a full view of design demonstrations to the rest of the class, thereby eliminating any pressure to consult with them individually.

With these methods of incorporating a smart board and document camera into teaching, students were able to engage and discuss design techniques with

their peers and lecturer. This created an environment that induced learning, since knowledge is constructed from learner experiences, and is cognitive rather than external, with learning thus derived from individual personal interpretations of the world based on personal belief and value systems.

When learners are given a design brief they are expected to draw inspiration, conceptualise and design using their personal interpretations guided by their beliefs and social influences (Burke 2011). A constructivist approach takes into consideration the social aspect of design, whereby students have to interpret fashion as a reflection of society. In this sense, they are able to translate and employ their design knowledge based on what they know, see and experience (Burke 2011), since learning is an active process which depends most on learner experience and its relevant contexts (Semple 2000:25).

A constructivist paradigm aligned with my teaching values guided the process of teaching and learning in relation to understanding the learning styles and needs of first year students in the Creative Design (I) classroom, as it was my goal to improve on learner performance and satisfaction. A blended mode of learning applies similar learning philosophies as constructivism, with one of the major components of these two concepts being self-directed problem-based discovery learning (Barman and Barman 1996; Kim and Fisher 1999; Rhodes and Whitten 1997; Tynjala 1998).

As mentioned in Chapter Two, a blended mode of learning as per the authors reviewed (Aycock, Graham and Kaleta 2002; Bonk *et al.* 2002a) also takes into consideration social presence, whereby the psychological degree to which the learner perceives their presence and connectedness with their peers is considered. A constructive philosophy likewise rests predominately on the cognitive and social aspects of learning, such as:

- **Cognitive constructivism** is believed to be a construction of ideas through personal processes, as opposed to social constructivism, where ideas are

normally constructed through interaction with an educator and class peers (Powell and Kalina 2009). Also, human cognitive competencies are developed and adjusted by social influences (Bandura 1989:2). Bandura (1989:22) additionally states that a human's social reality is swayed by experiences of hearing and seeing, which media heavily influence, thus creating a great social impact on their lives. Aspects of the electronic era are adopted and serve to broaden human experiences and environments (Bandura 1989:22).

- **Social constructivism** places great emphasis on the importance of culture in the context of understanding social occurrences within society, which then leads to knowledge being generated based on understanding (Kim 2001). Social constructivism is based on specific assumptions about reality, knowledge, and learning. In order to understand and practice this model of instruction one has to understand the premises that underline it: (a) reality – social constructivists believe that reality is constructed through human activity and does not exist prior to its social invention, but only exists once it is discovered (Kukla 2000); (b) knowledge – knowledge is a human product and is socially and culturally constructed; social constructivists state that humans create meaning through their interactions with others and the environment (Ernest 1999; Gredler 1997; Prawat and Floden 1994); (c) learning – in social constructivist terms this is necessarily viewed as a social process.

According to McMahon (1997), social constructivism is not an individual process or behaviour developed through external influences, because meaningful learning occurs when individuals are engaged in social activities. Bandura (1989:22) states that a human's social reality is swayed by experiences of hearing and seeing, which media influence heavily, thus creating a great social impact on the lives of individuals. Aspects of the electronic era are therewith adopted and serve to broaden human experiences and environments (Bandura 1989:22). With technology being the factor impacting on social behaviours such as learning, it is a social constructivist

theory which underpins the case being made for teaching and learning methods to be constantly reviewed and adapted.

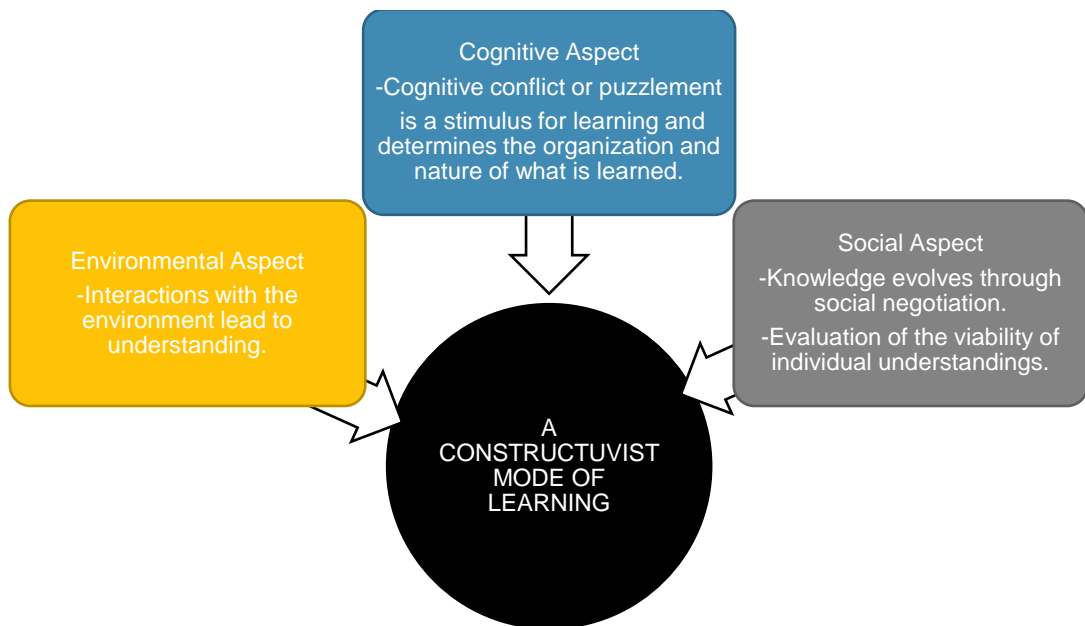


Figure 3-2: A constructivist mode of learning enlightened from Savery and Duffy (2001)

Savery and Duffy (2001) have adapted the philosophical view of constructivism from Rorty (1991) and von Glaserfeld (1989), and have characterised it with three primary propositions (Figure 3-2). The first principle and core concept of constructivism is that understanding is embedded in our interactions with the environment and that what is learned, and how it is learned cannot be viewed as two separate factors.

It is therefore imperative that the function of the content, context, the learner, and goals of the learner are fully understood. With regard to content, cognition does not rest solely within the individual, but also within their entire context. The second principle is that cognitive conflict is the stimulus for learning, and also determines the nature of what is learnt. In this regard the learner has a motivation for being in that particular environment. That might not be the only

stimulus for learning; although, it is the core factor which can determine what the learner attends to in terms of previous experience in order to construct understanding. According to Dewey (1938), it is “problematic” encounters which lead to learning. In this regard it is crucial that the problem-solving skills of learners are developed, since their use often offers the best technique for learning.

The third and last principle for learning forwarded by Savery and Duffy (2001) and von Glaserfeld (1989) is that knowledge evolves through social negotiation and through each individual’s understanding. One common thread that has been evident in the development of this study is that each of the chosen supporting theoretical frameworks has the “social” aspect as one of its core principles. This is premised on the belief that the social environment is crucial and critical to the development of our understanding, as well as to the development of knowledge.

In Chapter Two student engagement and collaboration and the impact the environment has on learning were explored, as well as the principles of creating a learning space that has a clear sense of community. The social impact in this regard becomes an important stimulus to learning, as students often learn through collaborative environments, which allow for the learner to move from a private world to a shared world.

The creation of a Blackboard blended learning space was an important achievement, as it allowed a platform for creative collaborative discussions through the use of group journals and discussion forums. The collaborative groups were important, as they are able to test individual understanding. Students were able to examine other’s understanding as a mechanism for enriching, interweaving and explaining of particular issues, which is a key learning technique used in a classroom.

According to von Glaserfeld (1989), “other people are the greatest source of alternate and challenging views and provide a source of puzzlement and learning is automatically stimulated”. Prior to planning stages of the action cyclical processes, I had a clear understanding of the paradigm, and an understanding of what parts of the research problem the worldview enlightens also remained key, as this clarified what theoretical frameworks needed to be utilised in order to undertake a critical inquiry.

To execute the teaching and learning in the Creative Design (I) classroom for first years, I employed a Problem-Based Learning instructional model, which is one of the first and core principles of a constructivist approach. This was the means used to find the best-suited learning method within the Creative Design (I) classroom, and the theory was used as a guiding principle in attempting to create focused and measurable instruction within the first-year Creative Design (I) course.

3.3.2 Problem-based learning – an instructional model used within a constructivist paradigm

For this study, a Problem-Based Learning instructional model has been employed within a constructivist paradigm, alongside an e-education framework (Garrison’s Online Community of Inquiry). Problem Based Learning rests between the theoretical principles of constructivism, the practice of instructional design, and the practice of teaching, and is considered one of the exemplars of a constructivist-learning environment (Savery and Duffy 2001:1).

Problem-Based Learning leans very closely to a community of inquiry framework, whereby students are given a problem to investigate individually or as a team. Students are then expected to engage in self-directed learning, researching, and gathering information using the library or computer-based resources. Once research is completed, students are expected to engage on a self-reflective journey by evaluating resources, which enables them to work on the problem with a new level of understanding. Information gained from

research is further used to understand and re-examine the problem. With this understanding students are then able to practice the same cycle again to solve any similar learning issues which may then arise (Barrows 1996).

Within the context of the blended learning environment, there are critical principles that students must possess related to self-directed learning, content knowledge and problem solving. To be successful, students must develop the self-directed learning skills needed in the fashion design field. Students must be able to independently develop strategies for identifying learning issues, locating, evaluating and learning from learning materials and resources relevant to an issue at hand (Savery and Duffy 2001). These self-directed learning abilities become imperative during the design process discussed in Chapter Two, and as shown in Figure 3-3.

3.3.3 Inquiry as a method of teaching an overview of Col

A Garrison Community of Enquiry underpins the online part of this study, which is the design of the creative space for first-year Creative Design (I) students using the Blackboard VLE. Garrison's e-education theory was used in this study to guide content design and student collaboration techniques, as it offers important learning benefits, such as social, cognitive and teaching presence (Garrison 2007).

The first objective of an online space is an attempt to shift social presence from socio-emotional support to focus more on group cohesion, this being a method of changing from personal to purposeful relationships amongst learners (Garrison 2007). The second objective is to promote a progressive development of cognitive presence from exploration to the end result – this being the inquiry.

The employment of an online community of inquiry framework was a method of investigating how teaching presence, which is design, facilitation and direct instruction, is conceived (Garrison 2007). The purpose of exploring such a

construct was to create a sense of community amongst learners, as this method provides collaborative learning support and discourse associated with higher levels of learning.

I approached this study with the view that there was evidence that a sense of community could be created online, and that a sense of community is significantly associated with perceived learning (Garrison 2007; Garrison and Cleveland-Innes 2005). Figure 3-3 displays the benefits of an online learning space guided by an online community of inquiry. This framework and principle has been employed for the Blackboard Creative Design (I) course space. In order to offer a Creative Design (I) space that is engaging and collaborative with a rich educational experience, a socially-enabling climate needed to be set up offering conversational supporting content and discourse.

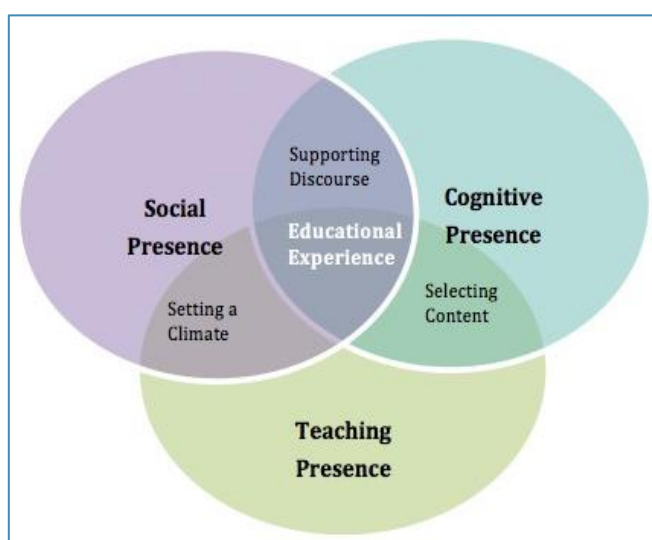


Figure 3-3: Online Community of Inquiry Framework from Garrison 2007:
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3.3.3.1 Social presence

Social presence is one of the key aspects of COI, since it creates a sense of reality amongst students as they are thereby able to project themselves both socially and emotionally (Garrison and Arbaugh 2007: 159). Studies

conducted indicate that group cohesiveness and interaction amongst students is generated by a strong relationship between social presence and learning outcomes. It was therefore imperative that activities which cultivate a social presence, and also enhance learners' satisfaction with the Internet as an educational delivery medium, were explored in order to achieve an engaging community of learning.

The integration of a blended learning space was an attempt to enhance learning by designing collaborative activities which allowed learners greater opportunities for learning. These activities encompassed increased social presence and a greater sense of online community, which in turn influenced the improvement of socio-emotional climates (Richardson and Swan 2003; Rovai 2002). Social climates such as an online community seem positive and appear to support the rapid spread of the mystery of the hidden curriculum of technology, resulting in increased satisfaction with this as a learning and delivery medium. The results of students having a social presence in an online classroom therefore also bear benefits, such as effective expression, open communication, and group cohesion (Garrison and Arbaugh 2007).

3.3.3.2 Cognitive presence

Authors have described cognitive presence as the extent to which learners are able to generate and make meaning through sustained reflection and dialogue (Garrison, Anderson and Archer 2001). Cognitive presence has been rationalised as a process which occurs in four phases (Figure 3-4), and this process can be closely associated with the design process as discussed in Chapter Two: inspiration; identification; conceptualisation; exploration and refinement; definition or modelling; communication; and production (Aspelund 2010).

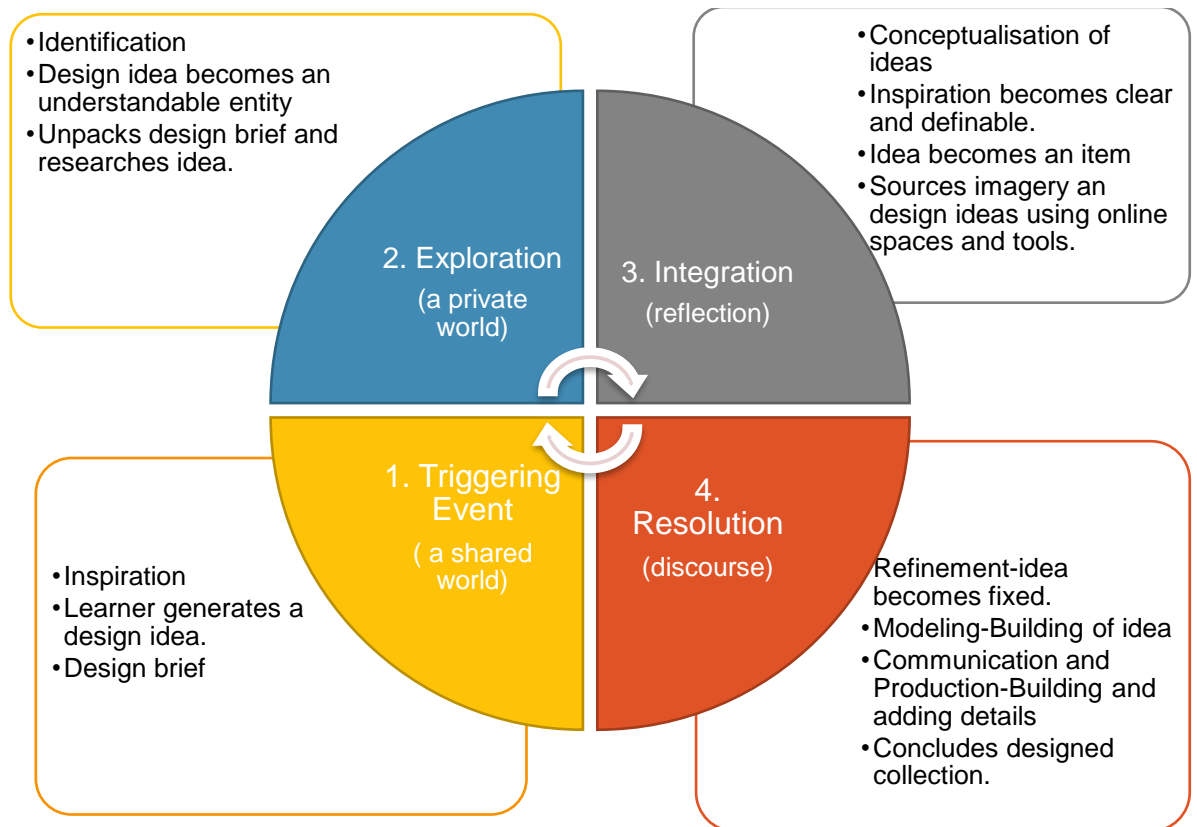
The first phase of exercising cognition is the triggering of an event, which is described as the identification of a problem for further inquiry. This process

closely associates with the inspiration process, whereby a student generates an idea, becomes excited and begins to perform research. After the triggering of an event, the exploration stage takes place. During this process students explore issues at hand, both individually and corporately, through critical reflection and dialogue.

The exploration stage relates to the second step of the design process, which is identification, where the idea becomes an understandable entity. Integration is the process whereby students construct meaning from ideas generated through the exploration stages. This stage encourages reflection, as inspiration becomes clear and definable. According to Garrison *et al.* (2001), the integration stage requires an enhanced teaching presence in order to probe and diagnose ideas elevating each learner to their highest order of thinking in the development of ideas.

During a design project, students participating in the study were encouraged to journal their ideas as a method of reflecting, and use modern technological media such as WGSN and Instagram. These media were also used in the Creative Design (I) Blackboard classroom to assist in developing ideas.

The last stage of cognition is resolution. During this phase, learners are able to apply newly-gained knowledge to educational or workplace settings. This is also the last phase of the design process, and is concerned with the refinement, building and finalisation of an idea. The Creative Design (I) blended learning space was designed to generate such a learning experience for first year fashion design students through its outcomes.



A pragmatic example of an educational experience using Col in reference to Cognitive Presence during the Creative Design (I) Process

Figure 3-4: A Creative Design (I) learning community enlightened through an online community of inquiry framework adapted from Garrison (2007); Aspelund (2010) and Burke (2011)

This study explores the primary issues of cognitive presence in relation to a progressive development of inquiry in an online learning environment, as cognitive presence is wherein lies a deliberate shift from understanding the problem through exploration, integration and application (Garrison 2007). Authors have argued that often creative inquiry has great difficulty moving beyond the exploration phase (Celentin 2007; Kanuka and Anderson 1998; McKlin *et al.* 2002; Vaughan and Garrison 2005).

This fact as mentioned by these authors has been seen as evident in first-year fashion design students, as they often struggle to move past the exploration stage, which is concerned with the understanding of the design idea. Why then is it so difficult for design students to move the process of inquiry through to resolution phase? This cognitive block can be caused by various factors, such as the contrived nature of the educational context, the communication medium, or the nature of the teaching presence, and which involves design, facilitation and direction. However, does evidence exist that this finding has more to do with teaching presence than these other factors named?

3.3.3.3 Teaching presence

Authors have argued that although both social and content-related interactions are important between students in a VLE, this alone will not necessarily ensure effective online learning (Garrison, Anderson and Archer 2000). In order for a teaching presence to be effective, these interactions need to have clearly-defined parameters, and be focused in a specific teaching direction.

Teaching presence is concerned with the design, facilitation, and direction of the cognitive and social processes (Anderson *et al.* 2001). During learning and facilitation, students must be able to benefit personally and educationally through working towards the achievement of meaningful learning outcomes. Teaching presence carries with it three key ingredients; a) instructional design and organisation; b) facilitating discourse, which is the building of understanding; and c) direct instruction (Anderson *et al.* 2001). Authors therefore confirm that teaching presence is important in order to execute a successful online learning platform, since this is a key ingredient which determines student satisfaction, perceived learning and a sense of community (Finegold and Cooke 2006; Kanuka, Lim and Barnes 2002; Pawan *et al.* 2003; Swan 2003; Swan and Shih 2005; Vaughan 2004).

In a study conducted by Blignaut and Trollip (2003), it is confirmed that there is a great focus on instructor presence in online asynchronous environments. It is important for instructors to be seen in order to be perceived as present in online learning communities (Kanuka, Rourke and Laflamme 2007). Students do support online learning methods, as in a study conducted by Dixon, Kuhlhorst and Reiff (2006), whose research results indicate that students were in favour of online learning courses, listing several benefits such as: being able to work anywhere at any time, and being able to engage with their peers.

Taking into consideration the COI framework, according to Shea, Pickett and Pelz (2004), teaching presence in an online learning space can be created by adopting principles of “good practice”. An environment must be knowledge-, assessment- and learner-centric, with a sense of community whereby there is contact between students and instructors.

In order for teaching presence to be effective during the Creative Design (I) Blackboard-based lessons, three key components were considered:

- **Instructional design and organisation:** This is concerned with design and planning of the structure, the process and evaluation of online material presented (Anderson *et al.* 2001). Activities comprising teaching presence that must be undertaken by the instructor in order to see a successful learning community take shape, including: re-creating Power Point presentations and lecturer notes onto the Blackboard course site; developing audio/video mini-lectures; providing personal insight into course material; creating a desirable mix of and schedule for individual and group activities; and also providing instructions for how to use the medium effectively (Swan 2003; Swan 2004).
- **Facilitating discourse:** This relates to ideas of contact between students, faculty and reciprocity and cooperation amongst students (Chickering and Gamson 1987). Facilitating discourse is where students are engaged,

interacting and building on information provided in course learning materials uploaded by the instructor (Anderson *et al.* 2001). The discussion forum tool on Blackboard was used for the facilitation of discourse. Students were able to engage by sharing meanings, identifying areas of agreement and disagreement, while also seeking to reach consensus and understanding. To effectively facilitate discourse review and commenting on student responses, raising questions, making observations, keeping a healthy flow in discussions, identifying inactive students, and the limiting of dominating posts that shifted attention to other learning topics, had to be undertaken (Anderson *et al.* 2001).

- **Direct instruction:** This is the role that must be executed by a subject expert, as it is imperative to diagnose comments for accurate understanding, inject sources of information, direct discussions in useful ways, and channel learner knowledge to the highest level of thinking and instruction (Anderson *et al.* 2001). This role requires an instructor to possess intellectual, scholarly and leadership qualities in order to share fully their subject matter knowledge with their students. Other key factors for direct instruction are indicators (rubrics) that assess the discourse and efficiency of the educational process (quick feedback).

Table 3-1 Community of Inquiry Framework (Adapted from Garrison 2007)

<i>Elements</i>	<i>Categories</i>	<i>Indicators</i>	<i>Blackboard Instrument Used to facilitate the COI framework</i>
Social Presence	Effective expression <ul style="list-style-type: none"> • Open Communication • Group Cohesion 	Emoticons <ul style="list-style-type: none"> • Risk free expressions • Encourage collaborations 	<ul style="list-style-type: none"> • Discussion Forums • Online Blackboard journal. • Blogging

Cognitive Presence	Triggering Event <ul style="list-style-type: none"> • Exploration • Integration • Resolution 	Sense of Puzzlement <ul style="list-style-type: none"> • Information Exchange • Connecting Ideas • Apply New Ideas 	<ul style="list-style-type: none"> • Discussion Forums • Online Blackboard journal. • Direct links to WGSN placed under Lesson Plan Tabs.
Teaching Presence	Design and Organisation <ul style="list-style-type: none"> • Facilitating Discourse • Direct Instruction 	Setting Curriculum and Methods <ul style="list-style-type: none"> • Sharing Personal Meaning • Focusing Discussion 	<ul style="list-style-type: none"> • Scheduled lessons created on Blackboard using Lesson Plan Tabs. • Design Briefs loaded on Content tool.

The benefits of using the COI framework are that students will feel a sense of community whilst in both in class and a virtual learning space. For this blended learning exploration, certain tools available in Blackboard have been used to facilitate the online COI framework (Table 3-1). The inquiry offers a key learning benefit, namely: the instructor has to remain aware of their teaching and instructional role in order to facilitate learning to benefit students.

3.4 A PRAGMATIC EXPLORATION: DESIGNING A BLACKBOARD CLASSROOM BASED ON THEORETICAL FRAMEWORKS

Constructivism was recognised to be the most fitting philosophy to adopt for this study, since it takes into consideration that students are active learners who tend to understand and make meaning when involved in engaging activities and tasks. It was proposed that blended learning be incorporated in Creative Design (I) for Fashion through the use of the Blackboard LMS, as engagement and collaboration with others in a form of a community of learning was vital for the enhancement of learning during the Creative Design (I) process.

The implementation of blended learning was executed through the employment of four cyclical action research processes. Through the action research processes, the creation of constant active learning activities was achieved, as each design assessment and learning task was thus designed based on data collected from the study's voluntary first-year student participants.

Feedback collected at each cycle was used to design and improve the face-to-face instructional methods, learning tasks, design projects and assessments facilitated in Creative Design (I). In order to design an engaging VLE which explored the social, cognitive and teaching fundamentals, it was imperative that impactful elements when designing a learning web space, such as colour, sound, font and use of space, were explored. It was important to create a VLE for Creative Design (I) students as this provided an opportunity to engage by offering a community of practical element to students (Wenger 2011).

The basic idea of introducing technology such as the Internet into learning is to provide a method for people to communicate in a particular way, sharing their knowledge in a pool, very much like a community (Baird and Fisher 2005). Communities of practice can be defined as groups of people who share a common interest in something and wish to improve on their interest by interacting with others regularly. This study explored a fast-growing area of teaching and learning whereby the focus is on developing a student-centric, technologically- and socially-rich environment which promises new discoveries across the educational spectrum of Fashion Design. A community of learning and practice was therefore developed for this study through the use of the Blackboard VLE (Baird and Fisher 2005).

According to Wenger (2011), in order for a space to be defined as a community of practice it must be a formal domain where members are able to engage and

interrogate their critical thinking through the use of problem-solving techniques. This exploring of community of practice elements was in line with the COI framework, which explores similar characteristics in such learning forums:

- A domain makes an online community formal by giving its space an identity defined by a shared common interest. Another way of formalising the space is by making it available through membership only. This was the first aspect applied with the Creative Design (I) Learning Space. A Creative Design (I) classroom was made available on Blackboard to only those registered first-year students who had volunteered for the study. Other members wanting access to the learning platform could be added only by the instructor in charge of the classroom. This made the platform exclusive to first-year fashion design students and invited members only, creating a common platform of trust, shared interest, engagement and collegiality.

The Creative Design (I) classroom learning space had to be a formal learning domain. Blackboard allows the instructor to design a personal banner under the welcome page, which makes the students aware that they have entered into the correct space.

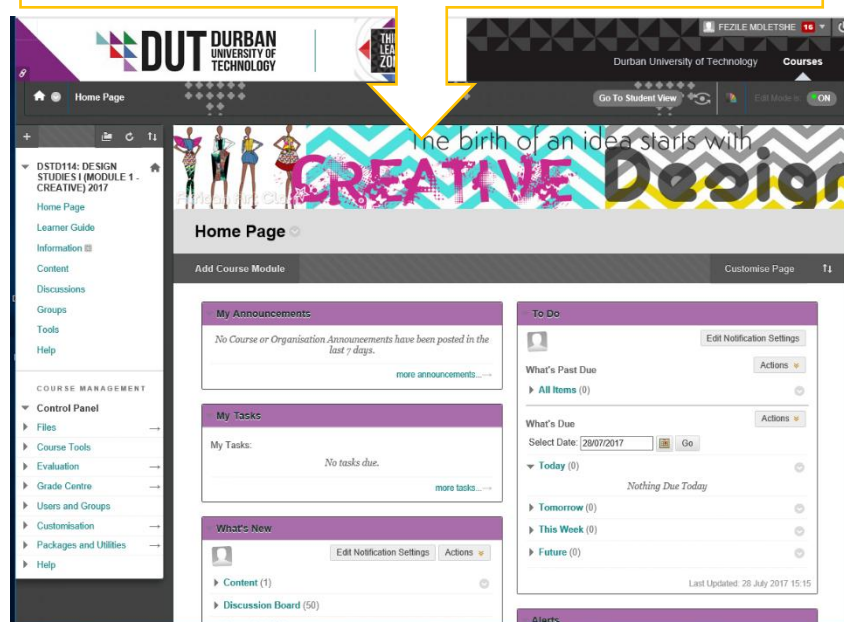


Figure 3-5: Example of the Creative Design Blackboard Classroom

- In pursuit of common interests, members are able to engage in joint activities, discussions, and share knowledge. This creates a sense of community. Web domains are able to offer a collegial platform for members to interact and potentially learn from one another. Using the Blackboard LMS made the process of adopting these principles easy, as the VLE has various tools, such as the discussion board and shared journals where students and their instructors can give each other quick feedback on assignments.

The discussion board on Blackboard was used as a common platform to post new fashion news. This allowed students to engage freely and openly during and after Creative Design (I) class times.

Discussion Board
Forums are made up of individual discussion threads that can be organised around a particular subject. Create Forums to organise discussions. [More Help](#)

Create Forum Search 11

Forum	Description	Total Posts	Unread Posts	Total Participants
<input type="checkbox"/>	What do you most like or dislike about using Blackboard?	42	15	19
<input type="checkbox"/>	What do you think are the most useful tools on Blackboard?	11	7	9
<input type="checkbox"/>	What is your favourite food?	43	28	19
<input type="checkbox"/>	Fashion NEWS	0	0	0

A South African retail exhibition opens in Paris
The work of almost 40 South African designers is being showcased at the renowned Le BHV/Marais department store in Paris until 31 July
June 15, 2017 | Text Jessica Hunkin Photo Supplied
f t i p

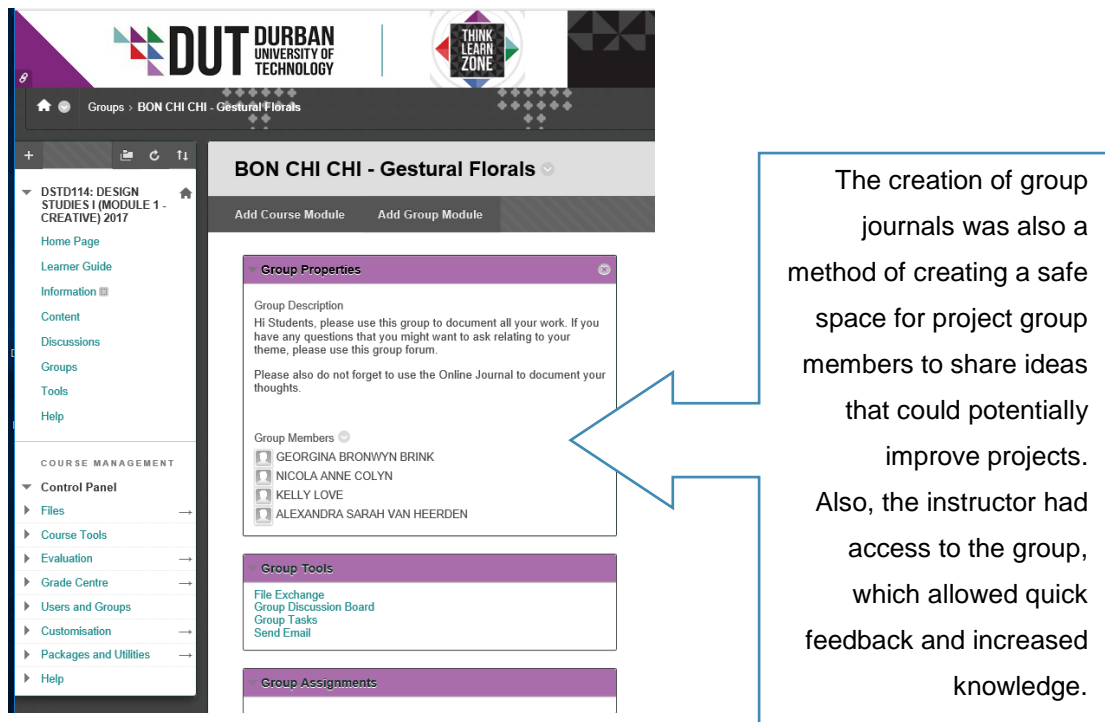


Figure 3-6: Example of the Creative Design discussion board on Blackboard

- In an attempt to enhance and add value to learning being provided for first year Fashion students, it was imperative that the Creative Design learning space not be only a community of common interest amongst students and their instructor. In order to interrogate possible learning challenges during the Creative Design process, I had to use the classroom as an investigatory platform – as a community of practice. As an instructor and as part of my action research methodology, the creation of a learning space was a method for developing a shared list of resources, student experiences, stories, tools and ways of addressing recurring learning problems. It was thus a method of documenting findings which could assist in improving learning, and also the implementation and use of the Creative Design Blackboard classroom.

A learning space has to offer certain characteristics in order to be deemed a community of practice, and in designing such a space, I had to take the following characteristics into consideration:

Table 3-2 Community of practice principles (Adapted from Wenger 2002:2)

	<i>Example</i>	<i>Does Blackboard offer this platform?</i>
<i>Problem solving</i>	Researching as a method of generating ideas.	☺ I added direct links to trend sites on Blackboard as a method of guiding learning.
<i>Request for information</i>	Students seeking information for projects and also the overall use of Blackboard.	☺ Direct email access to instructor and open discussion forums to ask peers.
<i>Seeking experience</i>	Collaborative learning.	☺ Discussion Forum was used as a method of enquiry amongst peers and instructor.
<i>Reusing assets</i>	Saved images and links for projects.	☺ Storing of images on individual journals and blogs. Student can share and email images with peers on the Discussion Forum and email.
<i>Coordination and synergy</i>	Putting all the inspirational images on the discussion board for students to use as sources of learning.	Discussion Forums are created by instructor as an information sharing platform.

<i>Discussing developments</i>	Inspiring an environment that is collaborative.	☺ Discussion board conversations between instructor and students.
<i>Documentation projects</i>	A method of encouraging reflection.	☺ Journaling of the design process online.
<i>Visits</i>	Consultation bookings.	☺ Direct email communication from Blackboard.
<i>Mapping knowledge and identifying gaps</i>	A platform that inspires inquiry.	☺ Conversations on the discussion board”.

Theorist Vygotsky (1978) also highlights that the optimisation of cognitive development is dependent on the full social interaction of the learner, and it is important that the facilitator’s instruction is efficient when students engage in activities within their social and collaborative learning environment. This is equally true when they receive guidance that is mediated by tools, as this results in an increased range of skill versus what can be attained alone.

As a means to break the traditional face-to-face classroom method of instruction between teacher and student, the employment of such Internet-based and other technologically-inclined tools was seen as a method of achieving social benefits in synchronous and asynchronous Web-based learning environments. Within a blended learning instruction model, various tools such as social media would be employed in design projects. These media tools provided an opportunity to take social interaction to a deeper level, as well as addressing various contemporary learning styles rooted in digital technologies (Baird and Fisher 2005). In order to cater for various digital learning styles, I had to take into consideration key elements when designing

a Web-based space, as users needed to be able to navigate the design space provided for them with ease.

Table 3-3: How users read the web

<i>Highlighted key words</i>	Hypertext links can be used for highlighting as well as typeface colours (Nielsen 1997; Baird and Fisher 2005)
<i>Meaningful headings and subheadings</i>	Use meaningful headings and subheadings; never use “clever” headings as they may confuse the reader (Nielsen 1997; Baird and Fisher 2005).
<i>Use one idea per paragraph</i>	Users tend to skip over unnecessary information and go to what they need (Nielsen 1997; Baird and Fisher 2005). This can be achieved by using short paragraphs.
<i>Less is more on the web.</i>	Use bullet points and always monitor your word count (Nielsen 1997; Baird and Fisher 2005).
<i>Use an inverted pyramid style</i>	Always start with the objective and conclusion (Nielsen 1997; Baird and Fisher 2005).

While designing the Creative Design VLE, I also took into consideration the physiological aspects of web navigation such as:

- **Language** – The use of key words was necessary as this assisted students conceptualise their mental image as targets, and also using familiar Creative Design and Fashion keywords within the Blackboard space that students could relate to and easily understand (Baird and Fisher 2005).
- **Size and Font** – When loading images, it was important to take into consideration that large items generally draw more attention first, as they will be seen as being the more important elements on the screen. Headers must also always be more vivid and large, as they communicate weight and importance (Fleming 1998:2)

- **Design (placement and position of elements)** – Placement of elements in a Web-based environment can be a communication of their importance, or of a sequence which should be followed in going through them. In normal settings, the mind is accustomed to reading and writing from left to right, and from top to bottom; therefore, the way in which people approach the screen will be relatively the same. The mind generally considers items at the top and on the far left of a page to be generally more important. Also, links and items that are clustered next to each other will be viewed by users as being of the same level of importance (Fleming 1998; Baird and Fisher 2005).
- **Colour** – Indicates a relationship between items, establishes importance, and draws the user's attention, such as with yellow or red. Another way to create focus is to use black on a light-coloured page. Colour should be used as a technique of indicating a continuing path, since colour can be interpreted rapidly and with a high degree of precision, for example yellow brick roads are as useful in life as in film. It is additionally important to stay away from using rainbow colours without any particular meaning or association, as this promotes a poor visual hierarchy (Fleming 1998).
- **Movement** – Draws user attention; however too many pop-up images with many colours tend to confuse the eye. Movement must be used carefully and with purpose, since the use of such animations can be an exciting and affective way of communicating information (Fleming 1998).

3.5 CONCLUSION

The constructivist viewpoint became a fundamental pillar in the planning and execution of this study. I was also able to infuse the research with the different theories as they took into consideration all the social, cognitive and teaching elements considered by this study. In adopting a constructivist view, it was imperative that during the planning stages of the field work and practical explorations, fundamental principles, such as creating an educational experience through the learning environment, were also considered.

The setting of a climate and the selection of content in order to enhance the learning abilities of the groups of first-year Creative Design (I) fashion students who volunteered for the study was considered imperative.

The three learning frameworks adopted were interwoven into the four-cyclical process expatiated on in the following chapter, with a constructivist view guiding the overall viewpoint of the study. The Garrison Community of Inquiry framework oversaw the designing and implementation of the Blackboard classroom, whilst the Problem-Based Learning theory focused on the design tasks of the students.

These theories were infused into the study to conceptualise a teaching and learning model for a blended learning environment for first-year Creative Design (I) for Fashion students. The conceptualisation was carried out through four action-research cyclical processes, as the study's aim was the improvement in student learning during the design process, and the achievement of change regarding teaching and learning modes in the Creative Design (I) Fashion course.

Chapter Four explains the theories employed alongside practical teaching and learning explorations in the Creative Design (I) course. The reflections used have guided each implementation stage of the research cycle and revealed sub-conclusive findings which assisted in the conducting of further explorations.

CHAPTER FOUR:

RESEARCH METHOD: FIELD WORK AND PRAGMATIC EXPLORATIONS

4.1 INTRODUCTION

This chapter explores how the identified theoretical frameworks have been applied alongside the four action cyclical processes. For this study, I argue for an action research approach underpinned by qualitative research principles, which have been employed alongside a constructivist perspective.

A qualitative research design has been used for the reason that it carries and reinforces constructivist principles in stating that knowledge and understanding are gained from interaction with others and the environment. Interaction with others and the environment took place during the study through the collection of data by means of a cycle of systematic attempts aimed at student educational improvement and change during the Creative Design process. This study was hence aimed at improving the manner in which an online Blackboard classroom could contribute and benefit learning in Creative Design (I) for first-year Fashion students.

Action research was considered a suitable qualitative approach for this study, because student learning behaviours had to be analysed in order to determine the improvement and change in their effective learning (Maree 2007:71; McNiff and Whitehead 2010). This entailed working openly with first year students, by following a repeated process of reflection, planning and implementation guided by action research principles. A cyclical process of action in Creative Design (I) was important to my study as it allowed for reflection on completed projects and planning going forward. With this I was able to design a suitable blended learning classroom for Creative Design (I) which could then also be considered a beneficial educational learning space for new first year students entering the university in 2018.

Students were intrinsic to the study, as educational spaces cannot be treated merely as benefactors of “technology” or sets of skills, methods and procedures to be implemented, but should instead be seen as part of the social practice of teaching and learning (Robin Usher cited in Scott and Usher 1996:2). Researching the integration of blended learning in Creative Design has allowed for knowledge to be shared and distributed, whereby I believe that learning has occurred between students, myself and study participants as students. This was considered imperative for this study, as it rests on the principles of a constructivist paradigm, whereby learning occurs when we interact socially with each other and the environment. I also explored principles from Dewey (1938) which were in line with action research that when a researcher takes on a constructivist approach, they are seeking to solve a “problem” in order to gain new knowledge, as with this study I intended to:

- Examine the reasons for learning challenges during the design process. With this study, I believed that the integration of technology might assist in learning, as students currently entering into the university appear to be digital-skills inclined.
- Explore the learning benefits of integrating blended learning into the Creative Design (I) course, and the advantages and disadvantages of the Creative Design Blackboard classroom. Modern technologies and social media were used alongside Creative Design projects as a method of encouraging visual vocabulary in order to assist with the conceptualisation of designs.
- Investigate instructional challenges regarding e-pedagogy. Upon beginning the design of the virtual Blackboard classroom, I had to familiarise myself with e-learning frameworks, instructional principles and VLE strategies that are beneficial to creating a learning space which carries collaborative ingredients, and also a deep sense of community for the sharing of knowledge.

- Investigate virtual classroom design in relation to user-friendly layout, fonts, engaging content and colour. Understanding what motivates students to learn in an online space was key to the success of the study. This also assisted in designing a user-friendly online space for the Blackboard LMS experience.
- Enquire and examine student perceptions regarding the use of technology for learning during the Creative Design process. Arrange surveys, journals, focus groups and interviews, which were employed as a method of collecting data in order to obtain necessary student feedback.
- Reflect on my role as a face-to-face and online instructor for Creative Design (I) (McNiff and Whitehead 2010).

4.2 WHY ACTION RESEARCH WAS USED

My reasoning for employing an action research approach was premised on the fact that it focused on meaning, and sought to explore the possible phenomenon of digital native students and of the learning challenges experienced to gain a deep, intense and holistic overview of the process. This was an intention to achieve full understanding needed to interact with first-year students as sample study participants (Scott and Usher 1996; Gray 2009:164).

As the study was set to investigate and improve on specific problems, action research fitted this enquiry, since it permitted the study to follow a path designated by the data collected from first year student participants. Action research focuses on action and research simultaneously in a participative manner. This was very fitting for this study, as all the planning, data collection, reflection and evaluation took place during Creative Design lessons with first year students as active participants (Coghlan and Brannick 2014). Further to this, the Blackboard online classroom was designed and further improved based on feedback received from the first-year design student groups. Upon partaking in an action research study, fundamental principles had to be taken into account, that:

- **This research had to be seen as an agent of change** – There has not yet been any documented evidence of an action research methodology for Creative Design (I). I identified an opportunity to explore blended learning by combining face-to-face instruction with an online space, as they felt that this would be more in line with current students entering university as what is termed digital natives. This study has been an opportunity of enhancing the methods by which Creative Design is taught and learned over the years, making it an inquiry that is both transformative and developmental in nature (Gray 2009:313; Maree 2007:124).
- **Research subjects are the researchers or are involved in a democratic partnership with the researcher** – For this study I used first-year DUT Fashion Design students as the study sample. This was premised on two reasons: firstly, convenient access (Maree 2007:71; McNiff and Whitehead 2010), and also because I wished the students to be involved in the development of the VLE classroom and be the instruments as channels of their own learning in the Creative Design course (Gray 2009:313).
- **Data is generated from direct experience of research participants** – Action research involves an interactive cyclical process. In this regard, four cycles of planning and implementation have been used to characterise the activities of this blended learning exploration, with each cycle becoming more focused at the reflection and evaluation stage (Gray 2009:313). An action research approach is one that constitutes participation, and is signified by a partnership between the researcher and study participants (Maree 2007:125). In order for this study to be brought to fruition, a greater level of transparency between myself and first-year students had to be established, as their involvement in the research dictated the direction and shape which the Creative Design course took.
- **Action research is practical** – Action research approaches are concerned with practical social challenges and solutions (Creswell 2005 cited in Maree 2007:124). Action research is aimed at developing practical solutions to

problems, which in turn informs their teaching practice. This means that action research is centred between research methodology and solving local, practical problems. The cycle of action research issues is studied, reflection on issues is undertaken, and collection and analysis of data is performed in order to implement practical changes based on findings (Creswell 2005).

4.2.1 The action research process

An action research process was employed to enable the systematic process of the study, as it is concerned with interactive cycles of planning, implementation and reflection. The action research approach undertaken consists of interactive cycles between practical Creative Design process challenges, the formulation of research questions, and reporting on research findings which further informs the researcher's teaching practice (Seale 2000 cited in Maree 2007:125).

Figure 4-1 illustrates that research and practice work hand-in-hand, and from the beginning a practical challenge regarding a social issue has driven the process of this study. For this study to reach fruition, I conducted four full-cyclical action research processes. Each full-cyclical action research process consisted of 4 small stages or phases, with each one leading to the next.

The first stage in the first full-cyclical process began with an identification of the problem focus area. My reason for embarking on action research was not only to investigate the possible learning issues at first hand, but also to investigate further social issues impacting learning for first-year students during the Creative Design process. During this phase of the study, I began to reflect and understand that action research has very little to do with finding answers to problems, but becomes more about finding those problems that require answers in going forward. The aim of action research is not to present finalised "answers" to problems, therefore, but to reveal different truths and realities supported by various individuals and groups (Gray 2009:317) at the

time of the study. For this research, I have followed a cyclical process guided by authors Maree (2007:128), Gray (2009:318), and McNiff and Whitehead (2010).

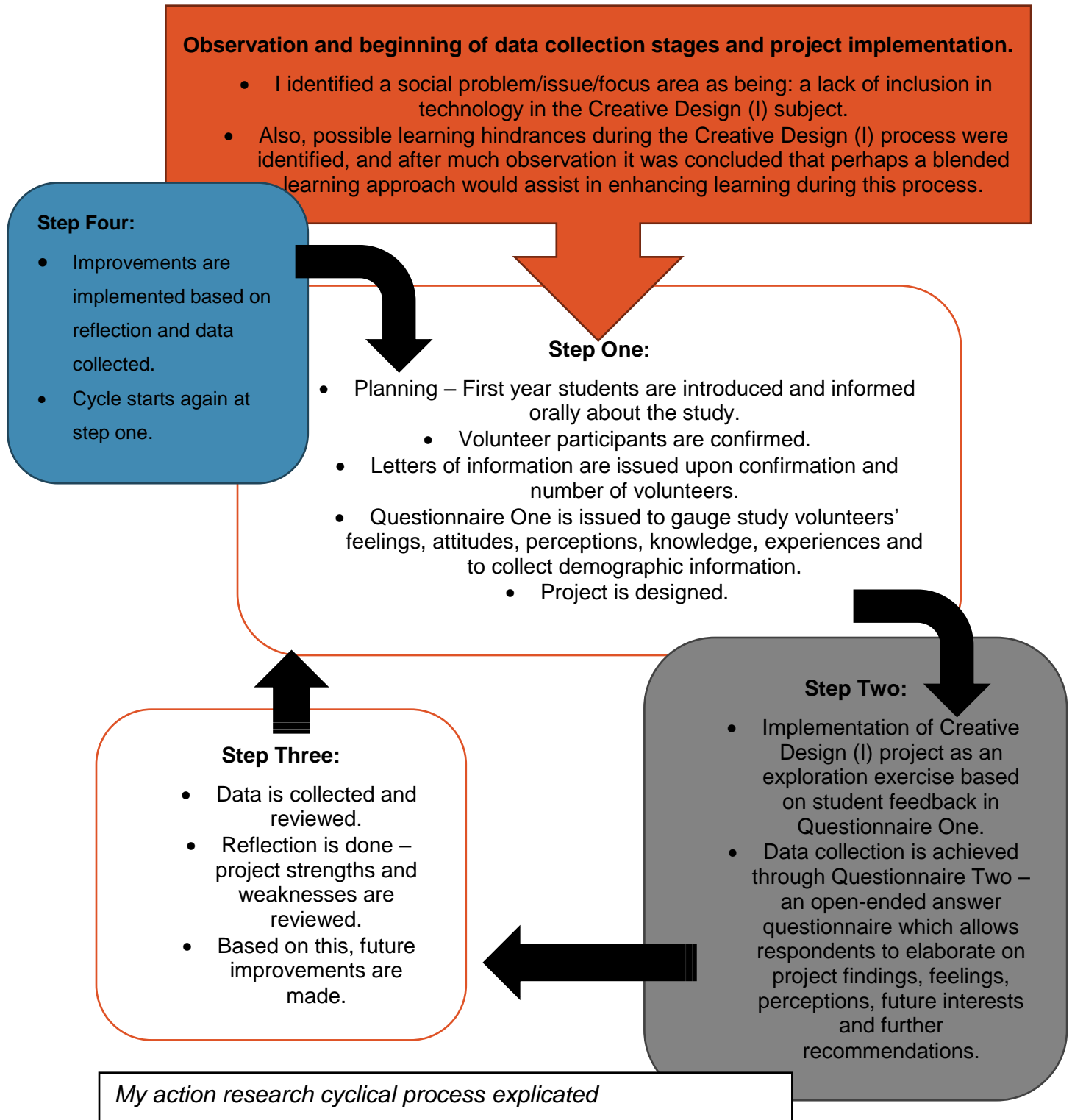


Figure 4-1: The study's cyclical action research adapted from Maree (2007:128), Gray (2009:318) and McNiff and Whitehead (2010)

In Figure 4-1, I have clearly illustrated the action research steps followed in order to start and complete this study. This illustration of the cycles in steps provides a clear depiction of a constructivist paradigm whereby collaboration, engagement and learning from others has taken place. Before commencing with the study, I initially identified social issues which entailed: first-year students' comprehension of the design process; their motivation in executing a design project; and their ability to conceptualise design themes and successfully generate designs.

The social issues observed were also: a lack of integration between Creative Design (I) and technology and current-generation students called digital natives enrolling at the university. The learning and social issues identified became a focus area for the study, and through the application of theoretical principals and the methodology adopted, this study hopes to generate learning strategies which could actively address these challenges for first year students going forward in 2018 (Maree 2007).

The section below reveals steps taken in each cycle after observation and identification of the problem:

- **Step one – Cycle One:** The first step was to introduce first-year students to the study orally and recruit volunteer participants. It was important that students were informed that their participation was purely voluntary and that all feedback information provided by them would be treated as confidential. Also during this stage, students were informed of the benefits of collaboration with the researcher, as this would strengthen the quality of the data collected. For this cycle, I deployed Questionnaire One to participants as a method of gauging technological perceptions, feelings and interests, and also to collect student demographic information. The

deployment of the first questionnaire was in an attempt to assist in confirming problems identified during the observation stage, such as the social issues already mentioned. Furthermore, it was a method of forming a relationship with volunteer participants, and of negotiating expectations and agendas (Maree 2007). By doing this, I set a direction that I wished the research to take. I did this by identifying the most suitable theory to be used. The questionnaire was administered to a group of 20 volunteer students.

- **Step two – Cycle Two:** Based on data collected in Questionnaire One during Cycle One, which determined biographical and information regarding student perceptions, an exploration project was designed based on these findings. Questionnaire Two was then deployed, and was an open-ended set of questions which allowed respondents to elaborate on project findings, feelings, perceptions, future interests and also make further project recommendations. The data collected using this questionnaire was then utilised in step three.
- **Step three – Cycle Three:** In Cycle Three, data collected from respondents in Cycle Two was reviewed and reflection took place, because once data is reviewed based on participant responses, reflection and evaluating the impact of the project should also occur (Gray 2009). In this way, intended changes and improvement can be measured for implementation. How then could improvement and change be evaluated? A criterion which constituted evidence of change by selecting a piece of evidence from the data collected which potentially demonstrated this change needed to be identified and this evidence then validated by others (Gray 2009:322). As I could not be in a position to validate the impact, it is for the participants in the project to judge for themselves. From this stage onwards, I was then able to evaluate progress and consider the challenges which had emerged. Once data was validated, improvements could then be made in Cycle Four of the project.

- **Step four – Cycle Four:** During this stage, the participants and researcher implemented ideas collaboratively, and mobilised identified and prioritised resources in order to actively deal with the research problems, which served as the realisation of the action research principles of agency, development and change.

4.3 INTRODUCTION TO RESEARCH INSTRUMENTS

In order to execute this study through a qualitative approach, my role as an action researcher was to engage with the study's participants with an inside perspective, rather than as an outsider. I had to recognise myself as more of a partner in learning, and not so much as an external facilitator of knowledge, since participatory action research (PAR) involves more than just straightforward participation (Berge 2004:202; Gray 2009:314).

PAR means immersing participants in the focus of the inquiry and its method, and involving them in the data collection and analysis process. PAR plays a pivotal role in educational research studies, as it aims to transform situations or structures in a democratic manner (Gray 2009:314). Whilst interrogating a series of social problems at hand, I also had to reflect on my own values as an educator, whilst additionally considering the chosen constructivist paradigm.

One of the key principles of action research, mainly for educational change, is to inform and empower people to work collectively to produce such beneficial changes (Berge 2004:201). During the data collection stages of this study, it was important that stakeholders were engaged and informed at every step of the action research cyclical process. Participation was maximised through a diverse use of data collection tools in order to expand on the responses obtained. Initially, the collection of data was planned to be through distributing surveys; however, during my stage of reflection after the second cyclical process, it was realised that adding interviews and a focus group were other qualitative collection data tools which could be used instead in order to

maximise on the gathering of data. Table 4-1 details the data collection tools used in the overall collection of data for this research:

Table 4-1: Data collection methods and instruments

Data collection methods explored	Data collection instruments employed
<p>1. Surveys – to investigate and collect data. All survey questions were group administered (Maree 2007:157).</p>	<ul style="list-style-type: none"> • Open-ended survey questionnaires – allowed participants to answer openly, as space was provided for participant comments. • Challenges on the analysis of data came where coding of answer responses differed (Maree 2007:157).
<p>2. Researcher personal reflective journal – a journal was kept during the course of this study. This journal was used for planning and reflecting on the study.</p>	<p>Reflective journal – a method of documenting the experience, reflection, conceptualisation and further experimentation on the study. Reflecting has assisted in developing the ability to uncover what the researcher had planned, discovered and achieved in their practice (Coghlan and Brannick 2010:25).</p>
<p>3. Blackboard Student journals.</p>	<p>Student journals/workbooks – provided information like homework and worksheets to teachers in order that they might gain a sense of students' thoughts, perceptions and experiences in the classroom (Mertler 2009:112).</p>
<p>4. Interviews</p>	<p>Semi-structured interviews were used to maximise the collection of data and feedback. These were non-standardised interviews, whereby a list of issues was covered, although not all were dealt</p>

	with at one time. The order of the questions is also not standardised; each answer from participants led to the next questions or elaboration. This also allowed probing to take place. This data collection session was documented through an audio voice recorder and notes were taken (Gray 2009).
5. Focus groups	To maximise on answers given at individual interview sessions, a focus group of all the study's volunteering participants was implemented to evaluate the fourth cyclical process of action research.

4.4 DATA COLLECTION PLAN

To demonstrate the progressive nature of the blended learning investigation in the Creative Design (I) course, various data collection tools were used in each cyclical study process. For this study, I designed two sets of survey questionnaires. Questionnaire One was used to narrow the focus area of research, and attain a better understanding of each volunteering participant's background. The first questionnaire was used as a guide to gauge the following aspects:

- Each student's prior interaction with a computer prior to their enrolment at the university.
- Each student's individual accessibility to a computer or smart cellular telephone or tablet.
- Whether each student had ever used a technologically-inclined platform for learning, and also whether they would be open to using one, preferably which one and why.

Questionnaire One which was administered in August 2016, and assisted in my reflection as a researcher and educator. After the analysis of the data

collected, I was able to identify digital resources and possible learning methods to use in a design project for this study. In the initial questionnaire, first-year students made mention of their interest in using a digital pin-board. Pin-boards sometimes act as mood-boards, and these can be used as a creative visual guide for designers. A Creative Design Pinterest project, inspired by each student's favourite medium, was then planned and facilitated through the Creative Design Blackboard classroom.

Following the first survey questionnaire, a second questionnaire was designed and distributed to the volunteering students as a method of evaluating the value of integrating Blackboard and other digital sources into the project. Table 4-2 provides each action cycle in detail, the research instrument used, the method of inquiry for each cycle, and the date and format in which the data were collected.

Table 4-2: Summary of research instruments

Cycle One (first group 2016)			
Research Instrument	Method of Inquiry	Date, place and participant	Format in which data was obtained
Q1: Administration of: <ul style="list-style-type: none"> structured scaled and open-ended questionnaire Letter of information 	<ul style="list-style-type: none"> Qualitative self-administered Establishing the scope 	<ul style="list-style-type: none"> August 2016 Durban Creative Design Class First group of 7 first years 	<ul style="list-style-type: none"> Hard copy text
Q2: Administration of: <ul style="list-style-type: none"> Semi-structured questionnaire 	<ul style="list-style-type: none"> Qualitative self-administered Evaluation of methods and results 	<ul style="list-style-type: none"> August 2016 Durban Creative Design Class. First group of 7 first years 	<ul style="list-style-type: none"> Hard copy text Access to student's project on Blackboard and Pinterest
Cycle Two (second group 2017)			

Research Instrument	Method of Inquiry	Date, place and participant	Format in which data was obtained
Q1: Administration of: <ul style="list-style-type: none"> • Semi-structured questionnaire • Letter of information 	<ul style="list-style-type: none"> • Qualitative • Self-administered. • Planning and new project • Establishing a scope for the second group of first years in 2017 	<ul style="list-style-type: none"> • January 2017 • Durban • Creative Design class, • Second group of 20 first years 	<ul style="list-style-type: none"> • Hard copy text
Q2: Administration of: <ul style="list-style-type: none"> • Online/web-based (Blackboard) Semi-structured and open-ended survey 	<ul style="list-style-type: none"> • Qualitative • Self-administered • Evaluation of project and results 	<ul style="list-style-type: none"> • March 2017 	<ul style="list-style-type: none"> • Online • Creative Design Blackboard classroom
Cycle Three (second group 2017)			
Research Instrument	Method of Inquiry	Date, place and participant	Format in which data was obtained
<ul style="list-style-type: none"> • Semi-structured interviews 	<ul style="list-style-type: none"> • Qualitative face-to-face 	<ul style="list-style-type: none"> • July 2017 	<ul style="list-style-type: none"> • Voice audio recording and field notes
Cycle Four (second group 2017)			
Research Instrument	Method of Inquiry	Date, place and participant	Format in which data was obtained
<ul style="list-style-type: none"> • Focus group 	<ul style="list-style-type: none"> • Qualitative conversations 	<ul style="list-style-type: none"> • 3 October 2017 	<ul style="list-style-type: none"> • Voice audio recording and field notes

4.5 PLAN FOR DATA ANALYSIS

Coding has also been employed to enforce reliability in the data obtained for this study. Coding is the process whereby the researcher has to carefully read through transcribed data and divide it into meaningful analytical units. An

identification pattern in a form of a thematic coding method will be employed as a method of weaving the best results possible. Thematic coding allows for data to be segmented, categorized, summarized and reconstructed in a method which captures important concepts about the study (Ayres 2008). The data has been marked within segments using symbols, descriptive words or unique identifying names (Maree 2007:105).

4.6 DESIGNING THE QUESTIONNAIRE

The purpose of employing the questionnaire was to investigate feelings, attitudes, perceptions, knowledge and experiences, and collect demographic student information. For this study I designed two questionnaires. The first consisted mainly of structured, scaled and open-ended self-administered questions (see Annexure C, whereby first year students were given a range of possible answers from which they as respondents were required to select. The second questionnaire consisted mainly of semi-structured and open-ended questions deployed at the end of the survey, and was used as a method of inviting students to comment on the learning received during the course.

According to Neuman (2000:252), a researcher should keep in mind the study's principles when setting a survey questionnaire, and questions should be set clearly to avoid respondents from becoming confused. Further to this, to avoid confusion both questionnaires were piloted prior to being distributed to sample participants. When designing the questionnaires, I kept in mind the principles that questions should not be vague or ambiguous, and that each question needed to deal with one topic.

Questions were kept short, clear, relevant, complete, concise and instructions for answering them were made clear. When conducting a survey, the researcher should not manipulate the situation in any way (Neuman 2000:34). Taking these guidelines into consideration, I made clear to the first-year students, both verbally and on the letter of information and questionnaire, that

their participation in the study was purely voluntary, as was any information they were prepared to offer.

Upon commencement of the study, students were assured that all the information they provided would be treated with strict confidentiality, and would be used only for research purposes in an attempt to improve the manner in which the online Blackboard classroom could contribute to and benefit their and others' future learning.

4.7 CONCLUSION

The following section of cycles explores the actual research design explored in its various stages. In the sections below, I explain the planning stages, the use of questionnaires as a method of collecting feedback data at the beginning and end of each cycle, the research tools utilised in each action research cycle, and their own reflections and planned improvements before moving to the next cycle.

4.7.1 Methodology – Cycle One

Cycle One was conducted with first-year Fashion students at the end of 2016. The cycle consisted of two survey research questionnaires: Questionnaire One being to gauge and evaluate student perceptions, interests and demographics; and the second questionnaire to evaluate project implementation success, drawbacks and attain further recommendations.

Both questionnaires were accompanied by a letter of information as part of the ethical measures required (see Annexure B). The questionnaires were voluntary surveys aimed at obtaining information on each student's age group, residential area, computer literacy skills, accessibility to a computer, smart phone access to the Internet at home, and preferred social media platform which could potentially be used for learning within the blended learning paradigm. Based on the responses obtained, a project was designed using the recommended blended learning suggestion. Following the project, a second

open-ended questionnaire was distributed to voluntary participants as a method of evaluating the implementation of a blended learning method on the project, and also the use of Blackboard for learning.

Step one- Project Design and planning

- In August 2016 the first group of participants was introduced to the study's concept and recruited for participation in the study.
- Two classes were invited to participate and the study received 7 volunteers.
- The study had at least ten students per class, who were invited to participate in order to receive a true reflection of the implementation of the project. Responses of interest in the study were extremely poor.
- Ethics: Letters of information and confidentiality agreements with participants were issued. See Appendix A.
- Letters of information were issued upon confirmation of the number of volunteers.
- Issue of first questionnaire – a written open-ended and semi-structured survey questionnaire was issued to seven students to gauge study volunteers' feelings, attitudes, perceptions, knowledge and experiences, and to collect demographic information.
- The questionnaire was distributed to volunteer participants during Creative Design (I) class time.
- The project was then designed based on respondent feedback – a celebrity-themed project, with the blend suggested by

Step Four-Cycle improvements.

- Based on reflections and limitations Cycle One was declared to be a scoping cycle. In 2017 there was a change-over in students and a new group was begun all over again as Cycle Two in 2017 on a new group which had enrolled at the beginning of the year.
- The process of recruiting participants had to start all over again as this was a new group of students, and it was imperative that I attain a true reflection on the type of student, their perceptions, interests and demographics.
- Ethics: due to ethical reasons both survey questionnaires remained the same with no changes in order to evaluate the project

Cycle One

Step Two-Implementation and data collection

- Implementation of Creative Design (I) project called themed the Celebrity Pinterest project based on respondents feedback.
- Questionnaire Two- a written self-administered survey questionnaire is issued.
- Data collection was for the Pinterest project achieved through Questionnaire Two- an open ended answer questionnaire which allows respondents to elaborate on project findings, feelings, perceptions, future interests and further recommendations.
- **Ethics:** No change in study sample participants. The seven students continued and completed the first cycle and volunteers. Letter of information and confidentiality agreements with participants had already been issued.

Step Three: Reflection – strengths, weaknesses and limitations

Reflections: Poor response on participation. Students were not keen to be part of the study. The study was also only limited to first year students.

Limitations: The volunteering number of students only reached seven. I had estimated a total of twenty students, ten in each class for a set of two groups.

The year 2016 was also a year which had the highest dropout rate for first-year students. Overall performance was also very poor, including in Creative Design (I). Many of the students were not very keen on doing work that was computer-related. Even interest in the use of Blackboard was not very high. Students that agreed to participate were the ones that were generally doing well in their Creative Design (I) work.

This led to a decision that this part of the cycle would be for "scoping" purposes only, and that I would have to re start Cycle One all over again, with a new group of first-year Fashion students in 2017 using the existing questionnaire.

Figure 4-2: Cycle One: blended learning enquiry titled Celebrity Pinterest Project

The following section discusses in detail the planning, execution and evaluation of data collection tools used in the first cycle of the action research study. Data collection was performed without much pressure, as convenience sampling was used for participant selection. First-year DUT Fashion students were the sample identified for this study due to convenient access. A non-probable convenience sampling method was thus employed in order to recruit participants for the study (Suen *et al.* 2014:1; Flick 2009:28). When planning and designing the questionnaire, I took into consideration the following aspects (Maree 2007:158):

- Appearance of questionnaire
- Question sequence
- Wording of questions
- Response categories

As a method of testing the above-mentioned questionnaire aspects, the questionnaire was initially piloted with participants who were not identified for the study.

4.7.1.1 Utilising the first questionnaire: scoping mechanism

The first questionnaire used on Cycle One consisted of closed- and open-ended questions. The reason for the first questionnaire was to determine the scope of the volunteering participants. Due to a change in the group of students between year one and year two, Questionnaire One was administered twice (also in Cycle Two), along with a letter of information regarding the study each time. Questionnaire One was sequenced to start with: biographical questions, then closed-ended questions, ranking questions, and finally open-ended questions (Annexure C). Contents of the questionnaire were as follows:

- a) One **biographical question**, which took into consideration only age. A single biographical question was used in order to determine the profile of the research sample, and also to compare the sample to general population characteristics (Maree 2007: 164).
- b) After the biographical question, **closed-ended questions** were asked which provided a set of responses to choose from. These were also easier to use for the analysis of data (Maree 2007: 161). These closed-ended questions took into consideration: computer literacy skills and computer, Internet and smart gadget access.
- c) **Ranking grid questions** were then asked to explore each respondent's ranking of certain issues in terms of preference and order of importance (Maree 2007:163). The questions took into consideration the following: favourite social media platforms, such as Facebook, Instagram, Twitter, Pinterest, Keek, YouTube, and blogs.
- d) Open-ended questions were last on the questionnaire. Open-ended questions can be defined as unstructured, allowing research participants to elaborate on their answers. This aspect gave an elaborate view of each participant's thinking. However, analysing open-ended questions has its disadvantages: the analysis of data becomes a very complex and tedious exercise (Maree 2007:161). Questions in this final section included:
 - Residential area of participant. This question was not added to the biographical section as participants live in varying areas.
 - Other preferred social media platforms.
 - Social media platform that each participant would find useful for learning.
 - Use of Internet for learning.

4.7.2 Implementation and data collection

Based on responses from the scoping questionnaire, I was able to determine a preferred social media platform for learning that could be used alongside Blackboard, since based on analysis it was realised that this also had to be an

easy platform to use. Following analysis of the first questionnaire, all first-year students were tasked to do a Pinterest Celebrity project. This was an annual project for first year design students; however certain changes were made. Instead of students producing a physical mood-board, they were administered to do a virtual pin-board instead, using Pinterest as a method of communicating their design concepts.

Students posted links of their work on the Creative Design Blackboard classroom for evaluation, sharing and marking. To evaluate this project for research, only the seven volunteering participants were handed the second questionnaire. To evaluate the success or failure, advantages or disadvantages of the first implementation of blended learning for the Creative Design (I) course, a written questionnaire divided into two sections was administered: the first section consisted of various ranking grid questions, and the second section entailed open-ended questions, and this was given to only the seven volunteering participants (Appendix D).

a) **Section A** of Questionnaire Two consisted of ranking grid questions, which explored each respondent's ranking of:

- Blackboard as a practical or impractical LMS.
- The university's (DUT) wireless connection and connectivity.
- Their home Internet access in order to execute project requirements, in this regard a Pinterest pin-board.
- The benefit, or lack thereof, of using a Social Media platform alongside Blackboard for learning.

b) Section B of the questionnaire consisted of open-ended unstructured questions, which allowed research participants to elaborate on the answers they provided. This section also took into consideration Likert-scale

questions, as these provided a measure of the participants' attitudes (Maree 2007:167).

This part of the questionnaire gave an elaborate view of each participant's thinking, feeling and further recommendations for Creative Design Blackboard classroom improvement. The questions covered the following aspects:

- Highlights of using the Creative Design (I) Blackboard classroom.
- Difficulties experienced whilst accessing the Blackboard classroom.
- Recommendations for improving the Blackboard classroom.

4.7.3 Reflection: strengths, weaknesses and limitations

As reflection is a critical part of action research, in the section below I expand on the strengths, weaknesses and limitations of questionnaires one and two disseminated to first year participants in the first action research cycle during 2016.

4.7.4 Overall Reflection on Cycle One

Based on reflection and student keenness in study participation, the rollout and integration of blended learning techniques in 2016 was not a successful exercise. This was evident in the small number of students willing to volunteer as participants for the study. Due to ethical reasons discussed in Chapter One, as a lecturer I would not enforce or make a pre-requisite that students participate in this study. Students were advised to participate in the study only on voluntary basis, and those that chose not to participate were told that they would not be negatively impacted in any way.

Of the two first-year classes, each consisting of thirty students, the study received only seven willing volunteers. This placed my research at a great disadvantage, as the positives or negatives of implementing blended learning

in Creative Design could not thereby be fairly examined. Upon analysis, I then had to re-identify Cycle One as simply a scoping mechanism for the following year's student intake.

4.7.5 Reflection on data collection methods

4.7.5.1 Questionnaire One

The strength of Questionnaire One was that students found the questions easy to understand and go through without needing clarification in each section. The weakness in Questionnaire One was the lack of student participation during this part of the study.

4.7.5.2 Questionnaire Two

Even with the poor student interest in participation, the seven volunteers were able to give a clear indication on the use of Blackboard as a learning tool. Questionnaire Two was thus able to assist in further designing technologically-inclined learning projects for the second group of first-years using the Blackboard learning space.

4.7.6 Cycle One: improvements

Based on the problem areas identified – the main one being participation – this could potentially have been a huge hindrance on the collection of data for this study, as such a small sample can lead to skewed results and unfair discretion. These problem areas have been identified as areas of improvement going forward. The following changes were made from Cycle One in order to try and improve data collection during Cycle Two:

Due to poor participation in Cycle One, I decided to re-distribute the questionnaire for Cycle One to a new group of first years in year two (2017). I realised that they could not use any of the feedback from Questionnaire Two in Cycle One, as this new group of students might exhibit different learning preferences. Based on this reflection, in Cycle Two, question one, with a letter

of information as a method of inviting new participants to the study, was distributed.

Based on the responses, which were positive, volunteering participants in year two reached twenty. Based on the responses to Questionnaire One, I was then able to continue the designing of the Creative Blackboard classroom and also integrate projects. As a method of encouraging the use of Blackboard within the Creative Design space, I planned for Questionnaire Two, which was for evaluation purposes, to be completed online by the volunteering participants.

4.8.1 Methodology – Cycle Two

Continuing from Cycle One, the same two research questionnaires with a letter of information were used to gauge and evaluate the scope of a new group of students entering their first year of study in 2017. As mentioned in Cycle One, question one was accompanied by a letter of information at part of the study's ethical measures.

Question one was aimed at obtaining information from the then-current student group of 2017, and their age group, residential area, computer literacy skills, access to a computer, smart gadget and Internet at home, and also their preferred social media platform were polled. This information was then used to continue designing a blended learning platform. In this way, the Blackboard classroom was then further designed based on questionnaire feedback from year one's group, and also from year two's new group.

In some ways, this became a balanced and fair indication of learning preferences, as the Blackboard classroom was then not based only on the responses from Cycle One in year one. The responses from Questionnaire One in Cycle Two thus also allowed the implementation of the second Creative Design project called Geometrics and Florals.

Step One- Project design and planning

- In February 2017 the second group of participants was introduced to the study's concept and recruited for participation in the second cycle of the study.
- Three classes were invited to participate, and the study received 20 volunteer students, which meets the quota initially proposed of 20 participants. Even though 2017 had three first-year classes, it was felt that with twenty participants that this would give a more truthful reflection on perceptions on the integration of blended learning in Creative Design (I) for Fashion.
- **Ethics:** Letter of information and confidentiality agreements with participants. (See Appendix A.)
- Letters of information are issued upon confirmation of the number of volunteers.
- Issuing of first questionnaire – a written open-ended and semi-structured survey questionnaire was issued to 20 students to gauge study volunteer feelings, attitudes, perceptions, knowledge, experiences and to collect demographic information.
- Questionnaire One was group-administered during Creative Design (I) class time.
- The project was designed based on respondent feedback – a Geometrics and Florals print-themed project, with the

Step four: Cycle improvements.

- Having started a project of this kind in the first term with new first years left me in a compromising position.
- This was purely because there was no relationship between myself and the new first years. After some time the interest in the study diminished, as students felt they didn't know me well enough.
- With these findings I decided to continue Cycle Three much later in the semester. However I did not stop exploring with Blackboard and its tools.

Q2: remained the same with no changes in order to evaluate the project based on new group's responses.

Step two: Implementation and data collection

- The second blended learning enquiry project was called Geometrics and Florals. This was an annual print project that is planned for first years in the first semester of the year.
- During this time it was impossible to start implementing new projects with modern technologies as I still had to induct the new group to Blackboard as a learning management system.
- Based on this, the annual project was kept the same; however certain Blackboard tools were included as part of the project.
- Written open-ended, rating and closed-feedback questionnaire was disseminated to twenty volunteering participants after completion of design project.

**Cycle
Two**

Reflection: strengths, weaknesses and limitations

Reflections: Year two showed a more positive response participation. Students were keen to be part of the study. The study was also only limited to first-year students.

Limitations: The year 2017 saw a first-year intake with three classes, so ideally 10 volunteers per class were anticipated, with each class having an estimated 30 students, which would have been a more ideal figure. I also realised that students with access to smart gadgets were keener to participate than students who did not. The class of 2017 as a whole had a better grasp of modern technology than that of 2016. Other limitations were the student-teacher relationship that I did not yet have with the new group, as Cycle Two of my action research started immediately at the beginning of first term in February 2017. Students felt they didn't know or trust me enough to participate. **Strengths:** For the duration of this study, I booked a computer lab during the Creative Design (I) contact time. This was an important exercise, as this was sometimes the only way some students could engage with the online classroom.

Figure 4-3: Cycle Two: blended learning enquiry entitled Geometrics and Floral

4.8.2 Project two: design and planning

The following section discusses in detail the planning, execution and evaluation of data collection tools for the second research cycle. The second group of first-year DUT Fashion students were identified as the most convenient sample to participate in the second-action cyclical process, whereby the process took into consideration all aspects of designing a questionnaire discussed in Cycle One.

In order for the Geometrics and Floral themed project to be successful, a computer lab was booked for the duration of the project until completion. This gave students sufficient freedom to engage, navigate, collaborate and explore with others.

4.8.2.1 Utilising the first questionnaire

As mentioned in Cycle One, the first questionnaire, which consisted of closed- and open-ended questions was again used in Cycle Two. As this was a new group of first-year students, questionnaires one and two needed to be repeat-administered in order to determine the learning scope of the 2017 volunteering participants. A letter of information was attached to clarify the terms and conditions.

Questionnaire One consisted of the exact same aspects mentioned in Cycle One: a biographical question, then closed-ended questions, ranking questions and open-ended questions (Annexure C). Furthermore, during this process it was important that I determine certain characteristics of the new group of first years for 2017. These characteristics were determined through the use of the first questionnaire.

Prior to continuing with Cycle Two in year two, it was important to establish and implement this, as I needed to evaluate the digital literacies of the second

group of first years prior to continuing with Cycle Two. The first questionnaire was used to determine:

- a) A **biographical setting**, which took into consideration only age. I used this question to determine the profile of the new research sample, and also to compare the sample to general population characteristics (Maree 2007:164).
- b) A set of **closed-ended questionnaires**, which provided each participant with a set of responses to choose from, such as: computer literacy skills, and computer, Internet and smart gadget access.
- c) A set of **ranking grid questions** to explore each new respondent's ranking of certain issues in terms of preference and order of importance (Maree 2007:163). These covered the preferred social media platforms of respondents.
- d) A set of **open unstructured questions**, which allowed participants to elaborate on the answers given. The challenge was to make sense of the data collected as responses varied from one participant to another. Responses obtained were more numerous than for Cycle One (Maree 2007:161).

4.8.3 Implementation and data collection

Based on responses to the first questionnaire, I was able to determine and further design an engaging learning space, which had a sense of community. Students indicated that having direct links to learning materials for design projects has been beneficial. I was also able to plan a new project based on the responses received. This project included an in-depth use of the creative Design Blackboard classroom in order for students to obtain information and perform further research for conceptualisation their design storyboard project called Florals and Geometrics.

Furthermore, to evaluate this the written questionnaire used in Cycle Two was distributed. This questionnaire consisted of two sections: the first section consisting of various ranking grid questions and the second section entailing open-ended questions, which was also given to the seven volunteering participants during research Cycle One (Annexure D). This section was the most critical path for the study, as I gained further insight into the advantages and disadvantages of creating a blended learning space in the Creative Design Blackboard classroom. This covers key areas, such as further recommendations from students for the Creative Design Blackboard classroom.

4.8.4 Reflection: strengths, weaknesses and limitations

The following section expands on the strengths, weaknesses and limitations of the Questionnaires One and Two disseminated to first-year participants in the second action research cycle during 2017. One of the key strengths of Cycle Two was that during this cycle students were highly encouraged to use most of the available Blackboard tools, especially the journal. This was a critical step in encouraging reflection, and also acted as a method of validating the information gathered.

4.8.5 Overall reflection on Cycle Two

According to my analysis and reflection, the rollout and integration of blended learning techniques in the first part of 2017 was a successful exercise. This was evident in the number of students willing to volunteer as participants for the study, which totalled 20. Based on observation, the 2017 group of students appeared to be far more inclined to use blended learning methods in Creative Design (I) that had previously been found in the first action research cycle.

4.8.5.1 Reflection on Questionnaire One

The strength in Questionnaire One was that students found the questions easy to understand and go through without needing clarification in each section.

The weakness with Questionnaire One was the lack of participation during this part of the study.

4.8.5.2 Reflection on Questionnaire Two

The evaluation Questionnaire Two was able to assist in further designing a learning space which was creative and engaging, and with a sense of community where students could share information.

4.8.6 Cycle Two: improvements

The entire study was designed to collect its data based on two questionnaires, mainly the second one. The first questionnaire was used as a method of determining demographics of students and the second one was used as a technique to evaluate the integration of Blackboard into Creative Design.

After having implemented the same questionnaires in both research action cycles, I realised that in order to fully execute blended learning and attain a truer reflection of its benefits and drawbacks, I needed to explore further data collection methods. However, amending a questionnaire has certain ethical consequences attached, and thus based on this fact, no changes were made to either of the questionnaires.

Moreover, I realised that perhaps it might be more favourable when conducting evaluation to use the same questions in Questionnaire Two, along with new data gathering methods such as interviews and focus groups. I felt that this would be of far more constructive use as a tool to probe and gain further insight from the study. I therefore then followed the use of questionnaires with the use of interviews in Cycle Three, and a focus group in Cycle Four of my action research.

4.9 MOTIVATION FOR EXPANDING DATA COLLECTION TOOLS FOR CYCLE THREE AND FOUR: INTERVIEWS AND FOCUS GROUPS

Upon collecting data and reflection, I realised that the continuous use of the same group-administered questionnaires as data collection tools would not be sufficient to collect further data in cycles Three and Four. In order to gain further information from the study's participants more tools had to be introduced that would allow for me to probe in order to gain further insight with the action research study.

As action research is aimed at improvement and change, feedback from first-year students at each action cycle played a pivotal role in the Creative Design continuous assessments, and also to the design and further improvement of the Blackboard classroom. Based on this, it was imperative that additional methods of collecting further data in order to gain full insight were required. Face-to-face interviews were hence added in Cycle Three, and to further expand on these one-on-one interviews, a focus group was then also conducted as a method of elaborating on the data collected.

4.9.1 Interviews

The employment of qualitative interviews in Cycle Three was an effective data collection method as it allowed the participant and researcher to engage in a two-way conversation as a method of collecting further data for Cycle Three, I was thus able to ask questions and learn about each participant's ideas, beliefs, views and opinions (Maree 2007: 87).

The integration of qualitative interviews was pivotal to the success of the study, which is grounded on a constructivist paradigm, as the incorporation of such interviews enabled me to see the world through each participant's eyes.

The use of interviews as a technique was also the most logical choice, as the objective of the research was largely exploratory. The success of this action research study rested predominantly on the examination of the participant's

feelings and attitudes towards the integration of blended learning in Creative Design (I) for Fashion (Gray 2009:370).

Furthermore, the employment of interviews was crucial to the pragmatic exploration of the study as the theoretical frameworks used – the Garrison Online Community of Inquiry (Garrison 2007) and Problem-Based Learning (Savery and Duffy 2001: 1) theories – rested entirely on my understanding of each participant's construction of knowledge and social reality (Maree 2007:87).

Using the same questions from Questionnaire Two through the incorporation of semi-structured interviews, I was able to probe for more detailed responses. This in turn revealed rich descriptive data which assisted in designing a suitable VLE and Creative Design tasks which enabled learning. After the completion of these interviews, a focus group interviewing strategy was additionally employed as a method of enabling interaction amongst participants in order to create engagement and widen the range of their responses.

4.9.2 Focus group

The aim of employing a focus group interviewing strategy was based on the assumption that placing the 20 study participants in one room would be productive in broadening the scope of research responses obtained (Maree 2007:90). Creating a group discussion amongst participants was a strategic attempt to activate any forgotten details of the experience in integrating Blackboard into the Creative Design (I) course. Additionally, this was an attempt to release any reservations that participants might still have felt regarding disclosing any further information about the study (Maree 2007:90). Focus groups differ from group interviews as they allow for participants to engage and build on each other's idea, comments and feedback (Maree 2007:90). This often provides a more elaborate overview of each participant's feeling about the study's area of exploration.

4.10 METHODOLOGY – CYCLE THREE

In Cycle Three, adjustments relating to data collection tools were made. Initially only two questionnaires were planned on to execute the collection of data for all four cycles, with primarily Questionnaire Two being used as a method of gathering data throughout the study. On reflection, I noted that the use of only one data collection tool and process would be insufficient to fully investigate the critical questions and frameworks implemented in the study.

The running of data collection in Cycle Three and Four was a progression of testing reviewed and implemented teaching methods through an improved technique on the VLE and class exercise.

Face-to-face interviews were used to collect data for Cycle Three of the study. The inclusion of face-to-face individual interviews with each participant was a technique to validate and probe elaboration on responses. A focus group was used to collect data for Cycle Four, as this was a method of creating interaction, engagement and collegiality amongst the volunteering participants.

It also allowed students to conduct healthy debates on the blended learning methods integrated in their Creative Design (I) course. The use of a focus group also allowed for me to probe, validate and verify the use of blended learning tools and theoretical frameworks integrated within the teaching and learning of Creative Design (I). Cycle Three interrogated the planning, implementation, tools use and reflection of the blended learning project implemented (Figure 4-3).

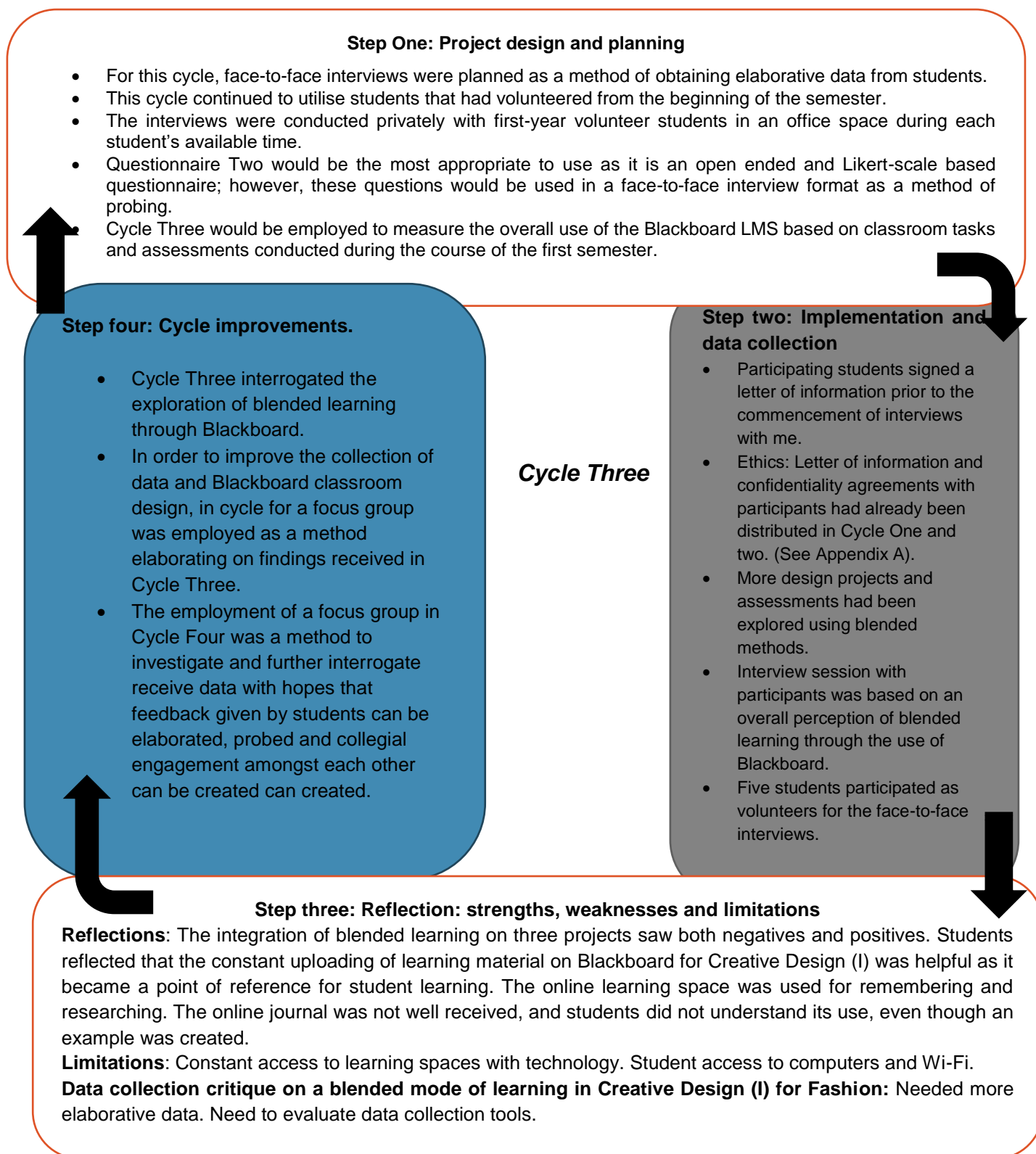


Figure 4-4: Cycle Three: blended learning enquiry on the overall perception of Blackboard Learning Management System.

Cycle Three was aimed at evaluating the implementation of blended learning and its possibility of improving the teaching and design practice of first-year Fashion Design students. I used first-year volunteer students to retrieve feedback relating to the overall integration of the Blackboard LMS, mainly on the use of Blackboard as a blended learning technique for Creative Design (I). For this cycle, I used Questionnaire Two questions in a form of an interview.

The study's participants were interviewed on the following Blackboard features:

- Access to Blackboard;
- Creative Design (I) classroom;
- Benefits of blended learning;
- Highlights of using the LMS; and
- Further recommendations.

4.10.2 Utilising the second questionnaire in interviews

The second questionnaire designed was utilised in face-to-face interview settings. Seven students volunteered to participate in private interviews which took place on the 17th of July 2017. The employment of qualitative interviews in Cycle Three of the study was a very effective data collection technique, as I was able to engage with each student on a one-on-one basis in a private space in creating a two-way conversation. Since the type of students engaged in the study had already been determined from the initial administering of Questionnaire One, there was no need for it to be used again in Cycle Three.

4.10.3 Implementation and data collected

Cycle Three was based on evaluating Blackboard and the blended teaching and learning methods employed in the first two cycles. The questions posed in the face-to-face interviews with participants were based on an overall

perception of a blended mode of learning. Data was collected using handwritten notes.

4.10.4 Reflection on project: strengths, weaknesses and limitations

The number of students who initially volunteered had dropped drastically by Cycle Three. This posed an issue, as only five students were willing to volunteer for interviews out of the initial 20. Also, the third action research cyclical process was conducted in term three of the academic year, which is in July, and many of the students who had formed part of the volunteering group in the first term by this time had dropped out. Furthermore, the five students who volunteered for the interviews were students within their first-year level of study who had a good understanding of the Creative Design (I) subject, and were familiar with modern technology. This group also mentioned having constant access to a computer and Wi-Fi access at home.

The strengths of the project, however, were that at this time of the action research cycle, I had been able to determine the benefits and drawbacks of the integration of blended learning. I had already explored two such projects with two research cycles, and had implemented improvements based on both sets of findings.

4.10.5 Overall reflection on Cycle Three

The implementation and conversion of Questionnaire Two to interviews in Cycle Three was considered beneficial, as it gave a better perspective of the benefits and drawbacks of using technology in the teaching and learning of Creative Design (I) using Blackboard. With these interviews, I able to probe and receive better constructive feedback with further recommendations from participants regarding the VLE.

4.10.6 Reflection on interviews

The interviews faced time constraints as first-year students normally operate on a tight schedule. The interviews therefore had to be set up and booked to

be conducted during Creative Design (I) class time, which was done in a private office with each individual.

4.10.7 Cycle Three improvements

Going forward into Cycle Four, I implemented a focus group as a method of collecting final data. With the information I had received in Cycle Three's interviews, it was important that they verified these findings and recommendations obtained from the five students interviewed. Also, during the course of the three action research cycles, I had used key theoretical teaching and learning frameworks, and needed to evaluate their benefits during the final cycle.

4.11 METHODOLOGY – CYCLE FOUR

The methodology followed for Cycle Four was a focus group, which is a form of group interview. The benefit in implementing a focus group for this final cycle was that when participants are joined together in one space for a group interview, the chances of non-responses being received are reduced to almost zero. One drawback, however, is that the social nature of responding under such conditions may have had an influence on the data collected (Gray 2009:388).

The aim of the fourth cycle was to uncover overall student perceptions of the implementation of blended learning using Blackboard and its tools. For this cycle, I was prepared to receive unexpected comments, expression or views. However, as the researcher, and in order to eliminate bias, it was imperative that I did not get drawn into over-expressing my own opinions, as my role there was purely to facilitate the session and elicit the views of participants.

Step One: design and planning

- For this cycle, a focus group was planned as a method of obtaining elaborative data from students.
- This cycle continued to utilise students that had volunteered from the beginning of the semester.
- The focus group would be conducted privately with first-year volunteer students in a closed room during a set time.
- A WhatsApp group would be created in order to liaise logistics with participants.
- Questionnaire Two would be the most appropriate to use to facilitate the focus group dialogue as it consists of open-ended and Likert-scale type questions.
- Cycle Four, as the final cycle, would measure the overall use of the Blackboard LMS, and the tools and projects implemented.

Step four: Cycle improvements.

- Going forward in 2018, technical video tutorials will be included as this was a previously missed opportunity.
- Termly inductions will be conducted on Blackboard as a method of familiarising students with the system.

Cycle Four

Step Two: Implementation and data collection

- Ethics: Letter of information and confidentiality agreements with participants has already been distributed in Cycle One and two. (See Appendix A.)
- Focus group was conducted on the 2nd of October 2017 in the business classroom on the first floor DUT campus. This was a tabled private session with only 10 participants and myself present.
- Students were engaged in a dialogue that discussed the overall integration of blended learning.

Reflection: strengths, weaknesses and limitations

Reflections: The fourth cycle proved very successful as it received 10 participants for the focus group. The students showed great interest in being in one room with other students to discuss the study. Also, the creation of a WhatsApp group was very beneficial in terms of communication and logistics. This made setting up the focus group far less complex.

Limitations: The 10 remaining volunteers for the last cycle consisted of only the best academically performing students in the entire first year group. Also, they have access to Wi-Fi and carry modern-enabled gadgets for studying. These ten students were the only students that were still interested in being part of this last cycle. This limitation created concern as I felt that they would not receive a true reflection of the study and its potential benefit.

Data collection critique on a blended mode of learning in Creative Design (I) for Fashion: Students recommended that an induction of Blackboard once a term would be more beneficial so that they can become more familiar. Also video of Technical Drawing tutorials, storyboard layout tutorials.

Figure 4-5: Cycle Four: blended learning enquiry on the overall perception of Blackboard tools

4.11.1 Project four: design and planning

In the last cycle, I set out to explore the benefits, drawbacks and future recommendations for the integration of:

- A blended mode of learning in Creative Design (I) for Fashion;
- Blackboard as a LMS; and
- The theoretical frameworks applied in designing and facilitating a blended classroom.

For this cycle it was crucial that the benefits of all projects integrated with technology, and the Creative Design (I) Blackboard classroom that had been designed, and also taking into consideration Garrison's Online Community of Inquiry framework and keeping in mind the teaching, social and cognitive presence, were evaluated.

4.11.2 Utilising the second questionnaire in a focus group

The employment of a focus group was very beneficial to the study, as there was a willingness amongst students to participate and engage. Sufficient meaningful data was collected in relation to the critical questions, objectives and theoretical frameworks employed. Also, the participants had a clear conception of how the Creative Design Blackboard classroom should be designed for first year students entering the university in 2018.

4.11.3 Implementation and data collection

The fourth cycle set out to evaluate other projects and assessments that had been implemented during the course of the year. Data was collected through a tape recorder, and a video record of the group session was also made and used.

4.11.4 Reflection on project: strengths, weaknesses and limitations

The focus group consisted of only ten academically-strong students whom I felt did not necessarily give a true reflection of perceptions as far as the implementation of a blended mode of learning was concerned.

4.11.5 Overall reflection on Cycle Four

The conversion and implementation of Questionnaire Two for focus groups in Cycle Four was considered beneficial, as it gave better insight on the perceptions of the implemented blended mode of learning. With a focus group, I was also able to validate data collected in the first three cycles, and better evaluate the blended learning approaches implemented.

4.11.5.1 Reflection on focus group

The focus group lacked a balanced calibre of students pertaining to demographics. The ten volunteer participants may have not have given a true reflection of overall group perceptions regarding the blended learning received.

4.11.6 Cycle Four improvements

An action research process is not designed to have conclusive findings, but is supposed to open up constructive dialogue on existing issues. By doing this, various truths and realities can be revealed and also improvements made.

4.12 CONCLUSION

In Chapter Four, I set out to explore benefits, drawbacks and recommendations for the integration of blended learning in the Creative Design (I) course for Fashion at DUT. The aim of employing different data collection tools was to engage participants in various dialogues relating to the blended mode of learning embarked on. This allowed participants to engage in and reveal different truths and realities about the blended learning enquiry.

In this chapter, I also set out to establish different student realities and perceptions on the Creative Design (I) classroom. It was crucial that the study findings reveal whether or not:

- A collaborative learning space was achieved whereby students shared knowledge to reach a common goal.
- The space offered social presence, whereby the psychological degree to which learners perceived presence and connectedness with peers was established to exist.
- The space achieved a sound level of student satisfaction, and an affective learning outcome by assessing whether there was any learner reaction to value and quality of learning, and also a motivation for learning.

The data collected in the four action cycle processes have been further reviewed and coded to determine findings. Data was validated through means of triangulation through survey questionnaires, interviews and focus groups.

Chapter five reveals data collection findings and coding methods to validate the trustworthiness of the information obtained.

Data findings have been reviewed and coded whereby common threads in respondent answers have been identified.

CHAPTER FIVE:
A BLENDED MODE OF LEARNING ENLIGHTENED:
DATA ANALYSIS AND SUB-CONCLUSIONS

5.1 INTRODUCTION

The interpretation and analysis of data for this chapter required the use of qualitative strategies. The data collected in the cyclical processes has been interpreted by means of an inductive analysis method, and has been organised into important patterns and themes in order to construct a framework for presenting the key findings of the action research study (Mertler 2009:141). A coding process of grouping similarities from survey questionnaire transcripts has been employed for organising, describing, analysing, grouping and interpreting data (Maree 2007:106; Mertler 2009:141). Findings have been interpreted and applied in a cumulative manner in order to further improve and refine the Creative Design Blackboard classroom for first-year Fashion students enrolling in 2018.

Although the specific process of data collection was sequential due to the action cyclical process of the research conducted, the interpretation of data has run concurrently with their collection (Somekh 2006:6-7). Following the completion of each cycle, the reflection process which is the data analysis process allowed improvements to be made to the research plan, and this was so that more refined data could be gathered in each subsequent cycle. By doing so, the data collection process has been embedded within the physical action research methodology, unlike traditional methods whereby data is only collected afterwards. This practice has allowed the study to be engaged in through a continual reflection process which has facilitated a rigorous and relevant outcome to be arrived at, instead of merely a concluding of results.

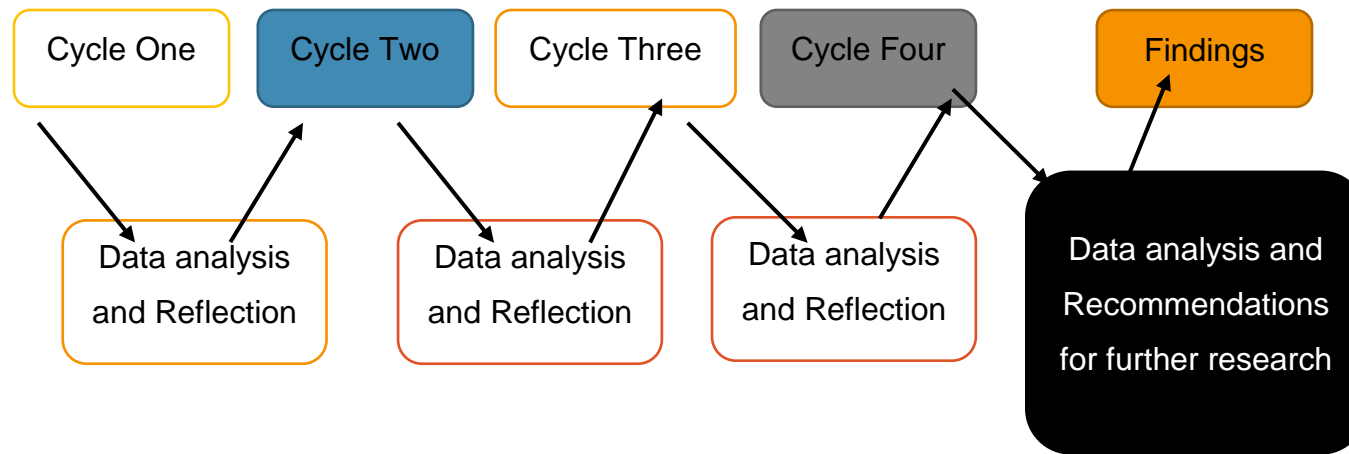


Figure 5-1: Creative Design (I) blended learning sequential data collection process adapted from Schultz (2013:59)

The analytical plan used to interpret questionnaire and interview data is justified and discussed in the following section. Within this, as the researcher I have taken certain factors into consideration, these being the ethical principles of data collection and interpretation, such as reliability, validity and the overall trustworthiness of findings.

5.1.1 Validity

The purpose of validating data collection and analysis in this action research study was not only to develop new ideas about Creative Design (I), but also to test key arguments with a critical audience in order to identify lack of clarity or focus, and to sharpen claims to new knowledge by ensuring that the data collected matched these claims (McNiff, Lomax and Whitehead 1996 cited in Gray 2009:327). Accountability in action research is also demonstrated through the testing of the data's validity. Action research studies are referred to as being valid when the practical approach adopted by the researcher is relevant, especially when such a study contributes to the existing body of knowledge (Kale, Naslund and Paulraj 2010:334).

To test my claims of an improved Creative Design (I) learning environment, evidence has been produced of collaborative work with first-year students whereby the current Blackboard classroom has been influenced by both my findings, and feedback from students. According to McNiff (2008), the validity of an action research study is guaranteed when the account of it provided is comprehensive, authentic, truthful and appropriate.

For this blended learning action research study, I am able to state that:

- The practical approach to the data collection process, whereby the data was collected directly from the people for whom the study's results were intended, provided significant relevant data. In keeping with this, the study's participants were DUT students directly engaged in their first year of study, who attended the Creative Design (I) class to fulfil this module of their

Fashion qualification. First-year students were engaged in a collaborative action research study whereby they were asked what their Creative Design (I) Blackboard classroom should include; this constituted an adequate measure of validity, as data was received first-hand, and could thus be considered truthful.

- The design of the final Creative Design (I) Blackboard classroom was refined at each stage of the action cycle process. The gathering of data in four cycles from various students through the use of different media – survey questionnaires, interviews and focus group – resulted in data that could be generalised across first-year student groups.
- Knowledge and contributions from myself and first-year students assisted in the development of a collaborative learning environment for Creative Design (I) which takes into consideration social, teaching and cognitive presence which is relevant and valid to the current teaching and learning philosophies for higher educational institutions.
- Based on the various data collection instruments employed for this study, I can state that authentic and truthful responses were gathered during the cyclical data collection stages, as students did not necessarily always agree with my perceptions and that of their peers. Students freely disagreed or agreed with certain aspects if need be. This was more evident in the focus group conducted, and it allowed for students to engage with each other and myself, posing questions to their peers and to me.

In order to achieve data quality and reliability, I had to ensure that the correct collection tools were employed. The data was obtained across different cycles, and the fact that various respondents showed corresponding results can be deemed as evidence of their trustworthiness.

5.1.2 Reliability

The reliability of this qualitative study has been enhanced through means of field notes from my reflective journal which were compiled and transcribed

through the duration of the action research cyclical process (Creswell 2007:209).

5.2 ETHICAL CONSIDERATIONS

The success of this study has been premised on first-year Fashion Design student participation. It was thus imperative that the study be conducted in an ethically correct manner, as human beings were directly involved (Leedy and Ormrod 2005). The participants were not exposed to any physical harm, and as part of the ethical considerations for the study DUT's research guidelines were strictly adhered to. Students were all formally invited to participate in the study on a voluntary basis via the letter of information provided to them. Those interested in the study were recruited as participants for survey questionnaires, and a subsequent focus group and interviews. Participation was completely voluntary and students were allowed to withdraw at any point with no repercussions.

The information supplied by students was treated with the highest confidentiality, and was only used for the purposes of this dissertation study. Data provided by participants who chose to withdraw was not used in the study and was destroyed. Students could refuse to answer any questions they did not want to answer, and this in no way impacted on their relationship with me as their lecturer. Also, course marks were not in any way related to this study, and were not affected by participation in it. Students that chose to withdraw from the study were not disadvantaged in any way in class activities or with relation to lecturer-student subjectivities, and there was no form of penalty, formal or informal, applicable to withdrawing from the study.

The action research method used resulted in rigorous collection of data which has answered the critical questions stated in Chapter One of this thesis. The constructivist perspective and investigative techniques adopted for this study have allowed a successful path for designing the final Creative Design (I)

Blackboard classroom. The next section discusses the data collection instruments, and the data collection, analysis and interpretation.

5.3 DATA ANALYSIS OF CYCLE ONE AND TWO

The below data has been compiled in table form indicating findings of Cycle One and Two. The table also explores concepts that emerged. These are further reviewed in order to explore implementation of frameworks, and teaching and learning methods employed. Using a table, I was able to trace common threads in participant responses as a method of determining findings interpretations and sub-conclusions. The findings revealed in data collection of both cycles between year one (2016) and year two (2017) were coded and transcribed in order to reveal emerging concepts prior to further planning and evaluation (See from Annexure K).

Table 5.3.1 Summary of emerging themes from action research cyclical processes One and Two

	CYCLE ONE	Emerging Concepts 2016	CYCLE TWO	Emerging Concepts 2017
Questionnaire One- Section A.	Graph Summary		Graph Summary	
Sample age group/Computer literacy skills/smart phone access	Participants are between the ages 18–25. Majority are advanced in their computer literacy skills. 100% indicated to have access. Full access to smart phones would allow for better access of work and research.	High end user of modern technologies.	Participants varied between 18–25 and 26–35. Majority of the sample can be ranked as intermediate in computer literacy. 95% of the sample indicated owning a smart phone.	Born after 1980 during the rise of modern technologies.
Home computer and internet access/ Preferred social media platforms/	High level of access. Least preferred – Facebook and Blogs. Most preferred – YouTube, Instagram and Pinterest. Findings are not well representative of majority of first year students. Challenges in study participation interest. Keen interest for social media platforms offering videos and fashion imagery. These sources are useful for learning and for design projects. Active on social media platforms not intended for learning mainly. WhatsApp and Snapchat for communication and social engagement. Blogging sites are used for reading, inspiration, posting and writing. Keen interest in using social media platforms for learning. Visible engagement with digital platforms for learning and socialising.	Participants tend to understand and construct knowledge by utilising technology to access information for learning	High level of access. Least preferred – Twitter, Keek and Blogs. Most preferred – Instagram and YouTube. Sizable number indicates high level of access in internet and computers regardless of digital literacies. Students utilise listed social media platforms for various purposes such as socialising and learning. Visible engagement with digital platforms for learning and socialising.	Students did not appear to find social media intimidating and over exposing.
Questionnaire One- Section B.	Graph Summary		Graph Summary	

Participant residential area	100% reside in suburban areas. Suburban areas are more likely to have far broader sources relating to internet, Internet stations and Wi-Fi access.	Possible easy access to Wi-Fi and internet.	86% reside in a suburban area. 10% reside at university residence. 5% reside in a township. Bigger sample offers a truer reflection of demographic balance. Suburban areas are more likely to have far broader sources relating to internet, Internet stations and Wi-Fi access. Also, university student residence has 24 hours free Wi-Fi access. Students residing at university residence even has access to trend sites such as WGSN.	Access to internet and Wi-Fi might not be as accessible.
Digital platforms for learning	Common territory – keen to use Social Media in learning as students are already actively engaging in it for social and learning purposes. Majority of participants indicated to already use Google for research and YouTube for learning videos. Participants use Internet for learning, mainly for fashion trends, inspiration and sourcing. Internet as an important medium for research. More likely to use YouTube and Pinterest for Creative Design learning. Another common thread – YouTube and Pinterest are preferred.	Cannot imagine life without technology!	Interviewee one: “Yes, I would. Best thing ever. YouTube videos have saved my life”. Interviewee two: “Yes. I love YouTube”. 95% indicating that they would use social media platforms for learning. Internet as an important medium for research. Common territory. Students are already using social media for learning and social engagement. Most likely to use YouTube and Pinterest for Creative Design learning. Another common thread – YouTube and Pinterest are preferred.	Technology is fun!
Questionnaire Two-Section A	Graph Summary		Graph Summary	
Logging on/computer access/connectivity/Wi-Fi/Internet, access/Blackboard logging	Not complex as prior induction was done by CELT representative. Clear instructions for logging on in subject guide given on first day of first term. Challenges associated with gaining access to a computer in a laboratory	Technology isn't difficult. Are on campus computers "trash"?	A Blackboard induction was done by a CELT and FYSE representative within the first term of the 2017 academic year. In addition to this training, each individual lecturer within the Fashion	Blackboard induction a necessary session.

	<p>or at the library. Laboratory is a lecturer supervised only venue. Library is always full, not enough computers, problematic computers, Wi-Fi connectivity issues.</p> <p>Participants preferred using their home-based computers and internet. A sense of comfort and no hassles – participants felt on-campus facilities such as computers and internet connections were problematic.</p>		<p>and Textiles Department conducted their own subject-related induction for Blackboard. Further training as per cycle one's sample's suggestion was done. This assisted the new cohorts greatly.</p> <p>Participants appeared to have mixed feelings about having constant internet access on campus or at home. Their responses varied because of variable on-campus connectivity issues, and also a lack of data where students needed to access online work from home.</p> <p>Participants viewed on-campus computers more favourably. 2017 participants did not appear to have any issues logging in to the Blackboard LMS.</p>	
Self agency in learning	<p>Participants felt positive about the blended learning integration. A possible trace of self agency in learning. Participants express positive views on the incorporation and use of digital and social media in key annual projects. A keen interest in incorporating social media and Blackboard in learning. Students strongly agreed that there was a benefit derived from having an active online Creative Design classroom alongside a traditional face-to-face method of instruction.</p> <p>An objective of inspiring self agency in learning is achieved.</p>	Self agency inspired.	<p>Participants indicated positive feedback, stating that it had given them something of a level of independence in their learning. A large proportion of study participants agreed that this integration was beneficial. A keen interest in incorporating social media and Blackboard in learning. Overall, participants enjoyed the integration of blended learning through Blackboard for Creative Design (I) and found great benefit in it for their learning. An objective of inspiring self agency and collaboration in learning is achieved.</p>	I have become independent in my learning!
Section B of Questionnaire Two	Graph Summary			

<p>Highlights of using Blackboard</p>	<p>Appreciated constant and easy access to online Creative Design class. Sense of enjoyment in integrating favourite social media platform with project. No enjoyment in using Blackboard with it. Enjoyed incorporating social media. Did not enjoy using Blackboard. Great dissatisfaction with internet connectivity whilst on campus. Easy to access and navigate Blackboard.</p>	<p>Mixed feelings. Blackboard is easy to navigate.</p>	<p>Appreciated constant and easy access and having a centralised area for knowledge sharing, communication and learning. No enjoyment in using Blackboard with social media. Common thread – enjoyed incorporating social media. Did not enjoy using Blackboard. Great dissatisfaction with internet connectivity whilst on campus, crashing files and rejected passwords. LMS layout template not being user-friendly. Conflicting views on Blackboard navigation. Not easy to navigate Blackboard.</p>	<p>Mixed feelings. Connectivity is a huge issue. Blackboard layout must be improved.</p>
<p>Participants recommendations</p>	<p>Learning material on technical drawings. Live stream or pre-recorded forums of tutorials and class sessions. An induction and introduction of the Blackboard Creative Design classroom and recommended online fashion research tools, apart from the explored social media sites. More interaction with peers on the discussion board.</p>	<p>Blackboard induction, a necessary session. "We need You-Tube videos for Technical Drawings". Let's use the discussion forum more.</p>	<p>Students stated that the Blackboard layout definitely needed to be reviewed so that learning material is simpler to find. However, 34% of the sample did not make any recommendations. 38% were happy with the integration, although they did not elaborate on their answers. Some students reserved their comments, some indicated satisfaction.</p>	<p>Blackboard layout must be reviewed. Mixed feelings.</p>

5.4 CYCLE ONE: IMPLEMENTATION OF QUESTIONNAIRE ONE

Cycle One was used to determine the first group of first year students' demographics, perceptions, interest and further suggestions on the integration of blended learning in the Creative Design (I) course. The cycle took place in the first year of the study in 2016. Upon confirmation of study's voluntary participants, letters of information were distributed (Annexure A), and an open-ended voluntary survey questionnaire followed.

Due to the collection of data for the study commencing late in the year, I decided to use this first cycle as a scoping mechanism. Only one project was planned and implemented in 2016, with the findings from the first questionnaire being as follows:

5.4.1 QUESTIONNAIRE ONE OF CYCLE ONE – SECTION A

In the first questionnaire, I set out to determine:

- The demographics of first year students in the 2016 Creative Design (I) course class.
- Perceptions of technology and the use of social media tools for design projects.
- Access to computers and Wi-Fi.
- Computer literacy skills.

In order to determine these demographics and conclude findings, both questionnaires and bot sections in the questionnaire were analysed using percentages. This analysis of figures has been shown (see Annexure K) using colour graphs, terms and phrases highlighted from transcripts with codes and interpretations.

5.4.2 QUESTIONNAIRE ONE OF CYCLE ONE– SECTION B

This section reveals various participant perceptions relating to the use of technology as a whole for learning. In Section B of the questionnaire in Annexure L, I intended to discover findings, once having interpreted data using a coded method. This set of questions was intended to reveal:

- The location at which participants predominantly reside – This was a method of estimating access to the Internet, Internet cafes, research tools and also to Wi-Fi.
- Other preferred social media platforms that students use – This was a method of determining and gauging an available social media platform which could be implemented with a Creative Design project.

5.4.3 Cycle One – Questionnaire One: findings, interpretation and sub-conclusions as displayed in Table 5.3.1 of emerging concepts.

The sub-conclusions made in Questionnaire One as administered for Cycle One of the research are:

- That a portion of first-year Creative Design (I) students use and interact with technology for researching and even learning.
- That a majority of the study's sample appear to be advanced in their use of technology as they have a high access to Wi-Fi and smart phones.
- That the suggested social media platforms for integration on Creative Design projects are YouTube and Pinterest.

5.4.4 Cycle one – Questionnaire One: data translation into Questionnaire Two of Cycle One

Based on the feedback received from participants in Questionnaire One for Cycle One, Creative Design projects themed Celebrity, Little Black Dress and Project Runway were implemented. These were annual projects whereby students source inspiration from favourite celebrities, historic references, and current and future fashion trends to design a small fashion collection.

As a method of encouraging an engaging and authentic learning environment which takes into consideration a social teaching and cognitive collaborative environment, these projects were conducted through Blackboard, with the social media tool integrated being Pinterest. Pinterest was used for the Celebrity storyboard project as the most fitting social media platform to create digital pin-boards for design inspiration. Students were able to store information using a pin board and this was linked and submitted with each student's online journal. After the completion of this project, Questionnaire Two of Cycle One was implemented to evaluate the benefits and drawbacks of the exercise. Instagram was collaborated with Little Black Dress and Project Runway design projects. Students were able to use this platform for researching, sourcing of high definition imagery and for following their style icons and latest fashion trends.

Throughout the course of these projects Blackboard was employed as a platform of communication. Students were able to communicate through email and engage in discussion forums with peers and instructor. These platforms inspired engagement amongst each other, allowing a medium whereby a common ground for the sharing of ideas was created.

5.5 CYCLE ONE – QUESTIONNAIRE TWO: IMPLEMENTATION

The design and implementation of questionnaire two within Cycle One was to evaluate, examine and interpret the established results. This was a method of evaluating the benefits of implemented theories for teaching and learning, and was also used to assess the benefits and drawback of integrating the instruction of Creative Design (I) into a LMS.

5.5.1 Cycle One – Questionnaire two: Findings, interpretation and sub-conclusions

Due to delays in commencement the study, the implementation of Cycle One only occurred late in the 2016 academic year, in its third term. By this time,

however, first-year students had received sufficient training in Blackboard and had been using it for other subjects outside of the Creative Design (I) classroom. I concluded that the first group of volunteers used was not a fulfilling sample for the study in terms of the feedback received and results examined. Based on this, I decided to utilize Cycle One's process as a scoping method in order to further evaluate the implications of the integration of a blended mode of learning in the Creative Design (I) Fashion course. These findings were, moreover, considered critical in the planning process for the second action research cycle.

5.5.2 Cycle One – Data transfer into Cycle Two

The same process used in Cycle One was repeated in Cycle Two. Data collection tools were also kept the same, with no amendments. It was important that the demographics and perceptions of technology for the new group of first years joining the 2017 academic year were fully explored prior to further implementation of any new projects.

5.6 CYCLE TWO: IMPLEMENTATION OF QUESTIONNAIRE ONE-SECTION A

The employment of the same questionnaires (see data analysis and process in Annexure O) for Cycle Two was a method of determining:

- The demographics of first-year students joining the 2017 academic year.
- Perceptions of technology and the use of social media tools for personal and Creative Design related projects by these students.
- Student access to computers and Wi-Fi.
- Participant computer literacy skills.

5.7 QUESTIONNAIRE ONE OF CYCLE TWO – SECTION B

Section B in Annexure P was designed to allow students to elaborate freely on answers given without any restrictions; this was in order to further understand their demographic groupings.

5.7.1 Cycle Two – Questionnaire One: Findings, interpretation and sub-conclusions displayed in Table 5.3.1 of emerging concepts

Questionnaire One was used to be able to determine key findings, such as the demographics, and learning and digital media preferences of first-year students for the 2017 academic year. The findings revealed that a majority of students do have internet and smart phone access, with a majority also residing in suburban areas. Cycle Two also indicated a fuller, truer reflection of the type of student entering into the university, as there was also more of a mix in their age groups.

5.7.2 Cycle Two – Questionnaire One: Data translation into questionnaire two

Findings further reveal that the second group of 2017 did prefer current technologies such as YouTube for videos, and Instagram which is visual photo sharing, lifestyle social media platform.

5.8 CYCLE TWO: IMPLEMENTATION OF QUESTIONNAIRE TWO-SECTION A

In Questionnaire One, I was able to gather key findings which assisted in the implementation of Creative Design (I) projects within the 2017 academic year. In the second year of the action research cyclical process, there was a greater integration of blended learning using the Blackboard VLE. This was a method of introducing more learning tools within the LMS as a method of creating an authentic, engaging, social, cognitive and collaborative teaching and learning environment. This was achieved through continuation in the use of preferred social media platforms. Further to that, tools such as Blackboard lesson plans, web links were utilised alongside the online journal and discussion forum. With

the second group being a larger sample number than that of the previous academic year, Cycle Two's research was able to achieve more reliable findings, as they were indicative of research performed on a larger group of first year Fashion students (see Annexure Q).

5.9 QUESTIONNAIRE TWO OF CYCLE TWO – SECTION B

Section B in Annexure R was used to elaborate on perceptions and bring forth further findings from Section A. In order to conclude on the overall findings, the second section of questionnaires was translated and sub-concluded through a coding method, where common groupings and similarities in student responses were assembled.

5.10 CYCLE TWO – QUESTIONNAIRE ONE: FINDINGS, INTREPRETATION AND SUB-CONCLUSIONS

Participants maintained that the Blackboard layout needed to be reviewed so that it is easier to navigate and locate information. Moreover, connectivity issues still appear to be a problem.

5.11 SUMMARY OF CYCLE ONE AND TWO OF EMERGING CONCEPTS.

Some of the themes and concepts that emerged from Cycle One and Two with questionnaires employed revealed that the first-year sample age group was all born after the 1980s. The 1980s were deemed as the decade with a high rise in the use of modern technologies. Participants appear to be high-end user of modern technologies mainly in Cycle One. This can be said as participants in Cycle two did not appear to find social media intimidating and over exposing (refer to Chapter Two). The recruited participants had a tendency to understand and construct knowledge by utilising technology to access information for learning.

The second cohort of participants in the 2017 academic year appeared to have a more realistic split of demographics as some resided in suburban areas where it can be assumed that Wi-Fi connectivity and internet is easier to

access. Some students stated to have been residing as university residents where there is a full cover of free Wi-Fi for constant internet access. A few in the group appeared to reside in the township where it can be assumed that Wi-Fi and internet is not easily accessible after hours when student is not on campus.

In conclusion, participants indicated to have found the use of technology fun and not difficult even with major connectivity issues. However, they still stated that it is necessary to train or induct new students on how to use Blackboard.

5.12 CYCLE TWO – DATA TRANSFER INTO CYCLE THREE AND FOUR BASED ON EMERGING CONCEPTS

Based on the table of emerging concepts for Cycle One and Two (see Table 5.3.1), it was imperative that further methods of data collection were explored in order to continuously interrogate emerging themes. This was because a sizable proportion (34 percent) of students did not make any further recommendations in Cycle Two, and others (38 percent) did not elaborate on their perceptions, indicating mixed feelings.

As a researcher, I had to further cross-examine participants' perceptions of the integration of a blended mode and frameworks employed. Due to ethical considerations, I employed face-to-face interviews; however, I kept the questionnaires and their structure the same. This was a technique of probing responses that added on to previously emerged themes.

Table 5.12.1 Summary of emerging themes from action research cyclical processes Three and Four

	CYCLE THREE	Emerging Concepts 2017	CYCLE FOUR	Emerging Concepts 2017
Summary of Questionnaire One and Two	Interview Summary		Focus Group Summary	
Summarised Blackboard Perceptions	<p>It was frequently stated by participants in the interviews that logging into and navigating through Blackboard did not present a challenge, as they had had intensive induction sessions from various lecturers regarding the LMS. Student 2: "Yah, they were easy because like everybody kept on showing us how to. Ms. Kaila showed us, Ms. Siwe showed us, you showed us. By the end of it we were sick and tired of logging on to Blackboard.</p>	Importance of Blackboard induction	<p>The extensive training sessions offered by lecturers, FYSE (first year student experience) and CELT representatives played a big part in students' understanding of Blackboard. Thus, logging on and navigating became easy as students were inducted in-depth on the use of the platform.</p> <p>Student 1: "For the first project you need guidance. Having the instructor guide us step by step on BB and WGSN was extremely beneficial."</p> <p>Student 2: "I think there should a clean line between like the student portal and Blackboard because I was so confused, because there was so much; Blackboard student portal, DUT for life...I felt overwhelmed in the beginning."</p> <p>Student 4: "I remember that once at FYSE we went to and they show you exactly where to get good images but there was only 5 of us in class. It was actually one of the most beneficial sessions because you always need good images." Students suggested that going forward, first year students should be inducted on Blackboard and any other modern technologies used for learning.</p> <p>Participants stressed that digital preparedness was imperative not only as being beneficial for the use of an LMS, but also for finding websites and links</p>	<p>A beneficial training session!</p> <p>Digital preparedness is important!</p>

			<p>that are valuable for Creative Design (I) research.</p> <p>Students require an induction on trend forecasting websites and image sourcing areas.</p> <p>Participants stated that it is not Creative Design (I) that is a problem, but that they are limited by sources for research, and also on key resources such as computers. There aren't enough good working computers within the DUT campus for them to use for projects across-the-board.</p>	
	CYCLE THREE	Emerging Concepts 2017	CYCLE FOUR	Emerging Concepts 2017
Summary of Questionnaire One and Two	Interview Summary		Focus Group Summary	
Summarised internet/Wi-Fi/Connectivity/Access	<p>Blackboard LMS was “easy access to information”. Students suggested that they appreciated having space whereby they could log in from home and reflect on work done during the day. This gave them a sense of independence which also assisted in their planning with regards to projects and deadlines.</p> <p>Student 4: “When you go home you have everything there on Blackboard.”</p> <p>Student 3: “Yeah, coz I can access Blackboard whenever. When I</p>	Importance of constant access in learning material	<p>Students felt that having a Creative Design Blackboard classroom gave them independence in their learning. This was because having direct access to important Creative Design (I) material was an integral part of their learning.</p> <p>On some links referred to by the instructor, students were not able to save images needed to finalise Creative Design (I) projects, as some websites restricted saving and copying of images.</p> <p>Connectivity issues are a well-known problem on campus, and students often experience difficulty logging on to Wi-Fi.</p> <p>Blackboard connectivity was sometimes problematic with major connectivity issues experienced mainly during system upgrades.</p>	<p>I have become more independent in my learning!</p> <p>Why does it crash?</p>

	wanna actually look up stuff or read further into projects and briefs to know exactly what I'm doing outside the classroom		Student 8: "Like especially when you're trying to download learning material and briefs, it just says content not available – unable to download. Blackboard upgrades tend to make the system crash at times, and everyone gets locked out". Students expressed frustration at connectivity issues related to Wi-Fi access, stating that the DUT Wi-Fi network was bad and often stops working when they really need it the most.	
	CYCLE THREE	Emerging Concepts 2017	CYCLE FOUR	Emerging Concepts 2017
Summary of Questionnaire One and Two	Interview Summary		Focus Group Summary	
Summarised access	Participants commonly indicated that with the implementation of the computer-time booking system at the DUT library, it was then easier to have access to Blackboard and the Internet. The library computer booking system was implemented so as to allow students a fair amount of time to access a computer and the Internet. This allowed students to gain some level of self agency and independence regarding their learning and access to information. Student 1: "There was something new, a new way of booking a PC, before you would just have to go in and you log in. But now you have to book a PC,	Standardised system to access computers	Students found the new system of booking a computer at the library tedious, time consuming and limiting. Student 6: "My issue is the computers in the library are 'trash'. They are old and slow and there's a small number of only 10, and if you look at the number of students in our campus it doesn't add up." Student 1: "Fourth floor can be the place where you go to do all your stuff or that can be like the 'research place' or if you wanna print." Student 1: "Personally for me I don't like the whole booking of a computer at the library, because you book one and then you get like an hour then after 2 seconds of literally logging on it just shuts down." Students concluded by stating that the fourth-floor computer lab would be a more suitable space to do more work than reserving a computer at the library.	Library computers are trash!!!

	you have to reserve a PC and then you get a PC number and then you go in and log on. I'm thinking maybe they are trying to curve the amount of people that are spending time, because as soon as your time expires normally you log back on and that infringes on other people's time."		They would prefer to have access to the fourth-floor computer lab more often without lecturers.	
	CYCLE THREE	Emerging Concepts 2017	CYCLE FOUR	Emerging Concepts 2017
Summary of Questionnaire One and Two	Interview Summary		Focus Group Summary	
Summarised perceptions	Study participants indicated that they found the projects which were integrated with social media platforms quite beneficial to the completion of their design projects. These perceptions are consistent with the findings revealed in Cycles One and Two. Students indicated that the most beneficial social media tools to integrate with Creative Design (I) projects were Pinterest and Instagram. Students appeared to utilise social media platforms for conducting research and for the sourcing of inspiration. Instagram in particular was beneficial for sourcing high resolution images for mood-boards,	Social media in learning-perceptions	Student felt strongly that having an online Creative Design Blackboard classroom added an element of "newness" to their learning. Student 2: "It's a little bit disorganised. The layout is a bit messy. It's got bars on the side and repetitive words. It's where the links are and where headings are, there's duplicate folders for some subjects. It's a bit hard to find sometimes. Folders live inside folders." Student 6: "I remember the time I struggled to open journals." Student 5: "I normally use my mom's computer and her Internet is with work, so they usually block out downloading and things so I use her iPhone. But I can't get the briefs of the right side, I can only access the content and headings on the left side and the app doesn't work."	Something new! Blackboard layout: a problem I don't want to imagine a life without technology

	<p>and also for exposure to public perceptions. Instagram gave students access to the work of some of their favourite artists and designers.</p> <p>Student 2: "Definitely helps and can be beneficial because as a young designer social media exposes you to so much more and you also become exposed to more. Student 1: "I am able to probe and do research in order to get more information."</p>		<p>Students mentioned that with magazines alone they are not able to achieve competent and professional Creative Design (I) work. Technology allows them to manipulate work, whereas physical magazines can be restricting.</p> <p>Students stated that they prefer using mostly Google and Pinterest for research over physical magazines as they are costly. The Internet can be accessed for free on campus, however.</p>	
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5.13 CYCLE THREE AND FOUR: FINDINGS AND DATA ANALYSIS

Based on the sub-conclusions drawn in Cycle Two, the incorporation of further data collection tools into Cycle Three was considered as a method of providing further insight to those findings which had already been established. Data in Cycle Three was therefore gathered through the implementation of face-to-face interviews with participants. This cycle experienced major drawbacks relating to the number of participants willing to continue with the action cyclical process. The number of voluntary participants decreased once students discovered that the research was ongoing. However, there were still participants keen on participating in interviews and the focus group for the remainder of the study. The goal of the focus group was to collect data of interest to the researcher in order to discover a wider range of opinions across the two groups of first-year students polled in the study, and in order to compare and contrast data from the first three cycles. The focus group was carried out using the open-ended questionnaires (Richard, Krueger and Casey 2014). It was important that there be cohesive interaction between the chosen study participants in order to probe and confirm the data received.

For Cycle Three and Four, I have provided information for a descriptive analysis of themes, which emerged from the interviews and focus group using a comparative table (see Table 5.3) which assessed a common thread deriving from the last two action research cycles.

5.13.1 How data was transferred into Cycle Four

The face-to-face interviews conducted in Cycle Three were meant to further add valuable information regarding the blended learning methodologies employed for the study and investigate benefits of the theoretical frameworks employed. In order to achieve this, the implementation of a focus group in Cycle Four was key. With the focus group, I was able to achieve a deeper understanding of student perceptions which were evident in the first three cycles of the study's data collection process. In concluding the study, I had to

have a full understanding of how students felt about the study's purpose, and the ideas implemented. Cycle Four was therefore used to further gather, consolidate the opinions and make recommendations for the study (Richard, Krueger and Casey 2014).

5.14 EMERGING THEMES FROM CYCLE THREE AND FOUR

For the 2017 academic year, the library put a system in place of booking/reserving a computer for working. Students found this reserving system problematic, even stating that "library computers are trash".


Thus, in order to ensure smooth running and uninterrupted collection of data during the progress of the study, Creative Design (I) projects and classes were conducted at campus computer labs. This also permitted equal use of computers and Internet access, as all the design projects integrated with this study required the use of Internet. This yielded a positive outcome, as participants were able to research freely with no time cut-off interruptions in order to conceptualise and design.

Some of the themes that emerged during the interviews and focus group were common to that of Cycle One and Two. Students agreed that there is a definite benefit to the incorporation of Blackboard in Creative Design (I) for fashion; however, in order for them to perform at their best with the technology, an induction or training session of the Learning Management System was important. Participants also noted that it is important to have constant access to learning material via the online Creative Design Blackboard classroom, and this inspired self agency and students became more independent towards their learning. However, connectivity issues remained an issue, as the DUT Wi-Fi connectivity often lost signal, sometimes even losing important documents needed for learning.

5.15 OVERALL CONCLUSIONS OF EMERGING THEMES FROM CYCLE ONE, TWO THREE AND FOUR

To conclude on the four action research cycles conducted, there was a common thread that participants share. This was evident from both academic years of 2016 and 2017. Students shared common feelings and perceptions stating that:

In order to benefit from blended learning in relation to a Blackboard Creative Design (I) classroom:

- “A happy medium is necessary” 

Across the board participants shared conflicting views relating to having a Blackboard Creative design classroom. What emerged was that that some students appreciated having constant access to course material even at home, especially when they are working on projects. However, some students expressed that home Internet access was a challenge, and also that not every student had money to buy data bundles in order to surf the Internet.

Additionally, students felt that some of them do not have smart phones which therefore makes it harder for them to access the Creative Design Blackboard classroom.

Student 1: “I think there needs to be a happy medium, so I think there needs to be like there's the brief, if you do not have Wi-Fi or Internet access you need to take pictures, you need to use the Internet you need to go print it out, go do everything now. But they need to take initiative and do it themselves.”

Student 2: “It is definitely being beneficial to have it [the Blackboard classroom] available online even though some people can't access it online.”

Students stated that the Creative Design classroom was beneficial. However, certain students could not access the online classroom at home as data is expensive and home Wi-Fi can be slow.

It can be concluded in stating that even though some first-year students have smart cellular telephones, it is impossible for them to keep up with information on Blackboard because data is expensive. Furthermore, this was seen to be an individual student effort to access their work, so that they remain up to date with project deadlines and module requirements.

- **Having internet access on campus is beneficial**



Some participants indicated a preference in using campus Wi-Fi. Stating that they have internet at home but it can be slow and that they preferred using the internet on campus.

- **Students need Blackboard Posts Alerts**



Students indicated that the LMS needed some sort of alert notification every time something is uploaded to it apart from just receiving email notifications.

Student 4: “If we had like a notification when new things are loaded. The app doesn’t work well. If maybe the class representative can communicate in the WhatsApp group what has been posted and what has not been posted.”

- **Understanding that technology isn’t difficult**



Students indicated that accessing the Creative Design Blackboard online classroom is more an individual initiative than anything else. Participants agree that most students ask their classmates for information and refuse to conduct research themselves.

Student 4: “They need to put in the work”

Student 7: “It really depends on how hard you want to work for it (your work).”

Overall the action cyclical process of collecting data yielded positive results of student engagement. Based on frustrations experienced whilst using some of the employed digital media platforms in Creative Design, students shared ideas on how to retrieve information on sites such as the Google’s Cultural Institute. Participants informed each group on how to save imagery on sites with this kind of restriction policy.

Student 6: “I also found a trick when I was sourcing images for this Project Runway is that the same thing, you find the artist, so if you can like put links up of like photographers, coz with photographers there’s some that you like don't pay for pictures so the upload their art and you go and save and you get a good reference with date and everything”.

5.16 CONCLUSION

In concluding my research, I am able to state that the objective of achieving a collaborative learning space that inspires self agency in learning during the Creative Design process was achieved. The integration and the use of social media platforms and Blackboard tools yielded positive results. At the end of the study, students comfortably expressed their future expectations of the Creative Design (I) Blackboard classroom stating that:

- They wanted a system that reminded them of deadlines on Blackboard. **Student 6** was quoted stating: “my thing is I have a very big serious issue with like Blackboard, you know how there’s a calendar of things due today. If I could open Blackboard and see that I somehow have a project that I might have forgotten about that would be so helpful. The last things that I can see are like from term 1. If that would be updated every time I have a project due that would be great. It doesn’t update, it only last updated in the first term”. Students expressed that Blackboard

should have countdown reminders of dates on due projects, as they could otherwise easily forget them.

- They needed unsupervised access to computer labs to achieve better quality of work. **Student 9** was quoted saying; “If we could use the Mac lab for better quality of work going forward.”
- Addition of using YouTube videos for learning, especially for technical drawings, it was necessary as video tutorials were a missed opportunity. **Student 2** was quoted saying: “Maybe you can set up the video camera on the first day and then have it set up. And then get the first years to sit quietly. And then do like a proper video and then you can edit it and post it.”
- Students also stressed that more lectures should be encouraged by the Department to use Blackboard.

I can state confidently that there is a definite benefit in having information, briefs and learning material available online. However, it is important to induct first years as certain tools on Blackboard can be complex to use, such as the online journals and the discussion board.

I am now also aware that not all students are able to engage in discussions which took place on the discussion panels, because in order to be actively engaged and sharing information everybody needed to be online at the same time, and this was not possible due to limited access and availability of Wi-Fi from home. This meant that the Creative Design (I) Blackboard classroom could only be beneficial with full computer and Internet access for all students.

I can conclude by stating that, there was a definite and clear indication that students do enjoy using and having a Creative Design (I) classroom. However,

the study findings have enlightened, stating that students still find having a lecturer present valuable as they need to engage constantly and ask questions. These findings affirm the need and value of a blended learning mode in a classroom.

CHAPTER SIX:
IMPLICATIONS OF A BLENDED MODE OF LEARNING FOR
CREATIVE DESIGN (I) FOR FASHION: FINDINGS AND FURTHER
RECOMMENDATIONS

6.1 INTRODUCTION

In this chapter, I argue for the positive implications of employing a blended mode of learning within the Creative Design (I) subject course for first-year Fashion students. In a quest to answer the critical questions for this study, I have used the underpinning constructivist paradigm with its supporting theories to conduct the four action research cycles for the collection of data, and its interpretation and findings.

This chapter sets out to answer the critical questions for the study and elaborate on findings relating to the application of theoretical frameworks explored. The literature reviewed enlightened on the current generation of student identity, definition, learning habits, styles and perceptions with the aim of finding blended learning techniques which could potentially improve the teaching and design practice learning of first-year Fashion Design students at DUT.

In response to the main question, and the three critical sub-questions posed, this qualitative study has explored key teaching and learning educational theories alongside an action research plan aimed at course improvement and change. As a result, conclusions and new discussions have been established.

In this study, I have therefore explored various topics and studies relating to the conceptualisation and application of a blended mode of learning.

6.2 CRITICAL RESEARCH QUESTIONS

The main question alongside the three critical sub-questions that were used as a guide for the study have been revisited as follows, alongside their conclusions and remarks.

6.2.1 How can blended learning be conceptualised and optimally applied in Creative Design (I) for Fashion?

The progressive application of technologies in higher education sectors has served to inspire this study. The study's aim was to explore a blended learning mode of learning in the first-year Creative Design (I) subject course in Fashion Design at DUT. Within this conceptualisation of a blended mode of learning, various key theories and frameworks were therefore explored and applied.

The guidelines regarding how people learn provided an excellent framework from which to consider the design of the Creative Design online learning environment. I was able to design an online classroom through the use of Blackboard (which has recently been renamed the ThinkLearnZone) as a LMS, a method highly encouraged for teaching and learning at DUT.

The study results indicate that blended learning can be conceptualised and optimally implemented in Creative Design (I) for Fashion. However, it is only possible to fully implement a blended learning method in Creative Design (I) if facilities are improved and classes are equipped with smart teaching and learning resources, such as a smart board, a document camera, and more and better computers.

The study became difficult to execute over a longer period, as it needed a fully-equipped Creative Design-designated computer laboratory. I saw this as a limiting factor with regard to a technologically-inclined teaching venue, since in order for the integration of a blended mode of learning to succeed, prior planning relating to computer laboratory access has to be performed.

The study's findings also reveal that students are in need of more unsupervised computer laboratories which are open for longer periods of time. This would greatly assist students in their work within the Fashion Design course as a whole. Overall, the conceptualisation of blended learning for Creative Design has to be guided by a key paradigm consisting of learning and e-learning theories in order to effectively achieve success.

6.2.2 How can the current generation of students be defined and identified?

Even though this study has based some of its investigation on a supposed current generation of students entering universities called “digital natives”, in Chapter One various literature was explored on the definition and identification of this phenomenon. The studies cited in Chapter One indicate clearly the characteristics possessed by a “digital native” group of students, and the participants, as identified from this study, possessed many of these characteristics.

However, even though this was the case, it is safe to conclude that not all people born in the 1980s can be defined as digital natives, especially in South Africa. Even though students have had prior interaction with cellular telephones, they still feel that digital preparedness is key, as they did not know how to operate most of the ICT tools with which they were presented.

The sub-conclusions drawn from this research identify that a majority of students own or have access to cellular or smart phones and Wi-Fi. However, this does not automatically make such students familiar with using technology, especially for learning. The study reveals that students saw the importance in their Blackboard training, subject introduction and induction, and this was an indicator that even though they are able to surf and navigate the Internet through a cellular or smart phone, this does not necessarily mean they either understand or can use most ICT-related tools.

6.2.3 What learning theories can be applied to the teaching and learning of digital natives in order to enhance their learning in the Creative Design (I) classroom?

This study was underpinned by a constructivist paradigm which rested on the belief that learning cannot be separated from how such learning is acquired. Learning is achieved when interaction, engagement, exploration and collaboration with and within the learning environment occurs. The study takes cognizance of the fact that learning is based on experience, and therefore attempts to create an authentic learning environment by adoption a blended mode of learning theory – those of COI and Problem-Based Learning. These two theories take into consideration critical thinking as cognitive stimuli, and design projects were thus integrated with current technologies such as social media platforms. The integration of a LMS was therefore with the objective of achieving a learning experience which encompasses a social, cognitive and teaching presence.

This study results thus reveal that the interweaving of these frameworks can be suitable for the implementation of a blended mode of learning in the Creative Design (I) subject for first-year Fashion students.

6.2.4 In what ways can the implementation of blended learning improve the teaching and design practice of first year Fashion Design students at DUT?

Based on the study's findings, the implementation of blended learning can have a significantly positive effect on the teaching and design practice of first years studying towards a degree in Fashion Design at DUT. Chapters Three, Four and Five have interrogated theories and made pragmatic explorations of blended learning as a method of improving the teaching and design practice of first-year students studying towards a fashion qualification in this regard.

Results from the four-action cyclical study process reveal that the integration of modern teaching methods did indeed improve the learning and design practice of first-year Fashion students, because with:

- Constant availability of Blackboard, students were able to reflect by perusing through learning material daily, which resulted in some of them planning for projects in advance.
- The inclusion of social media platforms, students became exposed to like-minded creative people within the Fashion field, drawing inspiration from them constantly for design projects.
- A lengthy induction of Blackboard and direct links to valuable fashion-related research websites, students are able to source inspiration and conceptualise better.
- Enhanced student collaboration in design tasks, more effective teaching and learning is achieved.

The results of the focus group became a knowledge sharing session amongst students, where each student shared their experience of the Creative Design (I) Blackboard classroom. Students advised each other how to achieve the best results with Blackboard linked internet sources during the design process.

6.3 FURTHER RECOMMENDATIONS TO THE BLENDED MODE OF LEARNING EXPLORATION

A common thread was evident throughout the collection of data for this study – students expressed that constant connectivity issues with Wi-Fi connections affected their learning, and also noted their frustration with weak Wi-Fi connectivity and slow Internet speeds.

Access to good working computers also appeared to be an issue for students. Focus group participants therefore suggested that unsupervised access be granted for first-year students to laboratories such as the Theory of Clothing

and Mac computer laboratories. Even though the library has formulated a working computer booking system to alleviate student computer traffic, participants still feel strongly that more designated computer labs would be useful, especially in the drive to use a LMS for learning. In order for a smooth transition to and application of Blackboard to occur, participants indicated that an induction and subject introduction to the VLE would be beneficial for first-year students entering university each year.

A further recommendation from this study would be an exploration of YouTube videos as a learning technique for certain design elements, such as technical drawings. This would be an attempt to improve student technical interpretation in terms of visual communication, garment replication techniques and design in Fashion as a whole.

The study results indicate that the current students are not necessarily all-round “digital natives”. However, students did mention their appreciation for on-tap constant access to their online Creative Design classroom. The majority of volunteers also appeared to have access to smart phones, and it is therefore possible that even though first-year students are not all digital natives, that there are signs that there are students who can now be deemed to be “m-learners”. “M-learners” are students who prefer learning through mobile technological forms, and mobile learning is fast becoming a preferred learning method for contemporary college students (McCombs and Liu 2011). This is largely because students have access to iPads and smart phones and prefer learning “on the go” (McCombs and Liu 2011).

Further studies on “m-learners” could also be joined, alongside more modern theoretical learning frameworks mainly connectivism and technology acceptance model known as TAM. Connectivism has been identified as a learning theory constructed for the digital age which adopts principles from constructivist and cognitive values-however is driven by the creation of a more socially impactful learning environment (Siemens 2014). Whilst the

connectivist theory aims to enhance student collaboration in real-time from geographically diverse locations- a technology acceptance model aims to externally stimulate cognitive response, intention and behaviour (Davis and Venkatesh 1996). This study has interrogated technology in teaching and learning and in it's conclusion I have come to know that technology constantly requires the rewiring of our brains. Also, in the same way, modern tools continuously reshape our thinking as the use of technology is mediated by our attitudes (Davis and Venkatesh 1996).

This study has hopefully contributed to the existing e-learning and blended learning body of work relating to research and studies within DUT.

6.4 CONCLUSION

It is with great optimism that I concluded this study, having overseen the final implementation of the Creative Design (I) for Fashion Blackboard classroom. During this study, I have received much positive feedback that will assist in the ongoing annual planning of the department's ongoing use of a VLE.

The experience of embarking on this study and its results has also provided me with more direction regarding how to improve on my own teaching and learning practice as a Creative Design (I) lecturer. Such improvements could impact importantly and positively on the learning of first-year Fashion students in the future.

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ANNEXURES

Annexure A – Letter of Information



LETTER OF INFORMATION

Title of the Research Study: Teaching Digital Natives: Integrating blended learning in Creative Design for Fashion

Principal Investigator/s/researcher: Mdletshe (N.Dip: Fashion, BTech: Fashion)

Co-Investigator/s/supervisor/s: Nirma Madhoo-Chipps (MTech: Fashion, MA: Fashion Photography)
Dr John Roome (DTech: Design)

Brief Introduction and Purpose of the Study:

The aim of this study is to explore the role of blended learning in Creative Design (I); with the objective of creating a student-centred learning environment and enriching learning. The study will consider Blackboard as a learning tool in various Creative Design projects in order to cater for first year students who appear to be digital natives. The study aims to document the benefits of incorporating blended learning into the Creative Design classroom.

Outline of the Procedures: As a **voluntary participant** in the study you will be asked to do the following things:

Participate in a series of open-ended online surveys and written questionnaires.

Participate in a focus group and face-to-face interview.

Allow the researcher to peruse through online student journals; and

Allow the researcher to monitor Blackboard student access and document statistics and findings.

Risks or Discomforts to the Participant: None

Benefits:

As the researcher, I am collecting information in order to develop an interactive and informative Blackboard Creative Design classroom which will feature fashion ideas and concepts, writings, videos and photographs about your Creative Design process. Furthermore, the virtual classroom (Blackboard) will be open to forum discussions and contributions from guest contributors with the hope of making it a sustainable learning domain.

I would like to submit a journal article about this study for publication in an academic journal.

Reason/s why the Participant May Be Withdrawn from the Study: As the participant, you can choose whether or not to participate in this study. If you volunteer to be in this study, you may withdraw at any time without consequences. These are voluntary surveys and students may withdraw at any point. The information given by the student is highly confidential and will be used only for the purposes of this MAA: Fashion dissertation study. Data provided by participants who choose to withdraw will therefore not be used in the study and will be destroyed. Students may refuse to answer any questions they do not want to answer and this will not in any way impact their relationship with the researcher. Also, course marks are not in any way related to this study and will not be affected by any means. Any student choosing to withdraw from the study will not be disadvantaged in any way in class activities, or in relation to lecturer-student subjectivities. There is no form of penalty, formal or informal applicable to this process.

Remuneration:

Participation is voluntary and you can withdraw at any time with no penalty.

No pay will be given to any of the participants.

Costs of the Study:

There will be no cost for you to participate in this study.

Confidentiality: Any information that is obtained in connection with this study and that can be identified as yours will be disclosed only with your permission. The Department of Fashion and Textiles (DUT) and I will be the only ones who have access to original footage of journals, design storyboards and digital media from Blackboard. If you allow me access to your journals, blogs or video footage of your work, your permission will be asked through a "permission to use student's work" form (See Annexure B) in order to grant me the required permission. Again, all work will be only released with your consent.

Research-related Injury: There are no foreseeable research related injuries in the study as it will take place in your natural setting (class).

Persons to Contact in the Event of Any Problems or Queries:

Please contact the:

Researcher: Ms. Fezile Mdletshe (0832947490/0313733737.)

My supervisor: Mrs. Nirma Madhoo-Chipps (031 3733719 or the Institutional Research Ethics Administrator on 031 373 2900. Complaints can be reported to the Director: Research and Postgraduate Support, Prof S Moyo on 031 373 2577 or moyos@dut.ac.za

General:

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g. isiZulu.



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, _____ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant

Date

Time

Signature

/

Right

Thumbprint

I, _____ (name of researcher) herewith confirm that the above participant has been fully

informed about the nature, conduct and risks of the above study.

Full Name of Researcher Date Signature _____

Full Name of Witness (If applicable) Date Signature _____

Full Name of Legal Guardian (If applicable) Date Signature _____

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level

- use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counselling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

References:

Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes*
<http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/>

Department of Health. 2006. *South African Good Clinical Practice Guidelines*. 2nd Ed. Available at:
http://www.nhrec.org.za/?page_id=14

Annexure B – Permission to use students' work

Teaching Digital Natives: Integrating blended learning in Creative Design for Fashion.

E-mail: fezilem@dut.ac.za

031 373 3737/083 294 7470

PERMISSION TO USE STUDENTS' WORK

Dear research participant, thank you for showing interest in this study.

I would hereby like request permission to utilise your Creative Design (I) audio visual materials, design projects and journals for my Master of Applied Arts in Fashion study. The outcome of requested permission on this form will in no way be related to your class performance.

If you agree to grant the requested permission, please kindly complete the below consent section and return to the researcher, Ms. Fezile Mdletshe. Please indicate if you would like your name to be used as credit to your work published. If you require any further information regarding this request please contact the researcher Fezile Mdletshe.

Yours Sincerely

Fezile Mdletshe (Ms.)
Creative Design (I) Lecturer
NDip: Fashion, BTech: Fashion.
Durban University of Technology

CONSENT

Statement of Agreement to grant Fezile Mdletshe permission to use my Creative Design work in the research study.

I do hereby grant permission to Fezile Mdletshe to take and use: Creative Design audio visual materials and journals related to her Master of Applied Arts in Fashion as follows:

In printed publications or materials

In electronic publications or presentations

On the Durban University of Technology website (*www.dut.ac.za*)

I agree that my work may be revealed in descriptive text or commentary in connection with the above mentioned study. I authorize the use of audio visual materials and journal indefinitely without compensation to me.

Please tick as appropriate:

I wish to have my work credited with my name	
I do not wish to have my work credited with my name	

Name

Signature

Date

Signed at (location)

Annexure C – Questionnaire One

Questionnaire One (Open-ended survey).

IREC reference number: REC/65/16

Section A-Student survey

This study explores blended learning in Creative Design (I) as an attempt to enhance teaching and learning. Your participation in this questionnaire will be valuable to the research, as I am compiling information to develop an interactive and informative Blackboard Creative Design (I) classroom that will feature fashion ideas and concepts, writings, videos and photographs about your Creative Design process. Furthermore, the virtual classroom (Blackboard) will be open to forum discussions and contributions from guest contributors, an attempt to make it a sustainable learning domain.

This is a **voluntary survey** and you may withdraw at any point. As the participant, you may choose whether or not to participate in this study. The information given by you is **highly confidential** and will be used only for the purposes of this MAA: Fashion research. Data provided by participants who choose to withdraw will therefore not be used in the study and will be discarded. You may refuse to answer any questions or not participate in the study and this will not impact your relationship with the researcher. Also, course marks are not related to this study, and will not be affected by any means. If you choose to withdraw from the study you will not be disadvantaged in class activities, or in relation to lecturer-student subjectivities. There is no form of penalty, formal or informal applicable to this process.

Please indicate your answer by ticking the appropriate box.

What is your age?

18-25	<input type="checkbox"/>
26-35	<input type="checkbox"/>
Other	<input type="checkbox"/>

How would you rate your computer literacy skills?

Beginner	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>
Advanced	<input type="checkbox"/>

Do you have access to a computer at home?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

Do you have access to the internet at home?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

Do you have a smart-phone?

Yes	
No	

Section B – Please read each of the questions below. For each statement, please tick the response (in the boxes on the right) that most accurately reflects your experience of using the Creative Design online Blackboard classroom.

Tick only one box for each statement. (A, B, C, D or E)

Key – what the symbols mean

A = strongly agree; B = agree; C = neutral; D = disagree; E = strongly disagree

Your favourite Social Media or Media platform is?

		A	B	C	D	E
1.	Facebook					
2.	Instagram					
3.	Twitter					
4.	Pinterest					
5.	Keek					
6.	You Tube					
7.	Blogs					

Please indicate which area you live in (within Durban)

.....

.....

.....

Do you use other Social Media platforms that are not listed above?

If Yes, please specify.

.....

.....

.....

Would you use your favourite Social Media platform for learning?

.....

.....

.....

Do you use the internet for learning and if you do, in what ways do you do so?

.....
.....
.....

Would you be interested in using social media platforms for learning? If yes, which social media platforms do you think can be utilised for learning?

.....
.....
.....

Annexure D – Questionnaire Two

Questionnaire Two (Open-ended survey questionnaire)

IREC reference number: REC/65/16

Student survey

This study explores blended learning in Creative Design (I) as an attempt to enhance teaching and learning. Your participation in this questionnaire will be valuable to the research, as I am compiling information to develop an interactive and informative Blackboard Creative Design (I) classroom that will feature fashion ideas and concepts, writings, videos and photographs about your Creative Design process. Furthermore, the virtual classroom (Blackboard) will be open to forum discussions and contributions from guest contributors, an attempt to make it a sustainable learning domain.

This is a **voluntary survey** and you may withdraw at any point. As the participant, you may choose whether or not to participate in this study. The information given by you is **highly confidential** and will be used only for the purposes of this MAA: Fashion research. Data provided by participants who choose to withdraw will therefore not be used in the study and will be discarded. You may refuse to answer any questions or not participate in the study and this will not impact your relationship with the researcher. Also, course marks are not related to this study, and will not be affected by any means. If you choose to withdraw from the study you will not be disadvantaged in class activities, or in relation to lecturer-student subjectivities. There is no form of penalty, formal or informal applicable to this process.

Please indicate your answer by ticking the appropriate box.

SECTION A– Please read each of the questions below. For each statement; please tick the response (in the boxes on the right) that most accurately reflects your experience of using the Creative Design online Blackboard classroom.

Tick only one box (A, B, C, D or E) for each statement.

Key – what the symbols mean

A = strongly agree; B = agree; C = neutral; D = disagree; E = strongly disagree

		A	B	C	D	E
1.	The instructions for logging onto Blackboard were easy to follow					
2.	It was easy for me to access a computer in the Lab or Library when on campus					
3.	Having the Creative Design classroom on Blackboard has given me more independence in my learning process					

4.	The DUT computers and Wifi connection are problematic					
5.	Logging onto Blackboard from home was not a challenge					
		A	B	C	D	E
6.	I had constant internet access at home or on campus in order to use Blackboard					
7.	I benefitted from incorporating technology into my work, in a Creative Design project					
8.	I have benefitted from incorporating Social Media platforms with Blackboard in a Creative Design project such as Project Runway and Little Black Dress.					
9.	I have benefitted from using the online Creative Design classroom; using Blackboard as a tool in the Creative Design class has improved my learning					
10.	I enjoy using Blackboard for learning					

Section B

1. What have been your highlights of using the Blackboard Creative Design online Classroom throughout the year?

.....

.....

.....

2. Did you experience any difficulties when using the Blackboard Creative Design online Classroom? Please expand on your answer.

.....

.....

.....

3. Please share your recommendations for improving the Creative Design online Classroom.

.....

.....

.....

Annexure E – Letter to request permission

Letter to request permission - Head of Department of Fashion and Textiles at the Durban University of Technology.

To:

Mrs S. Moodley

Head of Department

Department of Fashion and Textiles, DUT.

Dear Mrs Moodley.

Re: Request for permission to conduct study on department premises and Creative Design (I) class time.

I am studying towards the Master of Applied Arts: Fashion at the Durban University of Technology.

The title of my study is "Teaching Digital Natives: Integrating blended learning in Creative Design for Fashion". My study is aimed at exploring the incorporation of blended learning in Creative Design (I) for first years studying towards a Fashion Design qualification at the Durban University of Technology in the Department of Fashion and Textiles.

As the Creative Design (I) lecturer, I would like to please request permission to conduct my study on the premises of the Department of Fashion and Textiles during Creative Design classtime and, approach first year students as the participants for this study. I will also be distributing online survey questionnaires related to this study during Creative Design classtime.

All information gathered from the student questionnaires will be used for the purpose of this study.

Yours Sincerely

Fezile Mdletshe

Contact Details

Cell: 083 294 7490

Email: fezilem@dut.ac.za

Annexure F – Letter to request permission

Letter to request permission - Director: Research and Postgraduate Support-Durban University of Technology.

To:

Prof S. Moyo

Research and Postgraduate Support

Dear Prof Moyo

Request for permission to conduct study on Durban University of Technology premises during Creative Design (I) class time

I am studying towards the Master of Applied Arts: Fashion at the Durban University of Technology.

The title of my study is “Teaching Digital Natives: Integrating blended learning in Creative Design for Fashion”. My study is aimed at exploring the incorporation of blended learning into Creative Design (I) for first years studying towards a Fashion Design qualification at the Durban University of Technology in the Department of Fashion and Textiles.

As the Creative Design (I) lecturer, I would like to request permission to conduct my study on DUT premises at the Department of Fashion and Textiles during Creative Design class time and to also approach first year students to participate in this study. I will also be distributing online survey questionnaires related to this study during Creative Design class time.

All information gathered from the student questionnaires will be used for the purpose of this study.

Yours Sincerely

Fezile Mdletshe

Contact Details

Cell: 083 294 7490

Email: fezilem@dut.ac.za

Annexure G – Permission Letter from HOD



Institutional Research Ethics Committee
Directorate for Research and Postgraduate Support
Durban University of Technology

28 July 2016

Ms Fezile Mdletshe

Permission to conduct research at DUT's Fashion and Textiles Department

I, Sunthra Moodley, HOD in the Department of Fashion and Textiles at DUT, do grant permission for you to conduct your research with first year Creative Design (I) students, between the period July 2016 – July 2017, provided they agree to take part in the study.

Please ensure that all necessary consent documents are adhered to, ahead of the planned research.

Yours Sincerely

A handwritten signature in black ink, which appears to be 'Sunthra Moodley', is written over a solid black rectangular redaction box.

Sunthra Moodley

Annexure H – Permission Letter from University Gatekeeper



Directorate for Research and Postgraduate Support
Durban University of Technology
Tromso Annex, Steve Biko Campus
P.O. Box 1334, Durban 4000
Tel.: 031-3732576/7
Fax: 031-3732946
E-mail: moyos@dut.ac.za

15th August 2016

Ms Fezile Lungelwa Mdletshe
c/o Department of Fashion and textile
Faculty of Arts and Design
Durban University of Technology

Dear Ms Mdletshe

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers.

I am pleased to inform you that the Institutional Research Committee (IRC) has granted full permission for you to conduct your research "Teaching Digital Natives: Integrating blended learning in Creative Design for Fashion" at the Durban University of Technology.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of your studies.

Kindest regards.
Yours sincerely



PROF. S. MOYO
DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT

Annexure I – Researcher's Reflective Journal Notes

To whom this may concern,

The Reflective Journal notes haven been placed in a folder in the CD Rom.

Annexure J-1 – Creative Design (I) Blackboard Classroom

The image displays two screenshots of the Blackboard Classroom interface for the course DSTD114: DESIGN STUDIES I (MODULE 1 - CREATIVE) 2017.

Top Screenshot: Home Page

- Header:** DUT DURBAN UNIVERSITY OF TECHNOLOGY, THINK LEARN ZONE logo, FEZILE MDLETSHE 51, Durban University of Technology, Courses.
- Navigation:** Home Page, Go To Student View, Edit Mode is: ON.
- Course Information:** DSTD114: DESIGN STUDIES I (MODULE 1 - CREATIVE) 2017, Home Page, Learner Guide, Information, Content, Discussions, Groups, Tools, Help.
- Course Management:** COURSE MANAGEMENT, Control Panel.
- Home Page Content:**
 - My Announcements:** No Course or Organisation Announcements have been posted in the last 7 days. [more announcements...](#)
 - To Do:** Edit Notification Settings, Actions, What's Past Due, [All Items \(0\)](#).

Bottom Screenshot: Learner Guide

- Header:** DUT DURBAN UNIVERSITY OF TECHNOLOGY, THINK LEARN ZONE logo, FEZILE MDLETSHE 51, Durban University of Technology, Courses.
- Navigation:** Learner Guide, Go To Student View, Edit Mode is: ON.
- Course Information:** DSTD114: DESIGN STUDIES I (MODULE 1 - CREATIVE) 2017, Home Page, **Learner Guide**, Information, Content, Discussions, Groups, Tools, Help.
- Course Management:** COURSE MANAGEMENT, Control Panel.
- Learner Guide Content:**
 - Learner Guide CD 2017:** Enabled: Statistics Tracking.

Annexure J-2 – Creative Design (I) Blackboard Classroom Student Journals

Home Page

Learner Guide

Information

Content

Discussions

Groups

Tools

Help

COURSE MANAGEMENT

▼ Control Panel

► Files →

► Course Tools

► Evaluation →

► Grade Centre →

► Users and Groups

► Customisation →

► Packages and Utilities →

► Help

Journal Instructions ^

- Based on what you have learnt, you will document your entire thought process on the LBD project onto the Blackboard Online Journal.
- You are expected to document ALL 4 weeks worth of work. Capture your thoughts, images, your inspiration and design journey (the good and the bad). This will be marked based on detail and content loaded). You may also add LBD links to Videos (fashion runways or historic videos).

Thursday, 25 May 2017

Planning

Posted by at Thursday, 25 May 2017 14:41:59

The following images are my rough ideas of my concept (before refinements) and layout of the final mood board and storyboard.

Attached Files:

[Photo0.jpg](#)(5185.9kb)

[Photo1.jpg](#)(5013.2kb)

[Photo2.jpg](#)(4453.3kb)

[Photo3.jpg](#)(4678.2kb)

[Photo4.jpg](#)(4714.6kb)

[Photo5.jpg](#)(4620.7kb)

[Photo6.jpg](#)(4634.7kb)

[Comment](#)

Sunday, 21 May 2017

Layout & Materials used

Posted by at Sunday, 21 May 2017 21:52:11

Hello Miss Fez 😊

21 May 2017

Sunday

21:20

In this journal i plan to explain the link between my mood-board & storyboard layout + the materials used.

My entire concept is about women empowerment and feminism. This is something that i strongly support and is trending in today's world. I have chosen a black base for my boards. This represents the dark times that females endured due to not having equal rights, being victims of abuse etc. It needs to be forgotten and left in the past. I have used the colour purple to represent feminism. I drew inspiration from a book called The Color Purple by Alice Walker who through her novel, discusses the struggles a female faces and how important

JournalDetails

< (6) >

INDEX

21-May-2017 - 27-May-2017 (1)

Planning

14-May-2017 - 20-May-2017 (5)

Annexure J-3 – Creative Design (I) Blackboard Classroom Lesson Plans

+

2017 LESSON PLANS

Build Content
Assessments
Tools
Partner Content

DSTD114: DESIGN STUDIES I (MODULE 1 - CREATIVE) 2017

Home Page
Learner Guide
Information
Content
Discussions
Groups
Tools
Help

COURSE MANAGEMENT

Control Panel
Files
Course Tools
Evaluation
Grade Centre
Users and Groups

INTRODUCTION TO TDS 13 FEB-01 MAR 2017

Enabled: Statistics Tracking

A technical drawing is a precise and detailed drawing of an object. Also it is the act and discipline of composing plans that visually communicate how something functions.

Technical Drawings (TD's) can be defined as a method of visual communication and instruction between designers, pattern makers and manufacturers. Also known as TD's, flats, working drawings or line drawings, technical drawings are an accurate representation of your garment design showcasing all key details, construction, construction lines, zips, darts, stitching details and trims (Szkutnicka 2010:10). TD's are drawn after a garment design has been finalised. They have to be drawn in perfect proportion, to scale and be symmetrical. This is achieved by using a DUT female croqui. For the next few weeks you will be embarking on a technical drawing boot camp; is an initiative launched in 2015 aimed at developing technical drawing skills of 1st year fashion designers prior to commencement of storyboard projects. This is key for you development, so learn and draw as much as you can! The more you draw the better you will be! Good Luck!

6-8 MARCH 2017 CREATIVE DESIGN CLASS LESSON PLAN

Enabled: Statistics Tracking

Welcome to another exciting Creative Design lesson!

As per our classroom discussion last week, today we are going a little bit deeper into understanding Fashion, Concept, Inspiration and Mood Boards.

This is all in preparation for group GEOMETRICS and FLORALS inspired storyboard project starting on 13th of March 2017.

You will research GEOMETRICS and FLORALS using Spring Summer 2017 and 2018 trend concepts.

6-8 MARCH 2017 CREATIVE DESIGN CLASS LESSON PLAN

Description	<p>Welcome to another exciting Creative Design lesson!</p> <p>As per our classroom discussion last week, today we are going a little bit deeper into understanding Fashion, Concept, Inspiration and Mood Boards.</p> <p>This is all in preparation for group GEOMETRICS and FLORALS inspired storyboard project starting on 13th of March 2017.</p> <p>You will research GEOMETRICS and FLORALS using Spring Summer 2017 and 2018 trend concepts.</p> <p>Today we practice how to conceptualise!</p> <p>At the end of the lesson, you will be expected to fill out a group survey evaluating this lesson, and also SUBMIT work onto the online journal.</p>
Instructional Level	FIRST YEAR
Instructor	FEZILE MDLETSHE
Objectives	<ul style="list-style-type: none"> To learn how to research fashion trends using WGSN, in preparation for your 1st storyboard project inspired by Geometrics and Florals. To learn how to draw inspiration from Fashion Trends. To learn how to conceptualise and visually communicate ideas. To research and store work using technology
Subject Area	CREATIVE DESIGN
Author	FEZILE MDLETSHE
Location	4TH FLOOR TOC LAB
Outcomes: Expected	Hopefully by the end of this lesson you will be able to:

Annexure J-4 – Creative Design (I) Blackboard Discussion Forum

DSTD114: DESIGN STUDIES I (MODULE 1 - CREATIVE) 2017

[Home Page](#)
[Learner Guide](#)
[Information](#)
[Content](#)
[Discussions](#)
[Groups](#)
[Tools](#)
[Help](#)

COURSE MANAGEMENT

Control Panel

Files
Course Tools
Evaluation
Grade Centre
Users and Groups
Customisation

Discussion Board

Forums are made up of individual discussion threads that can be organised around a particular subject. Create Forums to organise discussions. [More Help](#)

Create Forum
Search

☐ Forum
Description
Total Posts
Unread Posts
Total Participants

☐ What do you most like or dislike about using Blackboard?
42
15
19

☐ What do you think are the most useful tools on Blackboard?
11
7
9

☐ What is your favourite food?
43
28
19

☐ Fashion NEWS
0
0
0

A South African retail exhibition opens in Paris

DSTD114: DESIGN STUDIES I (MODULE 1 - CREATIVE) 2017

[Home Page](#)
[Learner Guide](#)
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COURSE MANAGEMENT

Control Panel

Files
Course Tools
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Users and Groups

Forum: What do you think are the most useful tools on Blackboard?

Organise Forum Threads on this page and apply settings to several or all threads. Threads are listed in a tabular format. The Threads can be sorted by clicking the column title or the caret at the top of each column. [More Help](#)

Create Thread
Unsubscribe
Search
Display

☐ Thread Actions
Collect
Delete

☐ Date
Thread
Author
Status
Unread Posts
Total Posts

☐ 28/02/17 12:04
BB
Published
1
1

☐ 28/02/17 12:01
question
Published
1
1

☐ 28/02/17 12:01
blackboard
Published
1
1

☐ 28/02/17 12:00
what i like
Published
0
2

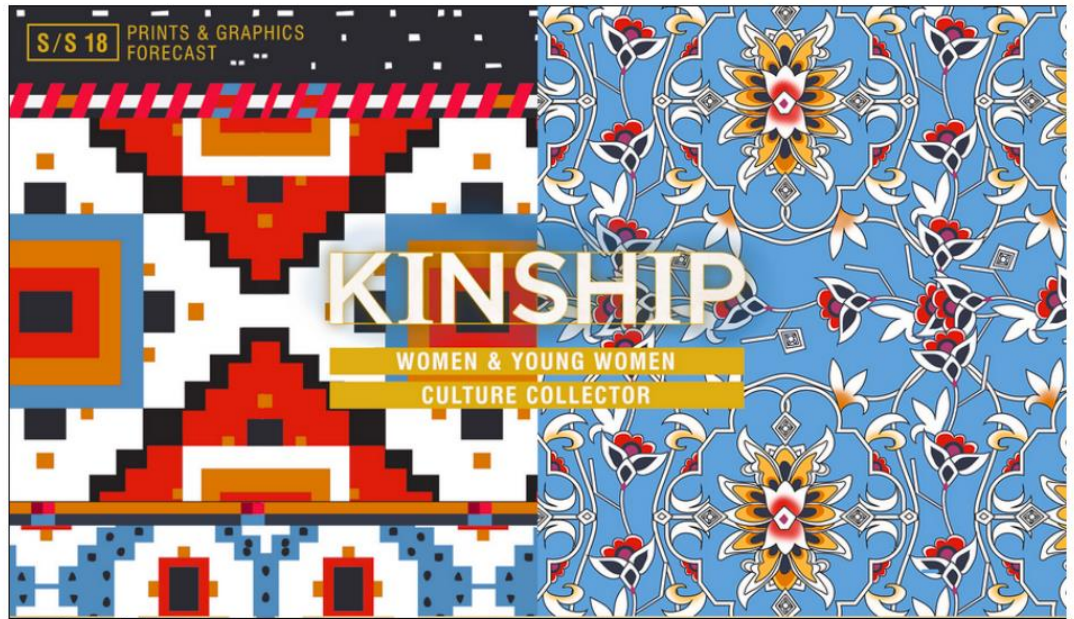
☐ 28/02/17 12:00
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1

Annexure J-5 – Creative Design (I) Blackboard WGSN Trend Links



GEOMETRICS and FLORALS



(wgsn 2017:online)
https://www.wgsn.com/content/reports/#!/Prints+&+Graphics/w/Original_Prints/19818

become non-seasonal which means, we now get prints in summer and in winter.



JOURNAL- Inspiration Process for the GEOMETRICS and FLORALS Project



GEOMETRICS and FLORALS WGSN Themes

I have loaded various learning materials in a form of web links and PDF slides. I hope that this will be a good enough guide to help you complete this part of the lesson.

Remember this is also in preparation for your storyboard projects starting next week 😊

Annexure K – Questionnaire One of Cyle One – Section A

QUESTIONNAIRE ONE OF CYCLE ONE- SECTION A

5.3.1 What is your age?

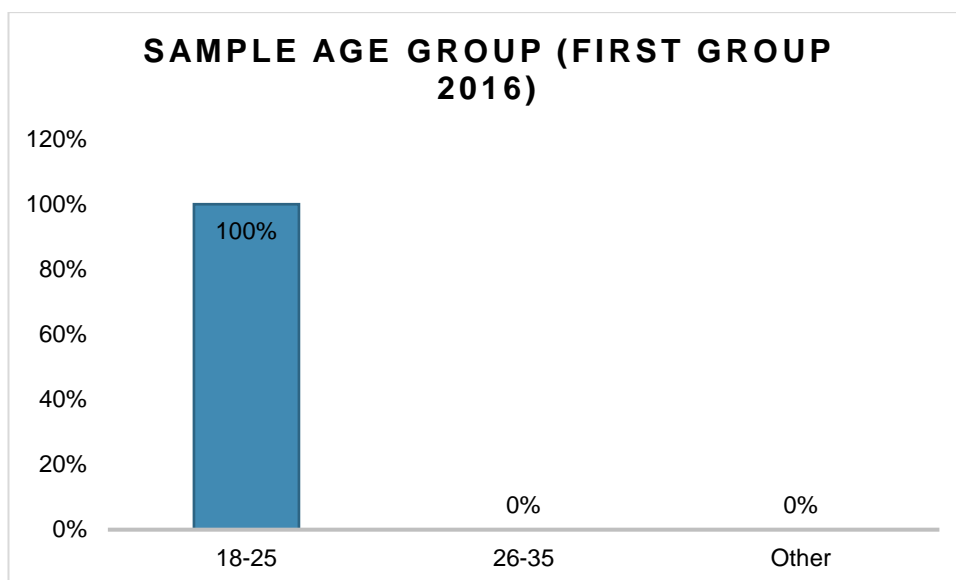


Figure 5-2: Sample age group (First Group 2016)

The findings from this question (Figure 5-2) indicate that first-year students within the Creative Design (I) classroom were between the ages of 18–25. This age group of students was part of that generation born in the 1980s – this being a possible indication that there were students in the group with an inherent interest in using technology who could thus be identified as being digital natives.

5.3.2 How would you rate your computer literacy skills?

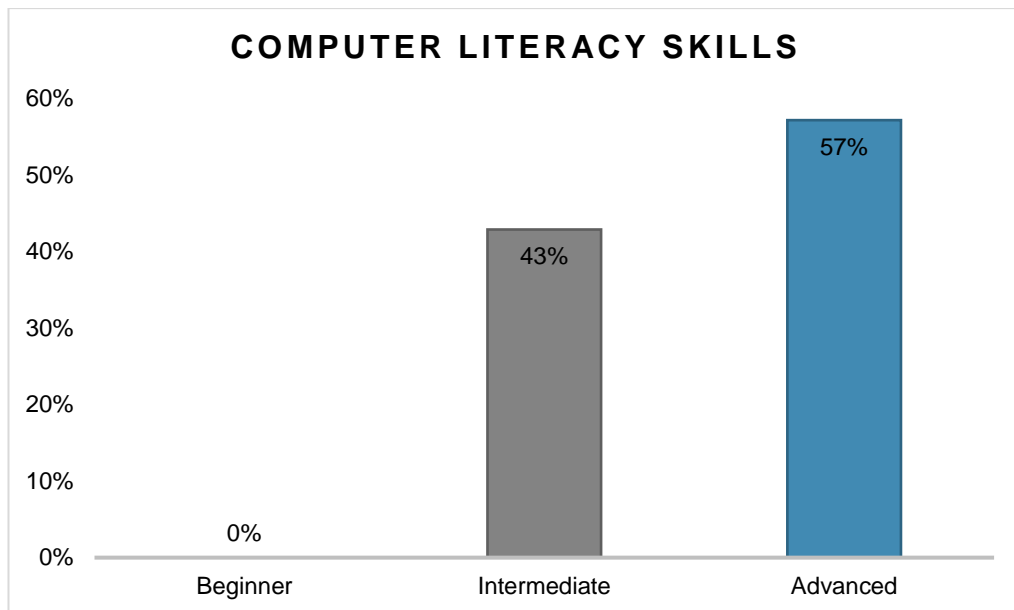


Figure 5-3: Computer literacy skills

The graph provided in Figure 5-3 indicates a large portion of the study sample to be advanced in their computer literacy skills. This was one of the confirming indicators that the integration of Blackboard with Creative Design (I) could be a possible realisation.

5.3.3 Do you have access to a computer at home?

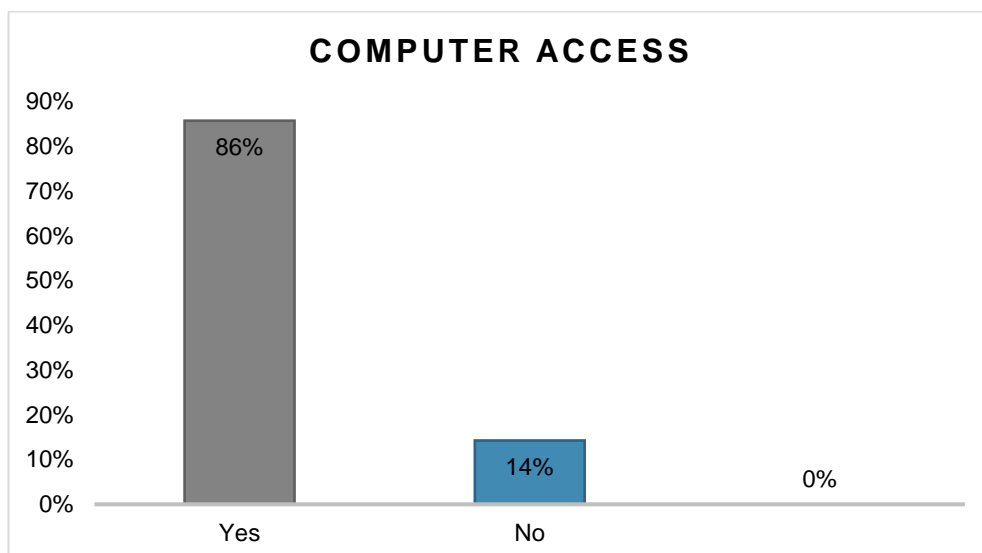


Figure 5-4: Home computer access

5.3.4 Do you have access to the internet at home?

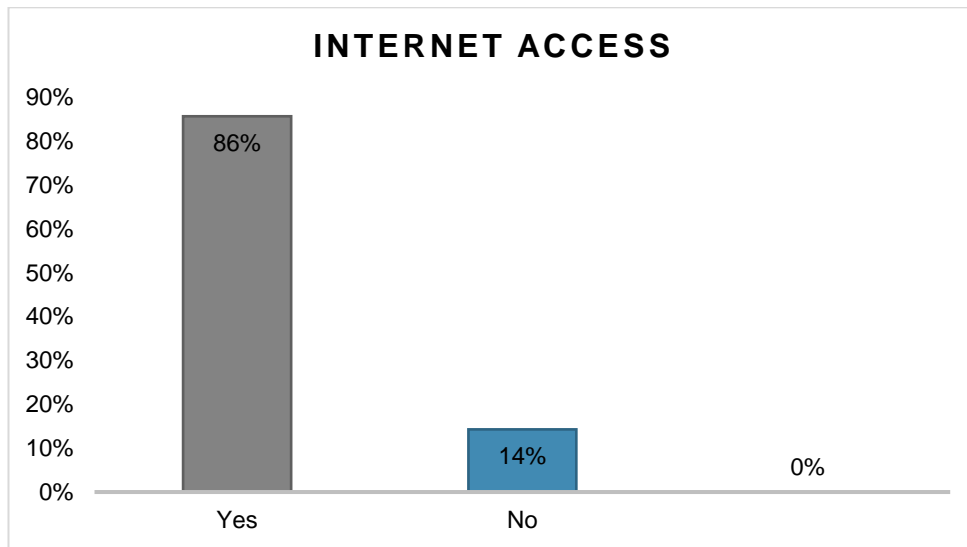


Figure 5-5: Home internet access

The first group of first year students indicated that they had a high level of access to computers and the Internet at home (Figure 5-4 and Figure 5-5). However, these findings do not represent the majority of first year students, as there were challenges in obtaining a representative identified sample.

5.3.5 Do you have a smart-phone?

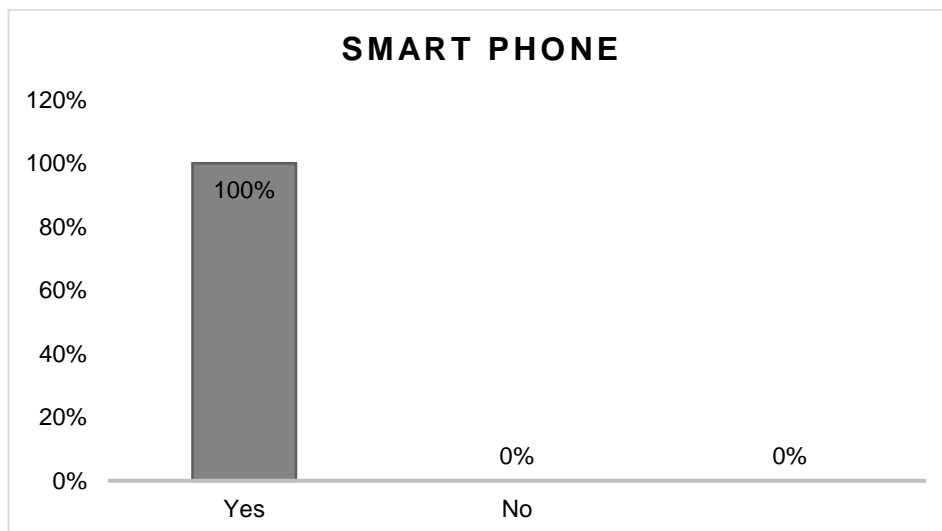


Figure 5-6: Access to a smart phone

The first sample of first-year students identified appeared to all have access to a smart phone (Figure 5-6). Access to small gadgets such as cell phones would have made it easier for students to access and research work online.

5.3.6 Your favourite social media or media platform is?

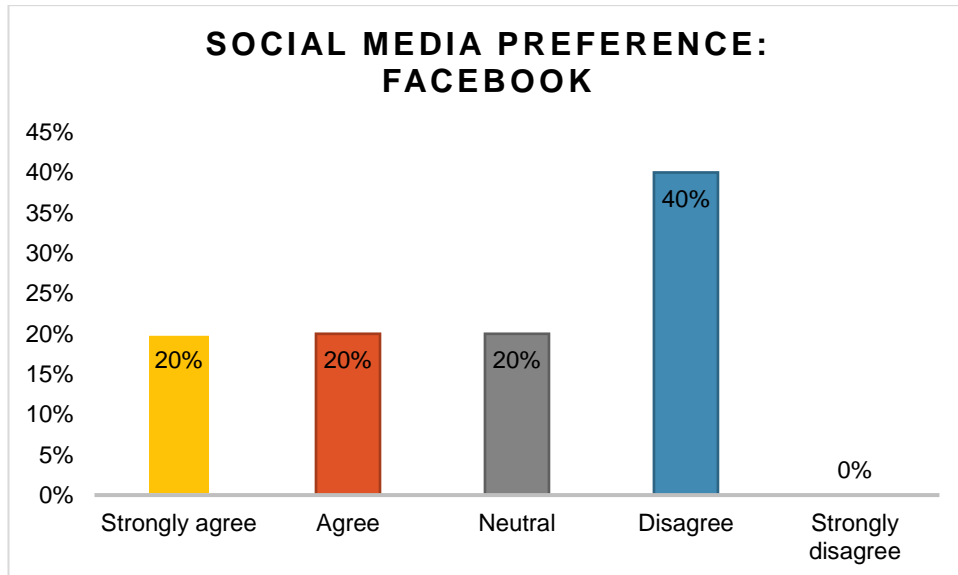


Figure 5-7: Social media preference (Facebook)

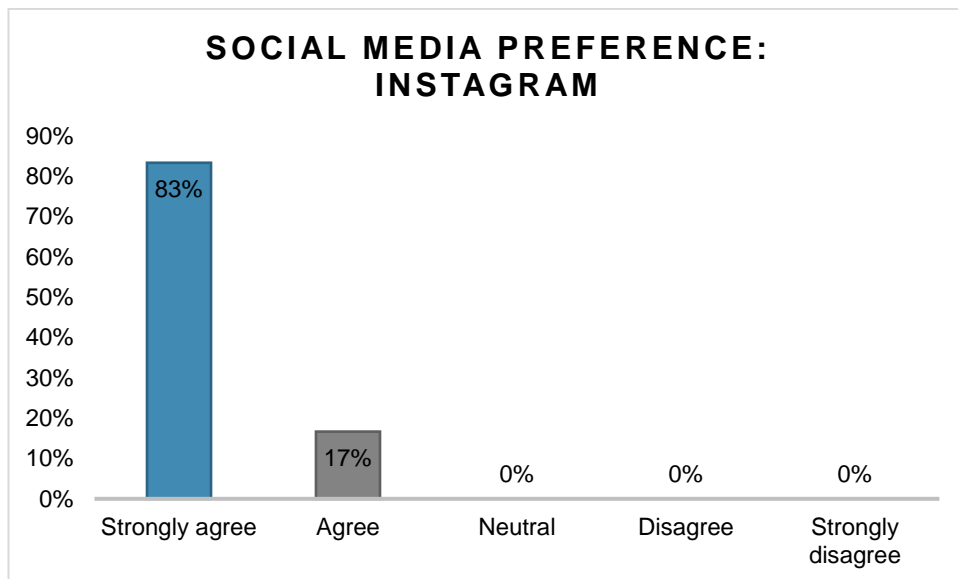


Figure 5-8: Social media preference (Instagram)

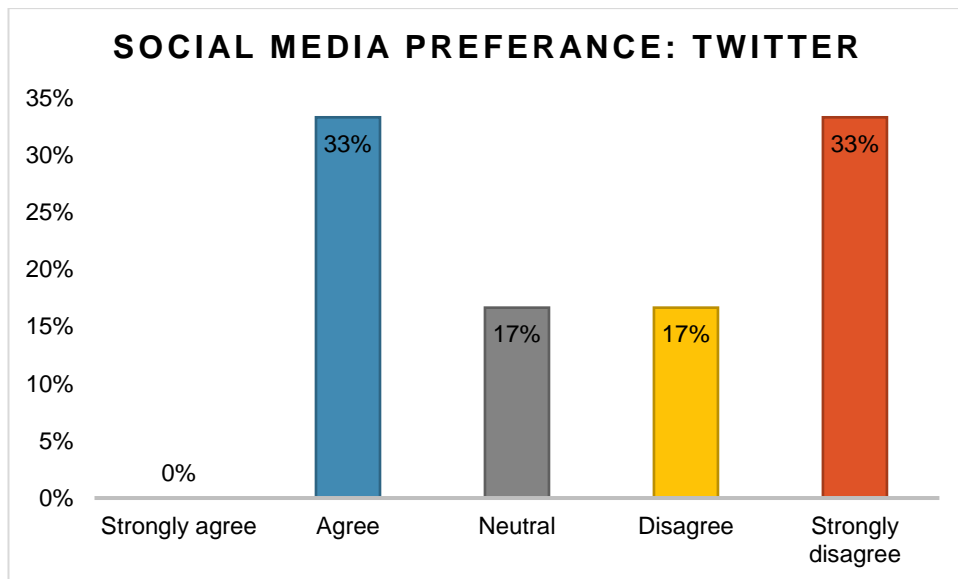


Figure 5-9: Social media preference (Twitter)

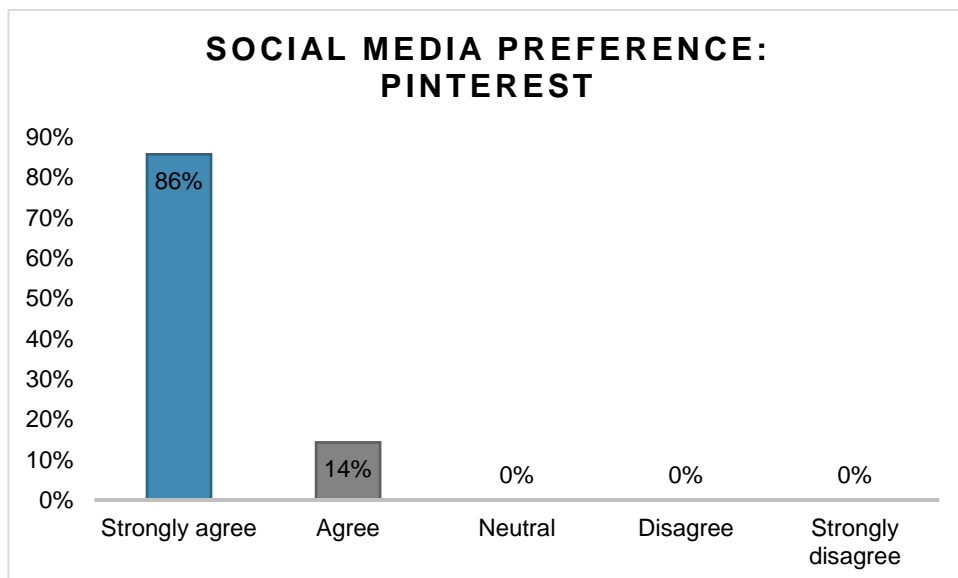


Figure 5-10: Social media preference (Pinterest)

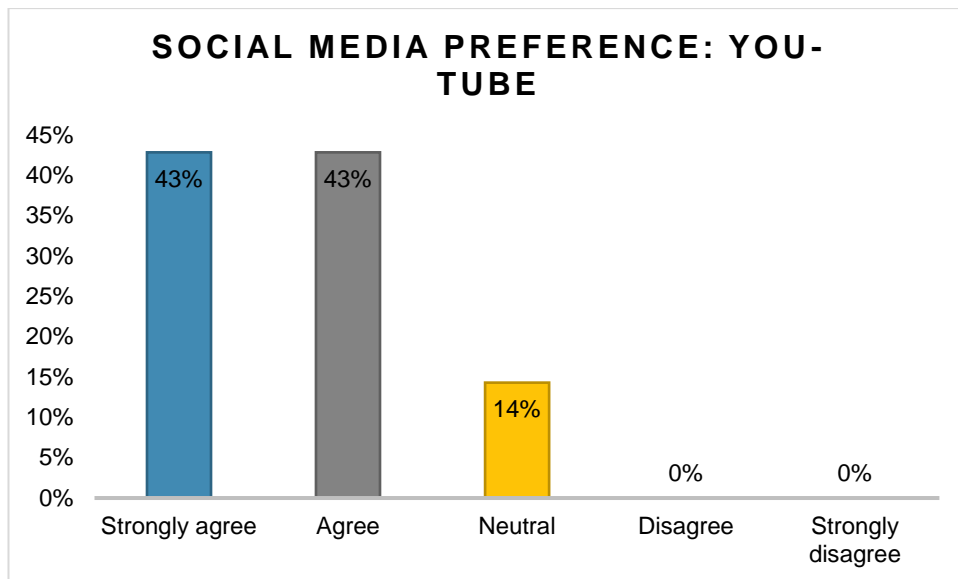


Figure 5-11: Social media preference (YouTube)

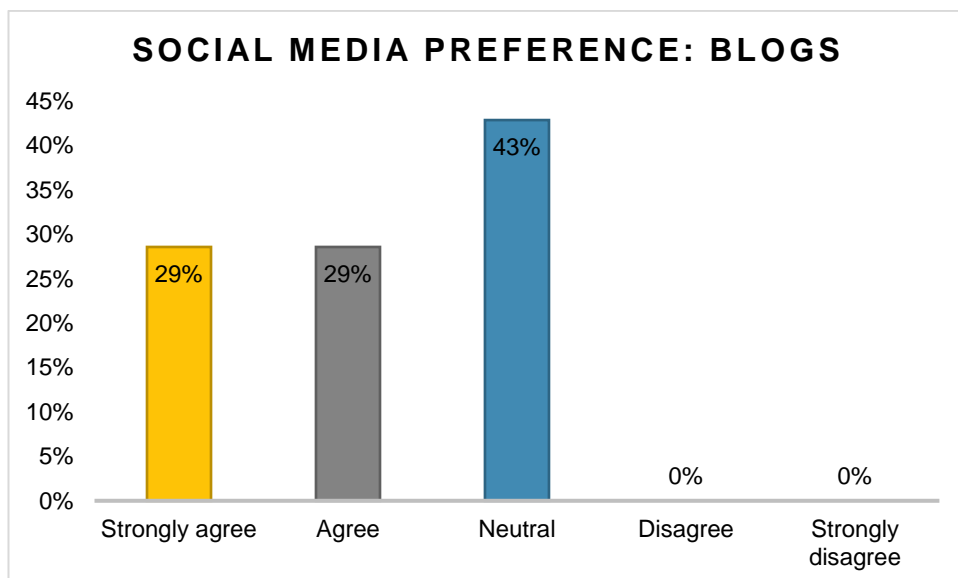


Figure 5-12: Your favourite social media or media platform (blogs)

5.3.6.1 Summary on preferred social media platform for learning

These findings (Figure 5-7 – Figure 5-12) reveal that amongst sample participants Facebook and blogs were the least preferred social media platforms for learning. Students indicated strong preferences for YouTube, Instagram and Pinterest. Students find these three social media platforms to be beneficial, as they could perform research and source Creative Design (I) inspiration from them.

Annexure L – Questionnaire One of Cycle One – Section B

QUESTIONNAIRE ONE OF CYCLE ONE- SECTION B

The following section discloses findings with a coded method and interpretation.

5.3.7.1 Please indicate which area you live in within Durban

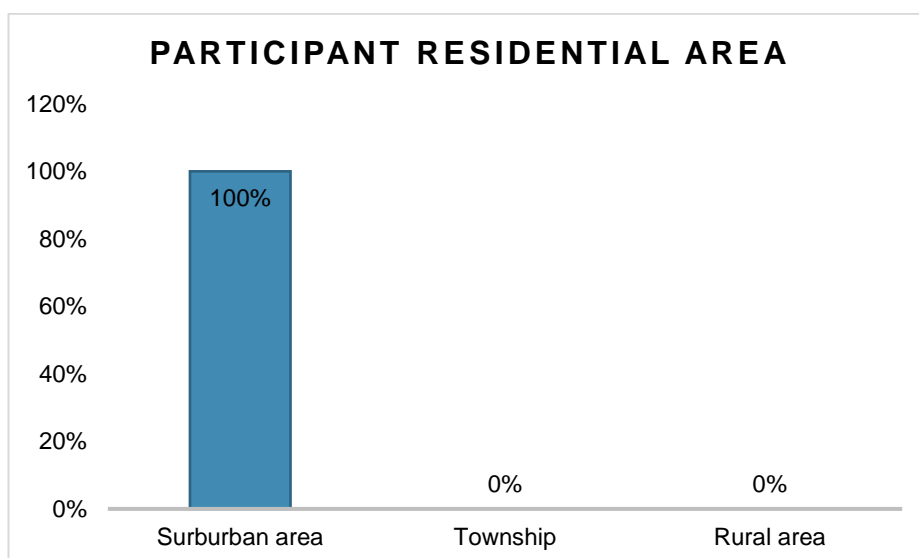


Figure 5-13: Participant residential area

Table 0-1: Open ended questionnaire coded data

TERMS AND PHRASES HIGHLIGHTED FROM TRANSCRIPT	CODES
I live in Berea	Residential area
I live in Morningside	Residential area
I live in Chatsworth (“Havenside”)	Residential area
I live in Glenwood	Residential area
I live in South Beach	Residential area
I live in Nagina	Residential area
I live in Ballito, North Coast	Residential area

Table 0-2: Open ended questionnaire coded data

INTERPRETATION	CODES
Suburban area	Student lives in a good area with access to internet cafes and possibly Wi-Fi hotspot areas.

5.3.7.2 Summary of coded and interpreted data

The demographic findings relating to the residential area in which participants reside reveal that first sample group participating in the first part of the cycle all reside in suburban areas (Figure 5-13). This was then translated in coding, as suburban areas are more likely to have far broader sources relating to internet, Internet stations and Wi-Fi access.

5.3.7.3 Do you use other social media platforms that are not listed above?

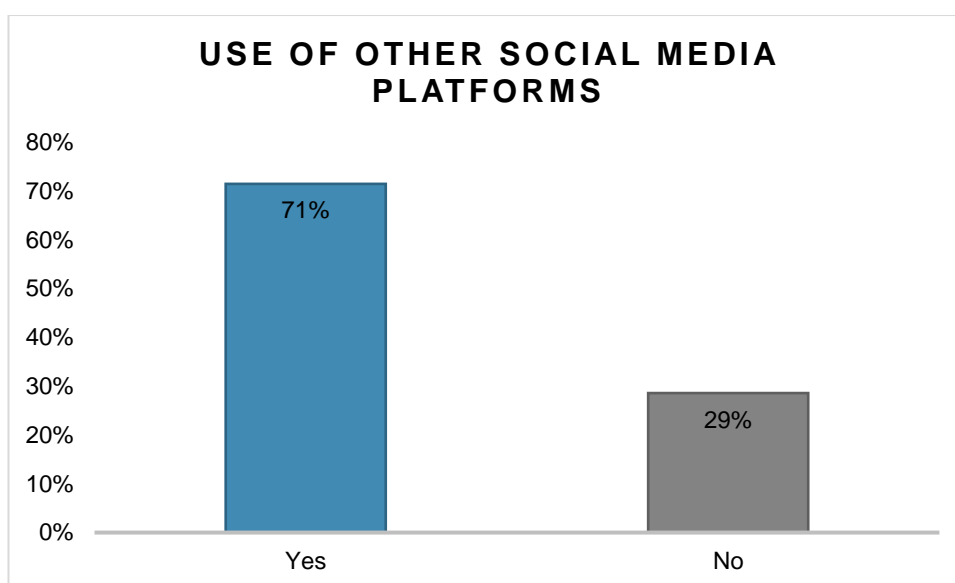


Figure 5-14: Use of other social media platforms

Table-3: Open ended questionnaire coded and interpreted data

TERMS AND PHRASES HIGHLIGHTED FROM TRANSCRIPT	CODES
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No, I do not use other social media platforms. I also do not use the listed ones.	Mixed feelings
Yes, I use WhatsApp.	Messaging social media platforms
Yes, I use WhatsApp.	Messaging social media platforms
Yes, I use Snapchat and Tumblr (blogging web).	Socialising and writing social media platforms
Yes, I use Snapchat.	Use of other social media platforms
Yes, I use Tumblr (blogging web).	Bloggng social media platforms
Not interested.	No interest

Table 0-4: Open ended questionnaire coded and interpreted data

CODES	INTERPRETATION
Social media Use	Student has no interest in social media.
Social media Use	Student uses social media platforms for communication.

5.3.7.4 Summary of coded and interpreted data

The coded and interpreted data indicates that students do actively use other social media platforms which are not specifically intended for learning. Participants do also use certain other social media platforms for communication, such as WhatsApp and Snapchat. Blogging sites were also mentioned – these platforms tend to be used for student reading, inspiration, posting and writing (Figure 5-14).

5.3.7.5 Would you use your favourite social media platform for learning?

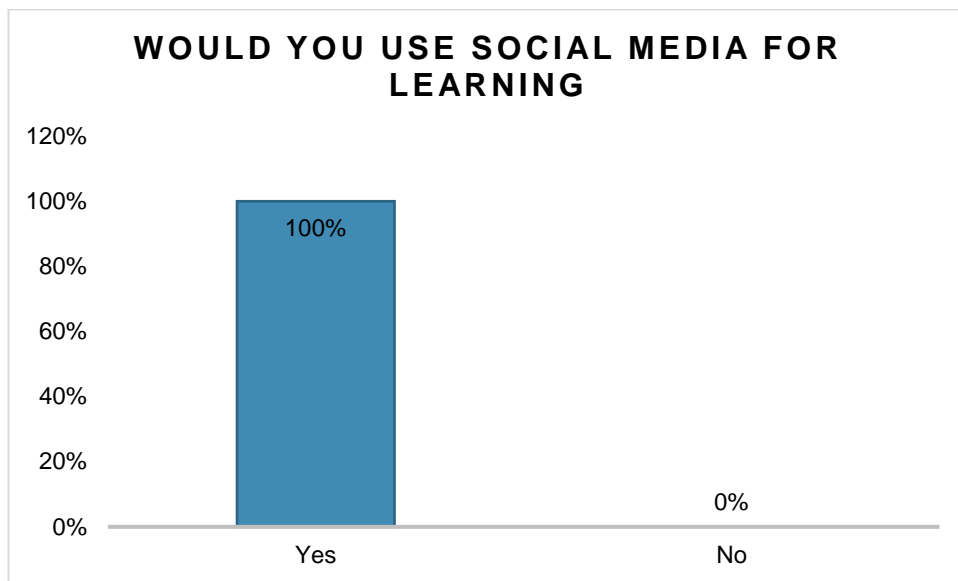


Figure 5-15: Would you use your social media for learning?

Table 0-5: Open ended questionnaire coded and interpreted data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
I would definitely use social media for learning.	Social media interest for learning
Yes, I would use social media.	Social media interest for learning
Yes, social media would make learning more fun.	Social media interest for learning
Yes, I would use social media.	Social media interest for learning
Yes, I believe that using a social media platform for learning would make it more fun. "Our age group is always on social media. So that would be like killing two birds with one stone."	Social media interest for learning
Absolutely.	Social media interest for learning

Yes, I would use social media.	Social media interest for learning
--------------------------------	------------------------------------

Table 0-6: Open ended questionnaire coded and interpreted data

CODES	INTERPRETATION
Yes	I would enjoy using social media for learning

5.3.7.5.1 Summary of coded and interpreted data

Participants showed a great interest in using social media platforms for learning (Figure 5-15). This question assisted in acquiring a clear indication of the plan regarding the integration of blended learning with Creative Design (I) through Blackboard as a digital platform going forward.

5.3.7.6 Do you use the internet for learning and if you do, in what ways do you do so?

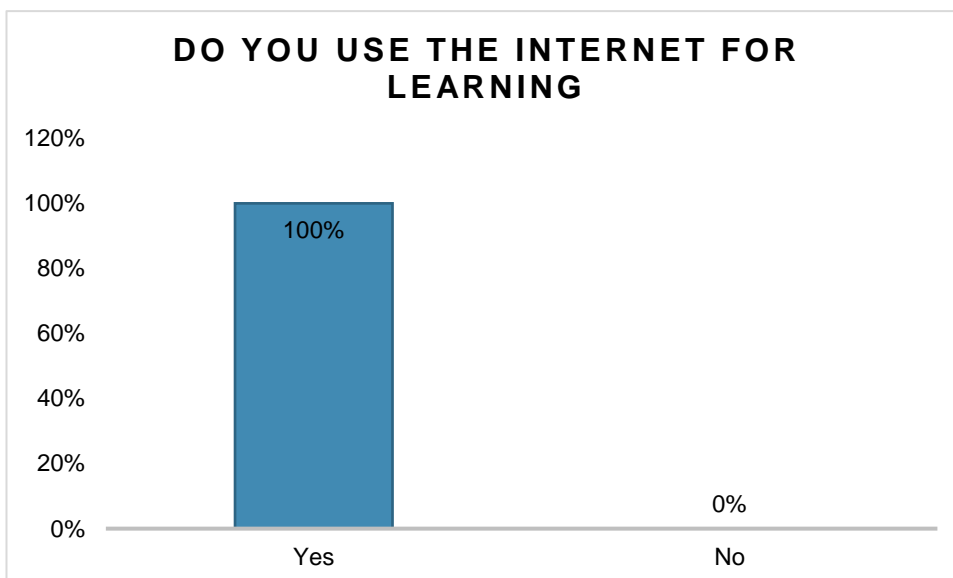


Figure 5-16: Do you use the internet for learning?

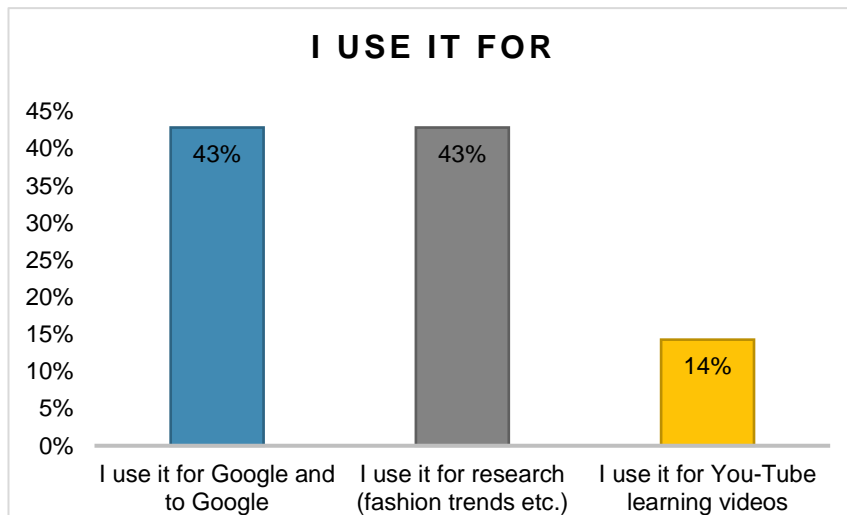


Figure 5-17: I use the Internet for learning in these ways

Table 0-7: Open-ended questionnaire coded and interpreted data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
Yes, I do use the Internet for research; to learn new fashion trends, styles and to “update my knowledge on street styles”.	Technology for learning/Technology and learning
Yes, I do use Internet for research. / I use Google if I am unsure about something.	Technology for learning/Technology and learning
Yes, I do use the Internet. / I use Google to access information immediately.	Technology for learning/Technology and learning
Yes, I do use the Internet to watch YouTube videos.	Technology for learning/Technology and learning
Yes, I do use the Internet for researching new international happenings.	Technology for learning/Technology and learning

Yes, I do use the Internet for learning; for research, DIY ideas, YouTube. I Google if there's something I do not know.	Technology for learning/Technology and learning
Yes, mostly for research as well as clarity on things I don't understand in class. / I also use it for curiosity to learn something new.	Technology for learning/Technology and learning

Table 0-8: Open ended questionnaire coded and interpreted data

CODES	INTERPRETATION
Technology as a tool for learning.	Yes, I do use the internet for learning. Helps me grow my knowledge in fashion. Clarifies information.
Technology as a tool for learning. Helps me grow my knowledge.	Yes, I do use the internet for learning.
Technology as a tool for learning.	Yes, I do use the internet for learning. Easy access to knowledge.
Technology as a tool for learning.	Yes, I do use the internet for learning. It's fun.
Technology as a tool for learning.	Yes, I do use the internet for learning.
Technology as a tool for learning.	Yes, I do use the internet for learning. It helps me grow my knowledge. I can learn how to do new things that can benefit me in my learning.
Technology as a tool for learning.	Yes, I do use the internet for learning. Helps me grow my knowledge. Clarifies information.

5.3.7.6.1 Summary of coded and interpreted data

The aim of this question (Figure 5-16 and Figure 5-17) was to acquire a clear understanding of the use of the Internet for Creative Design (I) work, and to also understand the type of media which students use. The majority of participants indicated that they use Google for research and YouTube for

learning videos. Overall, participants do use the Internet for learning, mainly for fashion trends, inspiration and sourcing.

5.3.7.7 Would you be interested in using social media platforms for learning? If yes, which social media platforms do you think can be utilised for learning

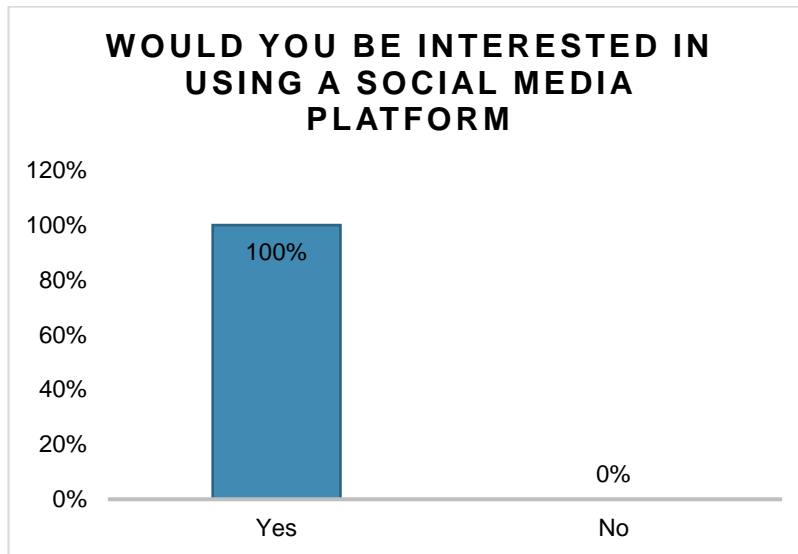


Figure 5-18: Would you be interested in using a social media platform?

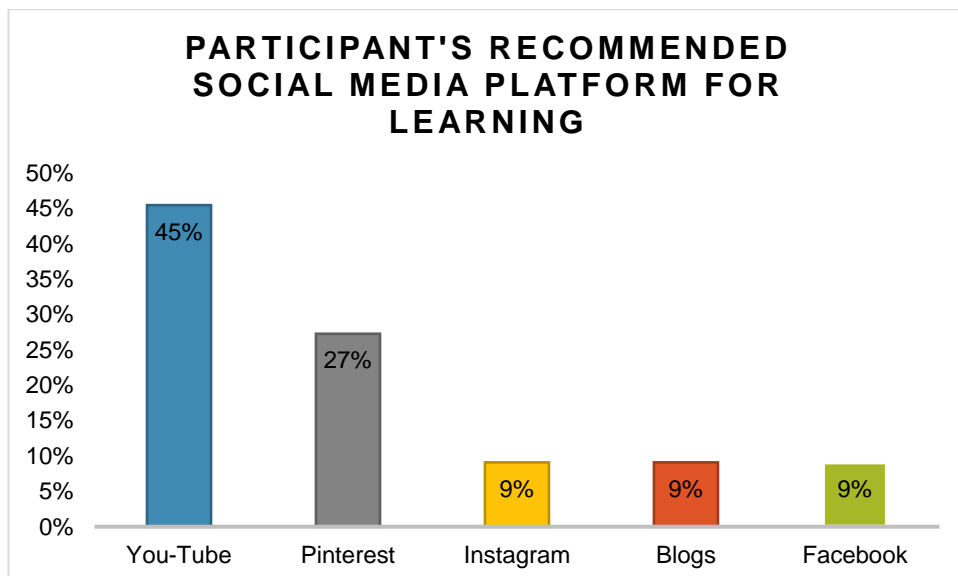


Figure 5-19: Participant's recommended social media platform for learning

Table 0-9: Open ended questionnaire coded and interpreted data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
Yes, I would use a social media platform for learning, I would use: Pinterest and YouTube as these are less "social" than Instagram and Facebook. YouTube and Pinterest would be less distracting for learning.	Creative Design (I), technology and learning
Yes, I would use a social media platform for learning such as Instagram and YouTube. "Because it is visual and easy to portray your message."	Creative Design (I), technology and learning
Yes, I would use YouTube.	Creative Design (I), technology and learning
Yes, I would use platforms such as Pinterest and Instagram.	Creative Design (I), technology and learning
Yes, I think Instagram would be fantastic because everyone already has it. / YouTube as well because it's a familiar platform.	Creative Design (I), technology and learning
One must take advantage of social media and use it for learning because nowadays most people are on it. My favourites are Instagram, YouTube and Pinterest.	Creative Design (I), technology and learning
Yes, Instagram, Facebook, Pinterest, Blogs and YouTube. Twitter for me is more of a status update platform = "boring".	Creative Design (I), technology and learning

Table 0-10: Open ended questionnaire coded and interpreted data

CODES	INTERPRETATION
Technology in Creative Design (I)	Pinterest and YouTube would be the most suitable for students to less. Other forms of Social Media like Facebook and Instagram would be less beneficial as students would spend time socialising instead of doing work.
Technology in Creative Design (I)	Instagram and You Tube would be more beneficial as you can communicate visually.
Technology in Creative Design (I)	Prefer YouTube.
Technology in Creative Design (I)	Prefer Instagram and Pinterest.
Technology in Creative Design (I)	Instagram because it is a common platform. The assumption here is it would be easier to navigate without any induction.
Technology in Creative Design (I)	Social media is the future.
Technology in Creative Design (I)	Prefer Instagram, Facebook, blogs, YouTube and Pinterest. Not Twitter.

5.3.7.7.1 Summary of coded and interpreted data

This question (Figure 5-18 and Figure 5-19) was used to measure student interest in using a social media platform for learning with a specific project for Creative Design (I) in mind. Upon determining an interest, students were then asked to mention and elaborate on their preferred social media platform. Students indicated that they are more likely to use YouTube and Pinterest for learning within Creative Design (I). Based on these findings, the project was implemented by taking onto account the digital platforms suggested.

Annexure M – Questionnaire Two of Cycle One – Section A

QUESTIONNAIRE TWO OF CYCLE ONE- SECTION A

5.4.1 The instructions for logging onto blackboard were easy to follow

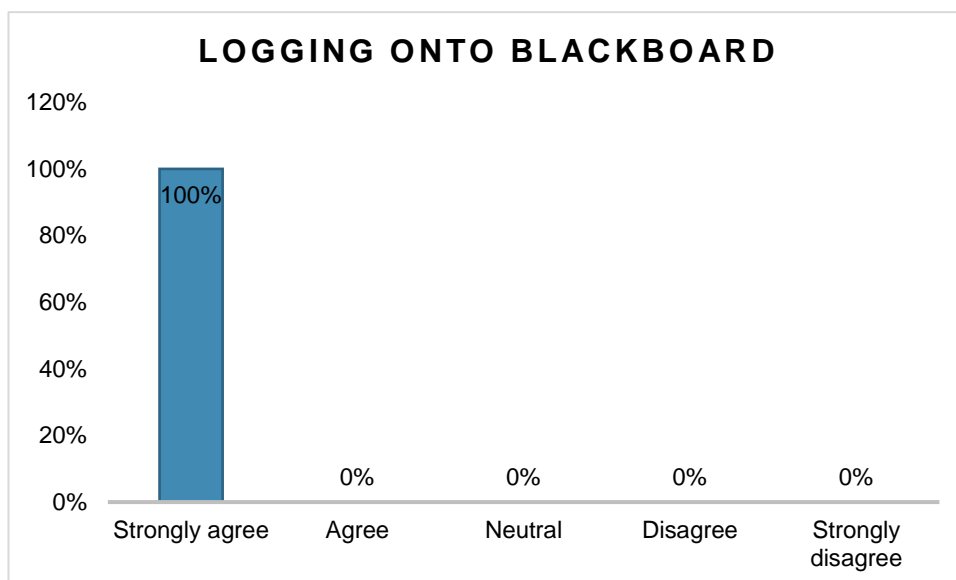


Figure 5-20: Logging onto Blackboard

5.4.2 It was easy for me to access a computer in the lab or library when on campus

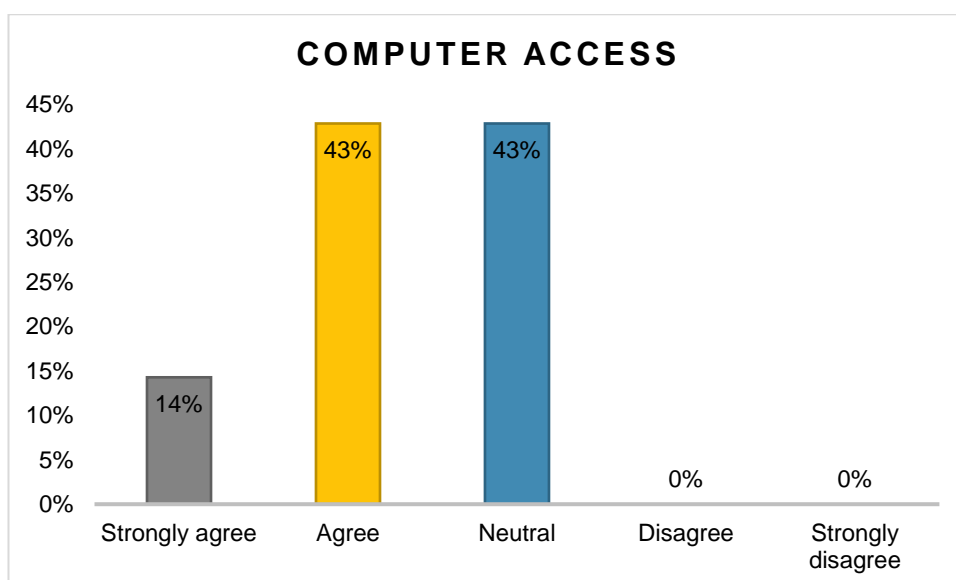


Figure 5-21: Computer access

Students appeared to agree that logging onto Blackboard is not complex as they had had prior induction in the platform from a CELT representative. Also, instructions for logging on were clearly stated on each subject guide. However, students indicated challenges associated with gaining access to a computer in a laboratory or at the library (Figure 5-20 and Figure 5-21).

5.4.2.1 Having the Creative Design classroom on Blackboard has given me more independence in my learning process

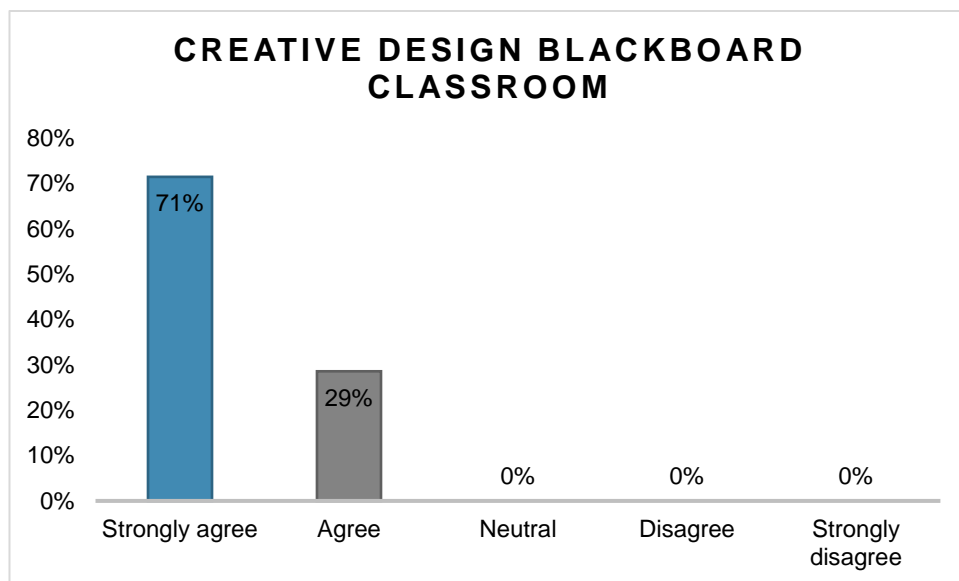


Figure 5-22: Creative Design Blackboard classroom

One of the key objectives for facilitating Creative Design (I) with a blended mode of learning was to encourage self agency amongst first year students. Having the Creative Design (I) subject constantly available on a virtual platform such as Blackboard was a method of encouraging students to be more independent in their learning and management of the design process during projects. The results obtained from this question indicate that students felt positive about the blended learning integration (Figure 5-22).

It is evident in the survey that students experienced benefits and also drawbacks. Students complained about problematic on campus computer at the library and also connectivity issues related to Wi-Fi.

5.4.2.2 The DUT computers and wi-fi connection are problematic

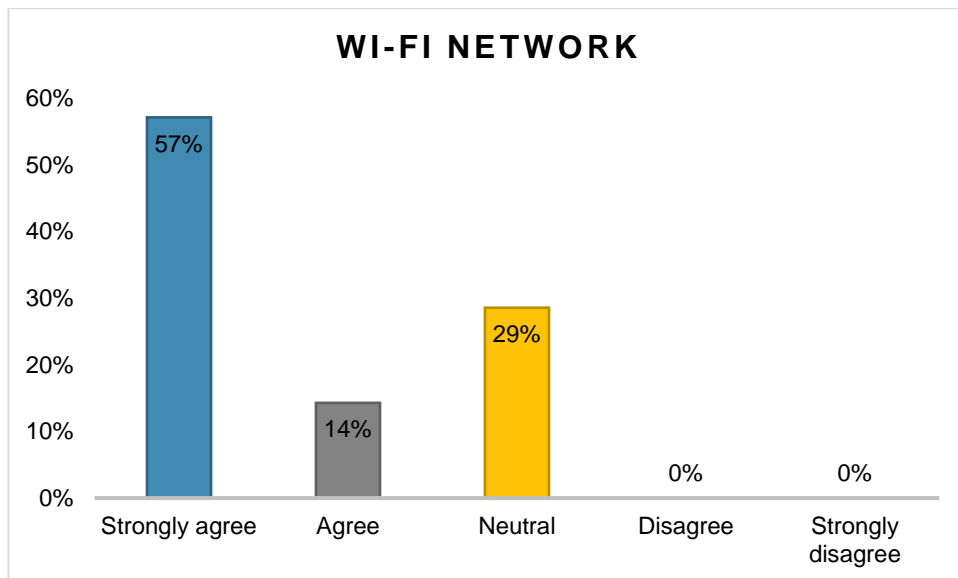


Figure 5-23: Wi-Fi network

5.4.2.3 Logging onto Blackboard from home was not a challenge

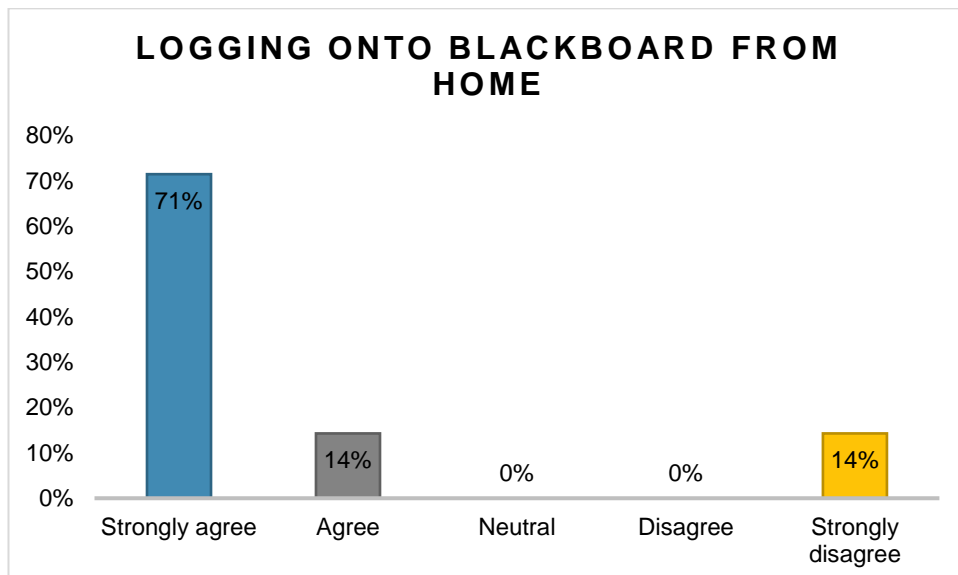


Figure 5-24 Logging onto Blackboard from home

5.4.2.4 I had constant internet access at home or on campus in order to use Blackboard

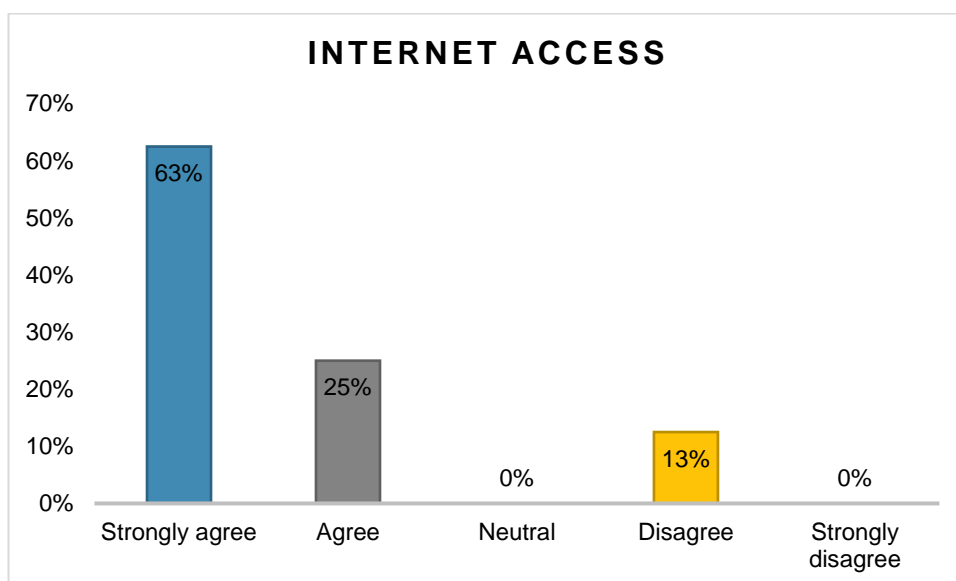


Figure 5-25: Internet access

The majority of the first group of students participating in the survey preferred utilising their home-based internet and computer, as they felt on-campus facilities such as computers and internet connections were problematic (Figure 5-25).

5.4.2.5 I benefitted from incorporating technology into my work in a Creative Design project

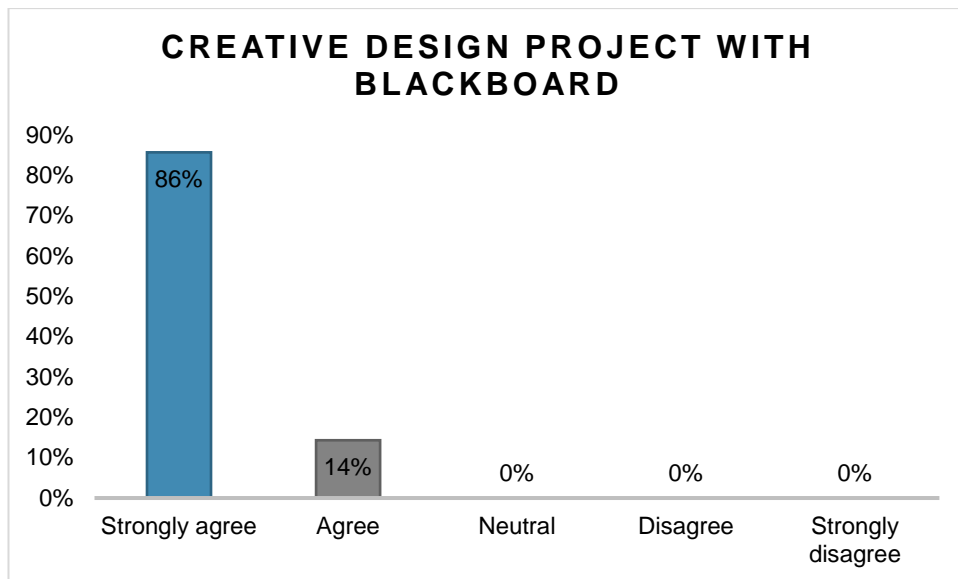


Figure 5-26: Creative Design project with Blackboard

5.4.2.6 I have benefitted from incorporating social media platforms with Blackboard in a Creative Design project such as Project Runway and Little Black Dress

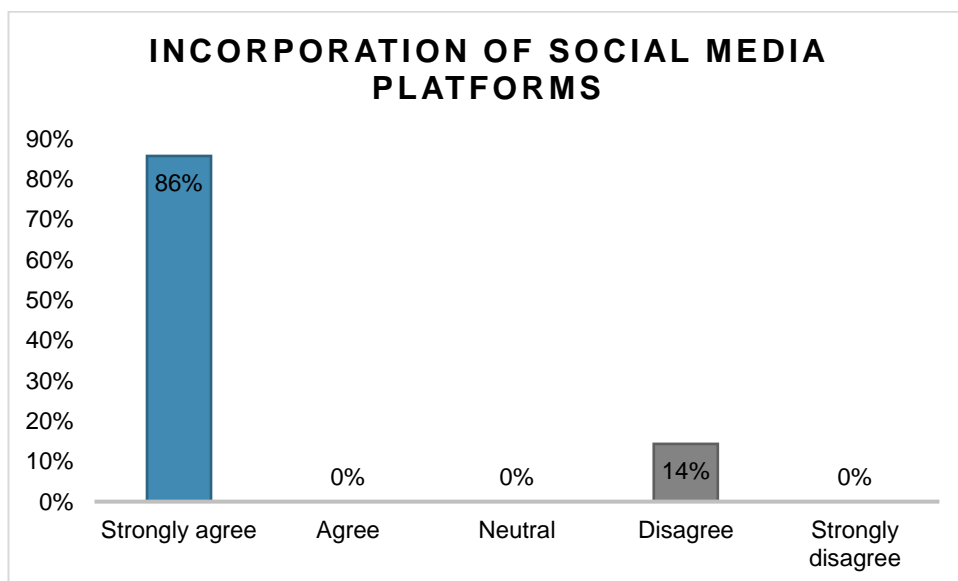


Figure 5-27: Incorporation of social media platforms

There was strong agreement amongst students regarding the incorporation and use of digital and social media in key annual projects. This was a positive

indication which allowed for planning of the Blackboard LMS going forward into Cycle Two (Figure 5-26 and Figure 5-27).

5.4.2.7 I have benefitted from using the online Creative Design classroom: using Blackboard as a tool in the Creative Design class has improved my learning

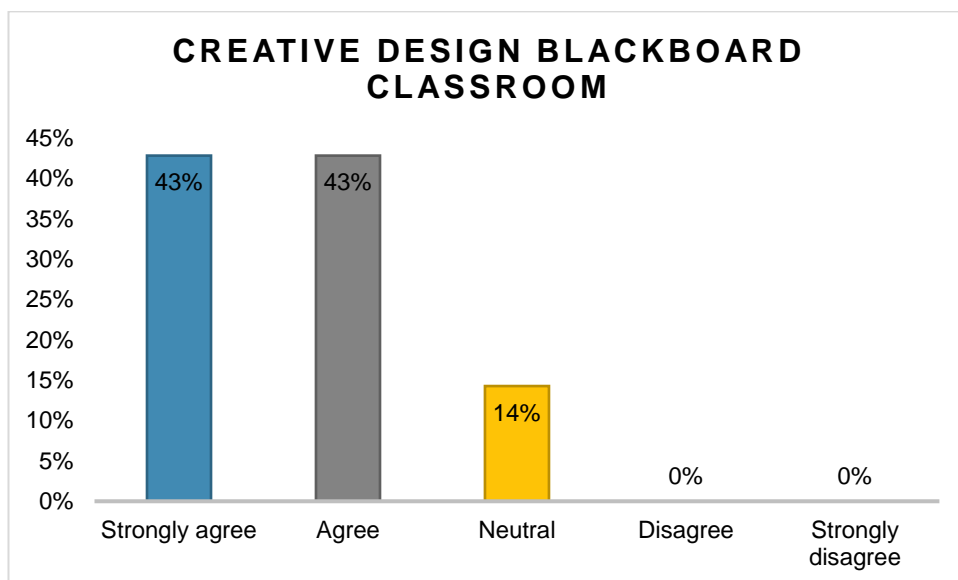


Figure 5-28: Creative Design Blackboard classroom

5.4.2.8 I enjoy using Blackboard for learning

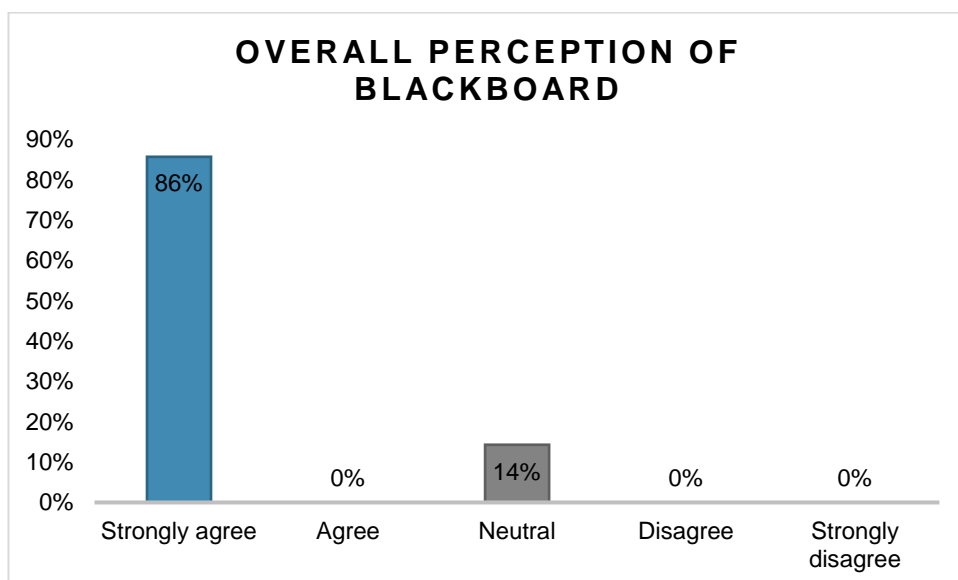


Figure 5-29: Overall perception of Blackboard

Students strongly agreed that there was a benefit derived from having an active online Creative Design (I) classroom alongside a traditional face-to-face method of instruction (Figure 5-28 and Figure 5-29).

Annexure N – Questionnaire Two of Cyle One – Section B

QUESTIONNAIRE TWO OF CYCLE ONE- SECTION B

As the first part of questionnaire two was more of a Likert-scale type survey, it was imperative that participants elaborated on their perceptions of a blended mode of learning. The second part of the questionnaire sought to interrogate further into the established responses of participants from part one of the questionnaire. For further analysis, responses were coded and categorised according to their similarities – this was a method of interpreting further findings in order to draw sub-conclusions and perform planning for Cycle Two.

5.4.3.1 What have been your highlights of using the Blackboard Creative Design online classroom throughout the year?

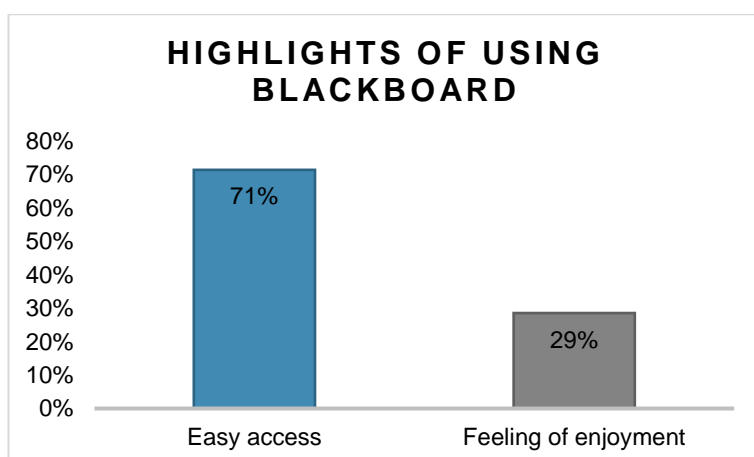


Figure 5-30: Highlights of using Blackboard

Table 0-7: Questionnaire Two: coded data

TERMS AND PHRASES HIGHLIGHTED FROM SCRIPT	CODES
There was a lot of extra information that was very beneficial in assignments.	Easy access to information

Celebrity project 2016. I really enjoyed this project as it merged with a social media platform (Pinterest) and Blackboard. This project also created a platform for interaction as the Blackboard discussion board was utilised.	Enjoyed Pinterest project
You are able to access work at any time.	Easy access to information
Offers a new and different method of learning. As technology is such an integral part of our everyday lives, it is nice to learn on and in such a comfortable setting/platform. The Pinterest project was thoroughly enjoyed.	Enjoyed Pinterest project
Work is always on there, so if you forget your task and don't have a lecture for a long period of time, you can check on Blackboard.	Easy access to information
Always being able to access notes I might need, wherever I may be as long as I have Internet access.	Easy access to information
It was easy to access notes, whenever I needed it. I didn't have to carry it with me.	Easy access to information

Table 0-8: Questionnaire Two: coded significance

CODES	INTERPRETATION
Access	Students found it easy to access Blackboard
Feeling of enjoyment	Students enjoyed project integrated with Pinterest

5.4.3.1.1 Summary of coded and interpreted data

Questionnaire results indicate that students achieved a sense of appreciation with having constant and easy access to their Creative Design (I) classroom, and also enjoyment at integrating their favourite social media platforms with projects. However, students did not necessarily feel a sense of enjoyment with using Blackboard (Figure 5-30).

5.4.3.2 Did you experience any difficulties when using the Blackboard Creative Design online classroom?

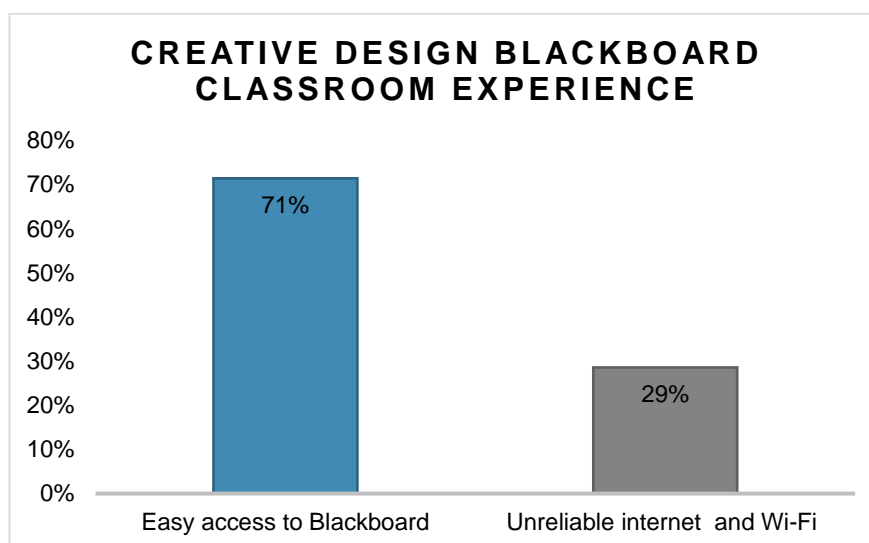


Figure 5-31: Creative Design Blackboard classroom experience

Table 0-9: Questionnaire Two: coded data

TERMS AND PHRASES HIGHLIGHTED FROM SCRIPT	CODES
Not really, I found it very easy to use throughout the year.	Easy to access and use
Yes, at the beginning phase. At the beginning of the year whilst I was unfamiliar with the program. However, as the year progressed I did not experience any difficulty.	No difficulties as I used it more often
"No".	No
Problem experienced was poor and no Internet connections. But accessing and navigating Blackboard and discussion board did not present any problems.	Internet issues

No, it's easily accessible and easy to follow.	Easy to access and use
No, navigating my way around was straightforward and then layout was also very straightforward and simple so I didn't experience any difficulty.	Easy to access and use
No, the only problem is the Internet isn't reliable at campus, and the computers are full of viruses.	Internet issues

Table 0-10: Questionnaire Two: coded significance

CODES	INTERPRETATION
Access	Students found it easy to access and use Blackboard.
Connection	Network and Internet issues.

5.4.3.2.1 Summary of coded and interpreted data

Students expressed great dissatisfaction with internet connectivity whilst on campus, although they did find it easy to access and navigate Blackboard (Figure 5-31).

5.4.3.3 Please share your recommendations for improving the Creative Design online classroom

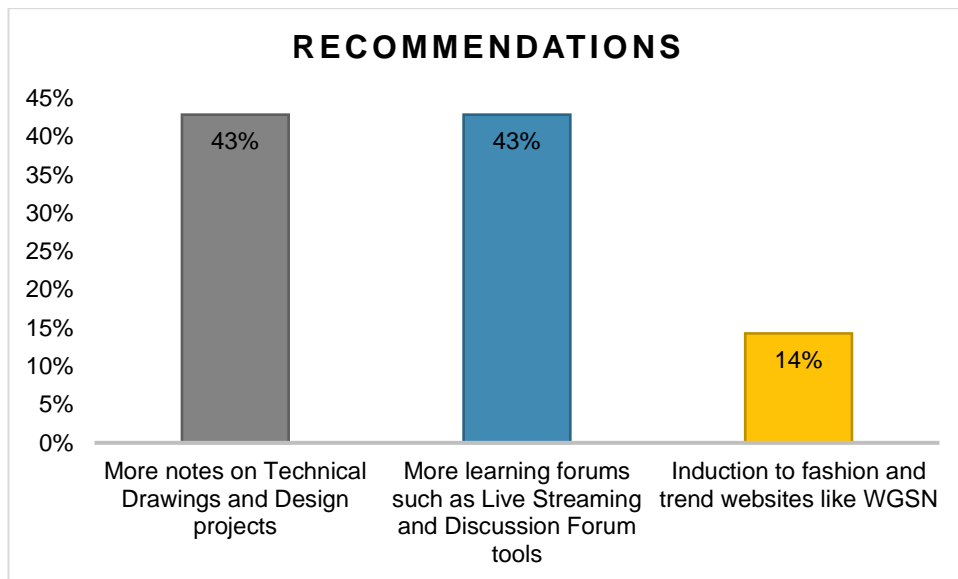


Figure 5-32: Recommendations

Table 0-11: Questionnaire Two: coded data

TERMS AND PHRASES HIGHLIGHTED FROM SCRIPT	CODES
It would be nice to get annotated TDs so that we can know exactly what to annotate and name different things, searching online isn't always correct.	Notes on Technical Drawings
More interaction on project related discussions on the discussion board. Also, discussion on any difficulties experienced in Creative Design (I). More projects such as Celebrity Projects that merge Blackboard and a Social Media Platform.	More use of the discussion board forum.
More content in different areas of Creative Design (I).	More Creative Design (I) content
It would be interesting to explore online live classrooms, such as live webinars as opposed to coming to the classroom for every lesson as webinars are available on smart phones as well.	Online live classrooms

Open up discussion boards to discuss any problems/questions on lectures and projects amongst the students.	More use of the Discussion board forum
Honestly nothing major. Maybe if there could be a tutorial of some sort of how to navigate your way around WGSN, as WGSN plays a very large part of Creative Design projects/storyboards/mood-boards.	Induction on WGSN
More notes on TDs would be great.	Notes on Technical Drawings

Table 0-12: Questionnaire Two: coded significance

CODES	INTERPRETATION
Notes	Students want more notes on Technical Drawings.
Learning Forums	Students found the discussion forum beneficial for projects. Students recommend the exploration of live Creative Design (I).
Learning Forums	Online live stream classrooms and discussion forums.
Induction	WGSN induction and introduction.

5.4.3.3.1 Summary of coded and interpreted data

In order to proceed with further planning in the second action cyclical process, students were encouraged to share further recommendations which could potentially assist in maintaining a collaborative teaching and learning space within Creative Design (I) using the Blackboard VLE. In order to attain the best method of instruction and a fitting framework for the teaching and learning of Creative Design (I), students made the following suggestions:

Learning material on technical drawings.

Live stream or pre-recorded forums of tutorials and class sessions.

An induction and introduction of the Blackboard Creative Design (I) classroom and recommended online fashion research tools, apart from the explored social media sites.

More interaction with peers on the discussion board.

Annexure O – Questionnaire One of Cycle Two – Section A

QUESTIONNAIRE ONE OF CYCLE TWO- SECTION A

5.5.1 What is your age?

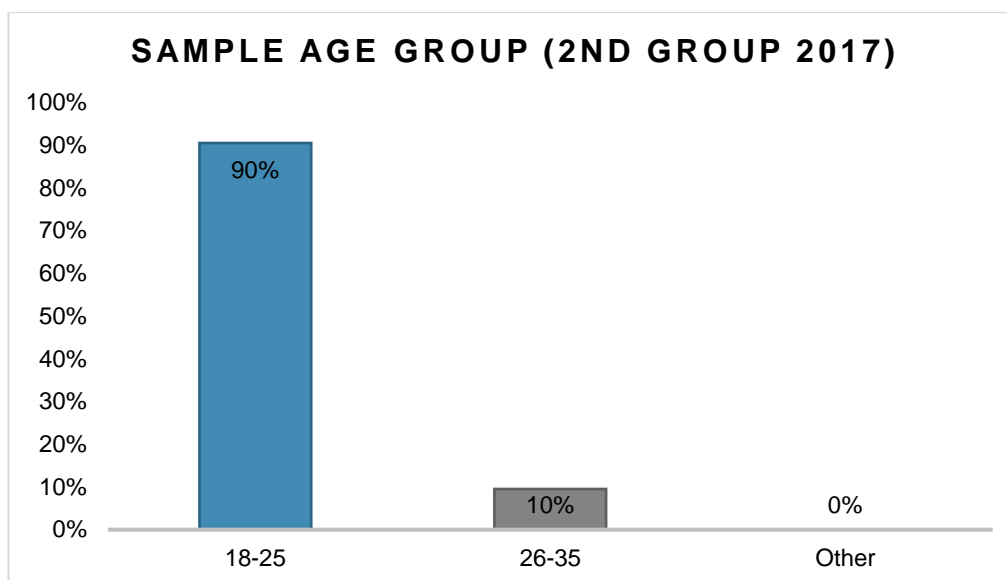


Figure 5-33: Sample age group (2nd Group 2017)

The sample size of the second group of students was more positive – there was also a greater willingness to participate in the study. The majority of the second group (90 percent) were between the ages of 18–25. However, as this was a larger group, for this cycle a small portion of participants were also found to be between the ages of 26–35 (10 percent) (Figure 5-33).

5.5.2 How would you rate your computer literacy skills?

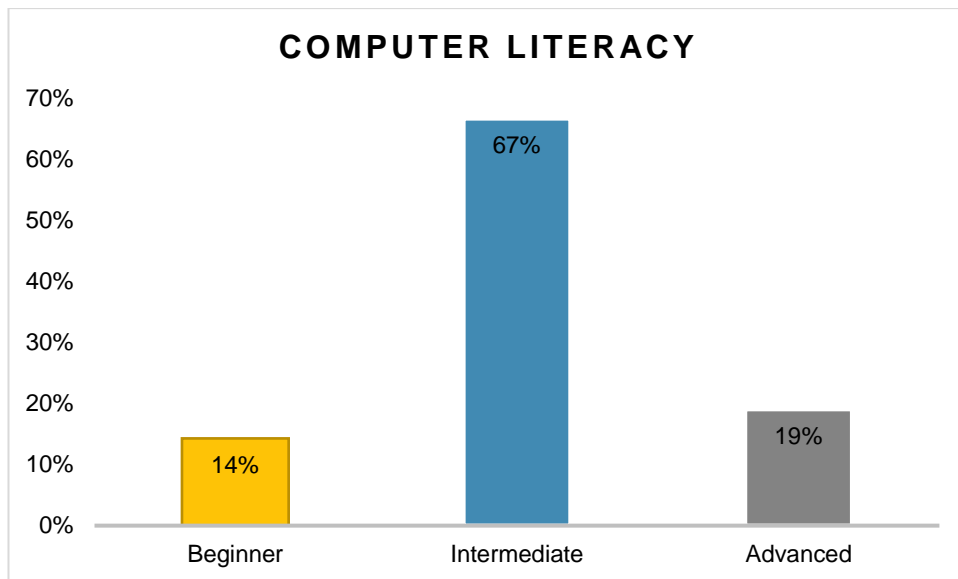


Figure 5-34: Computer literacy

5.5.3 Do you have access to a computer at home?

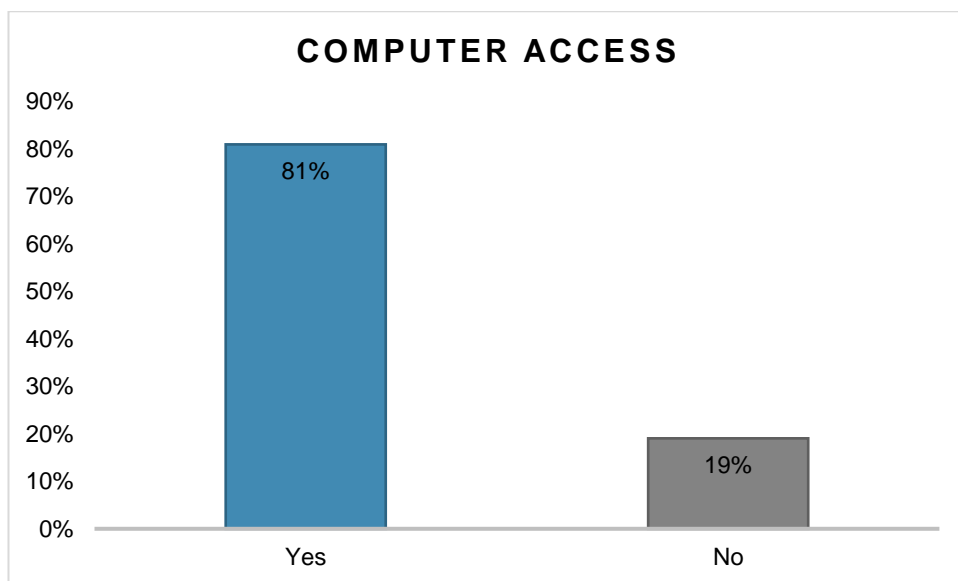


Figure 5-35: Computer access

5.5.4 Do you have access to the internet at home?

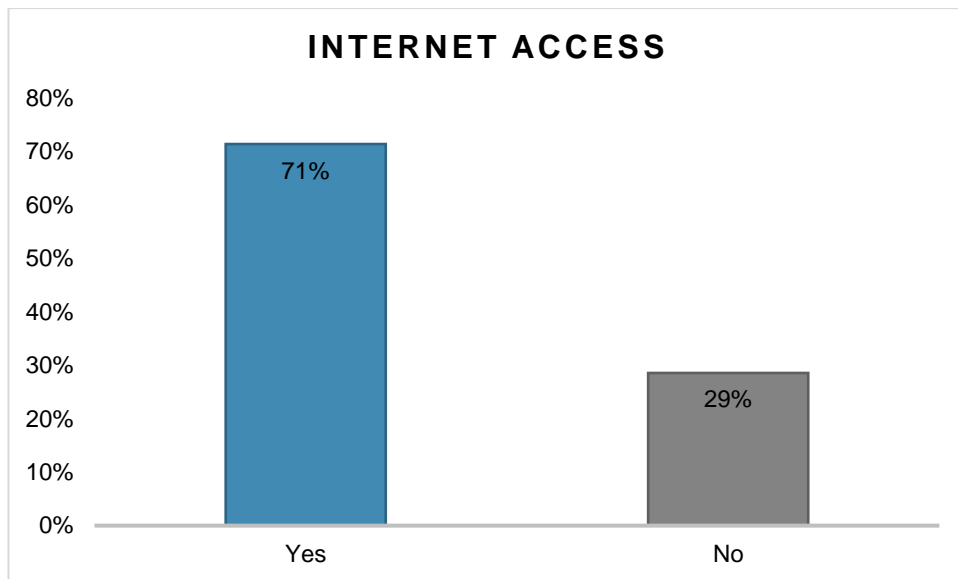


Figure 5-36: Internet access

5.5.4.1 Summary of computer and internet literacy and access

By comparison to the first group of volunteers, the second group appeared to be more intermediate in their computer knowledge and skills. This was considered a much more genuine reflection of the class assortment. Even though the majority of the sample stated that they are more intermediate in their knowledge of computers, a sizable number of them indicated that they have computer and Internet access at home (Figure 5-34, Figure 5-35 and Figure 5-36).

5.5.5 Do you have a smart-phone?

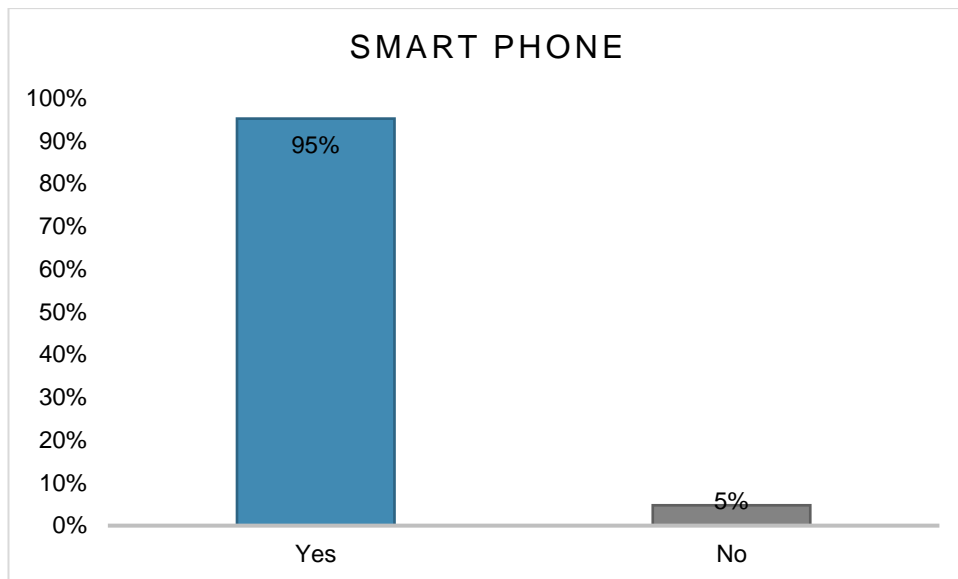


Figure 5-37: Smart phone

This question was used as a guide to evaluate access by students to other digital platforms, apart from just computers. Also, to answer questions raised by parts of the literature review – whereby it is evident that most students have engaged with or have access to a cellular or smart phone in this regard – the results given in Figure 5-37 attest to the fact that 95% of the sample indicated owning a smart phone.

Annexure P – Questionnaire One of Cycle Two – Section B
QUESTIONNAIRE ONE OF CYCLE TWO- SECTION B

5.5.6 Your favourite social media or media platform is?

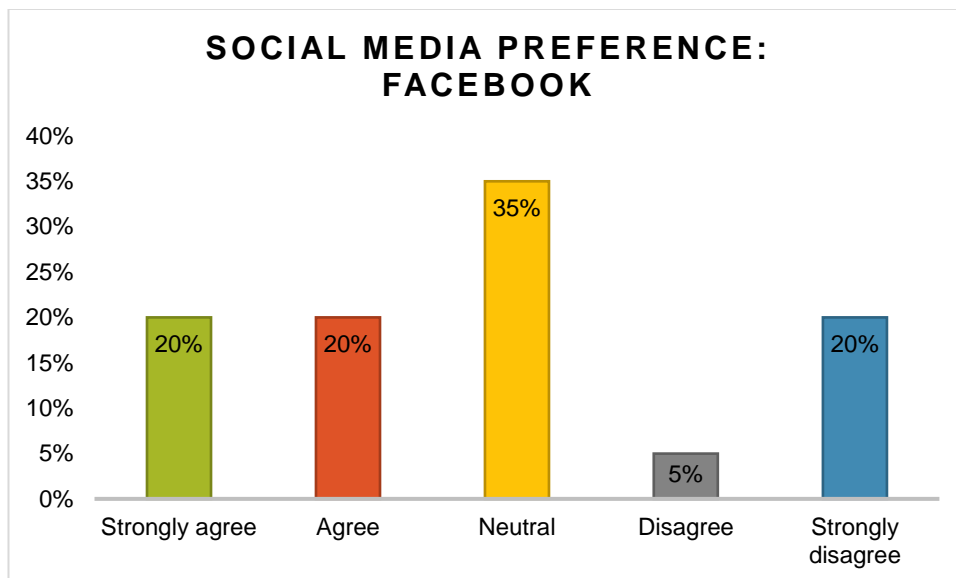


Figure 5-38: Social media preference (Facebook)

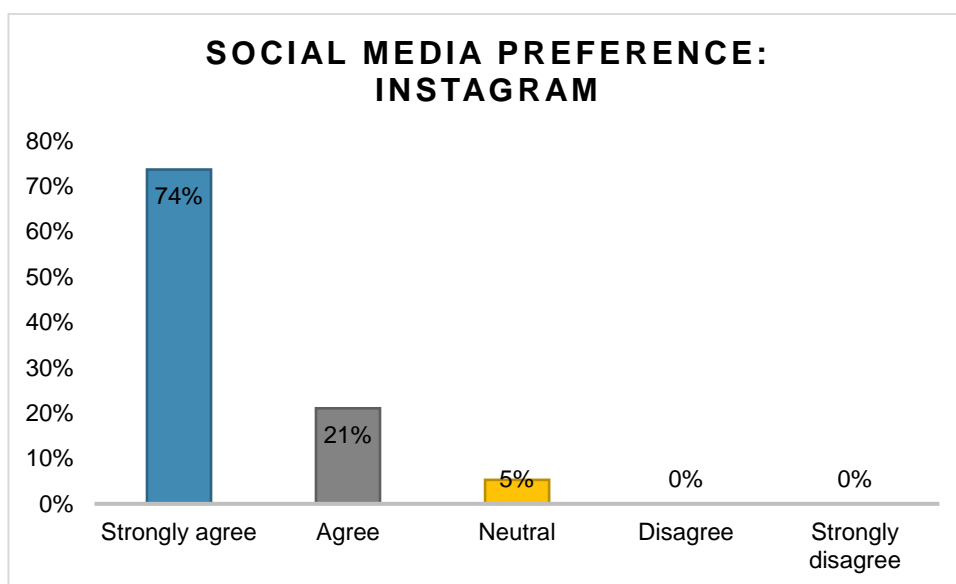


Figure 5-39: Social media preference (Instagram)

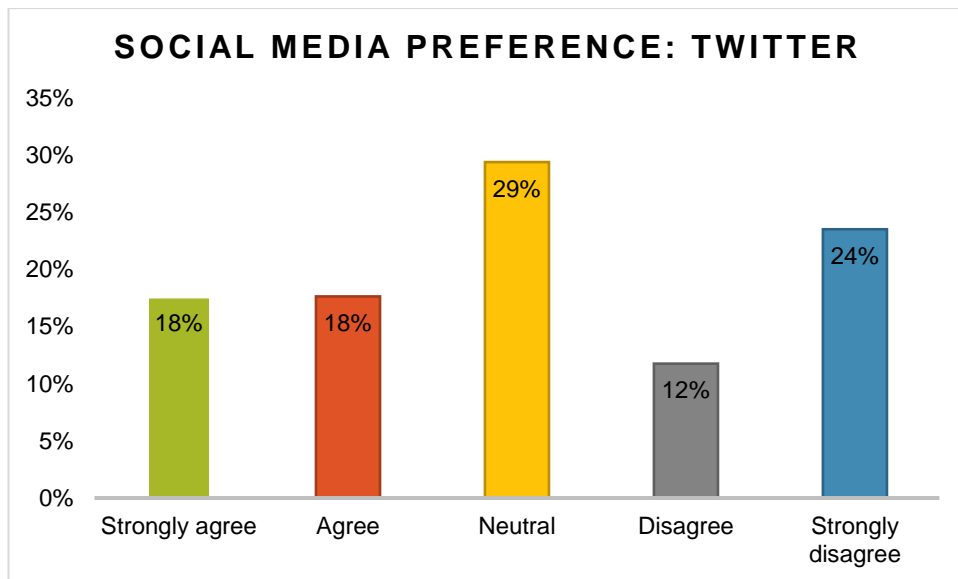


Figure 5-40: Social media preference (Twitter)

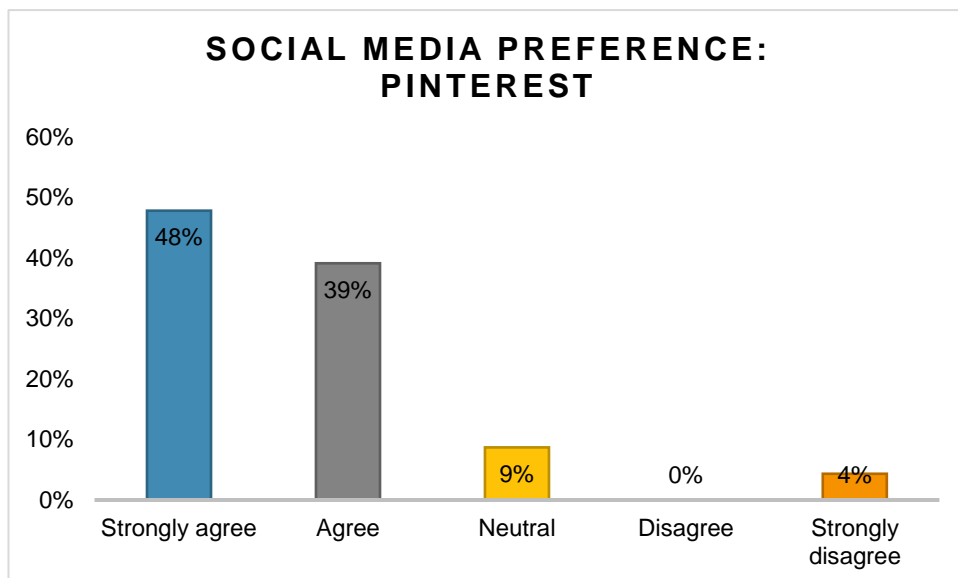


Figure 5-41: Social media preference (Pinterest)

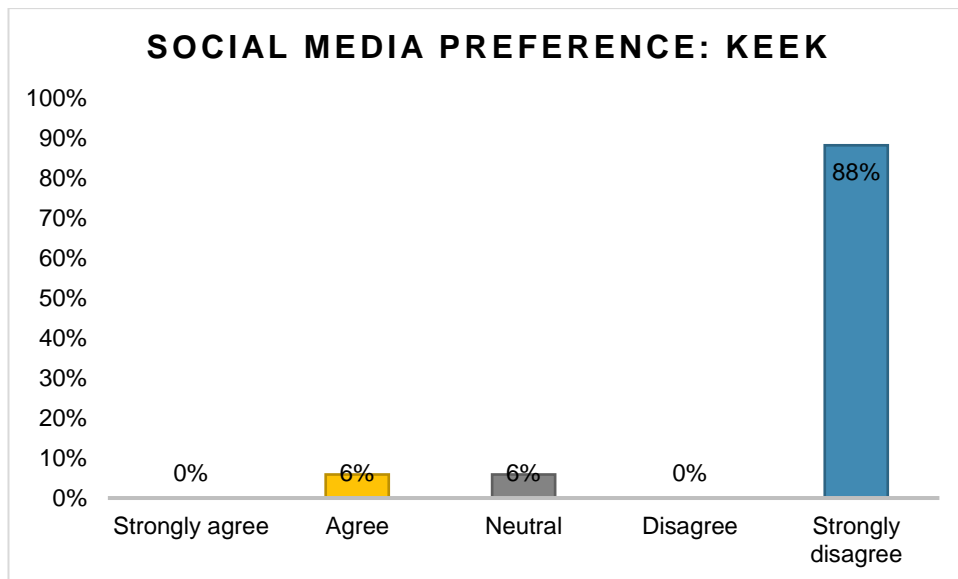


Figure 5-42: Social media preference (Keek)

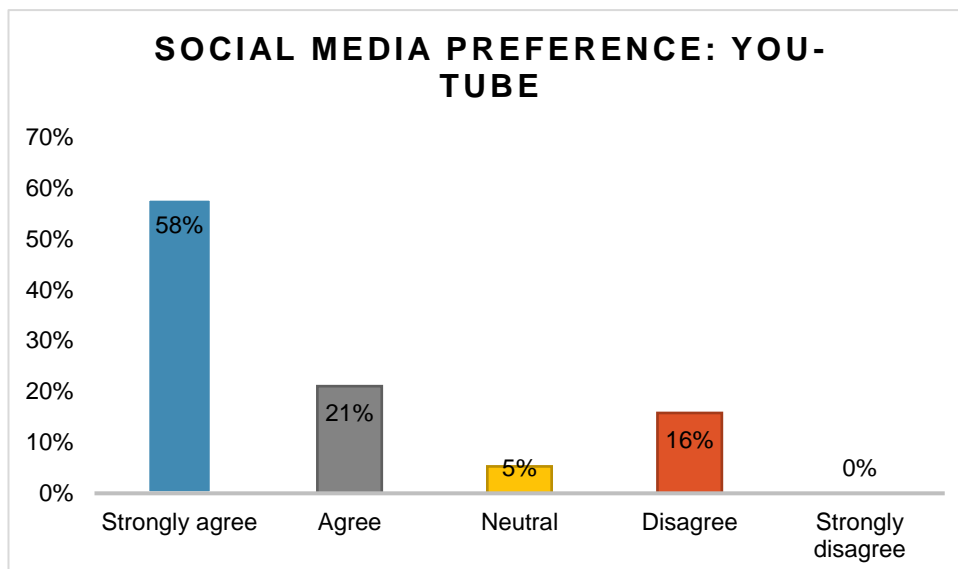


Figure 5-43: Social media preference (YouTube)

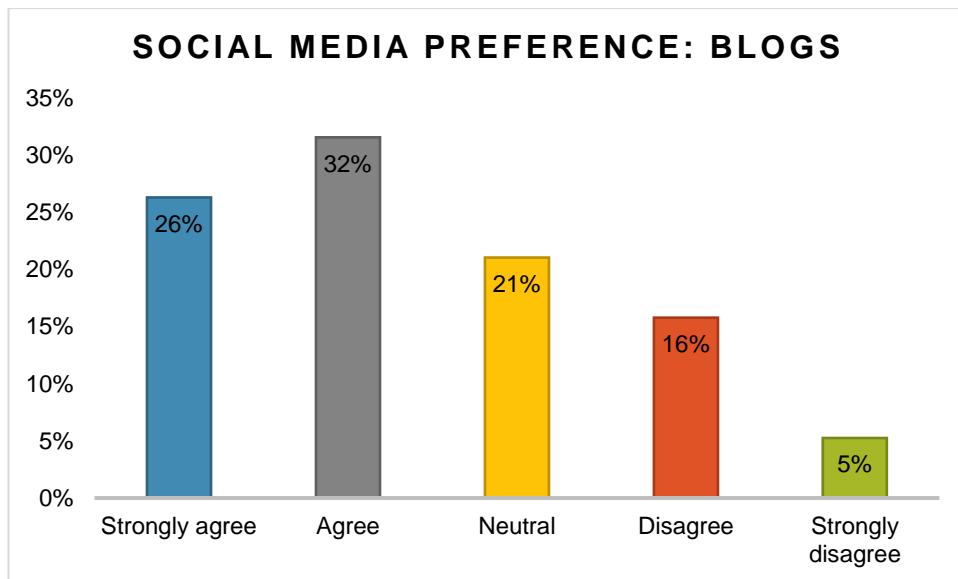


Figure 5-44: Social media preference (blogs)

5.5.6.1 Summary on preferred social media platform for learning

The questionnaire relating to social media was used as a guide to compare preferences and perceptions from the first sampled group's size. This was then used to assist in the further integration of a blended mode of learning in Cycle Two of the study. Social media was an important feature, as it is important for learning to also have an element of fun – meaning that it should remain social, relatable, collaborative and engaging. The preferred social media sites chosen by the second sample were predominantly Instagram, blogs, YouTube and Pinterest. Instagram achieved the highest results, and this was indicative of the type of student that was entering DUT in the 2017 academic year, as Instagram is a current and a fast-growing photo and lifestyle social media platform.

5.6.1 Please indicate which area you live in within Durban

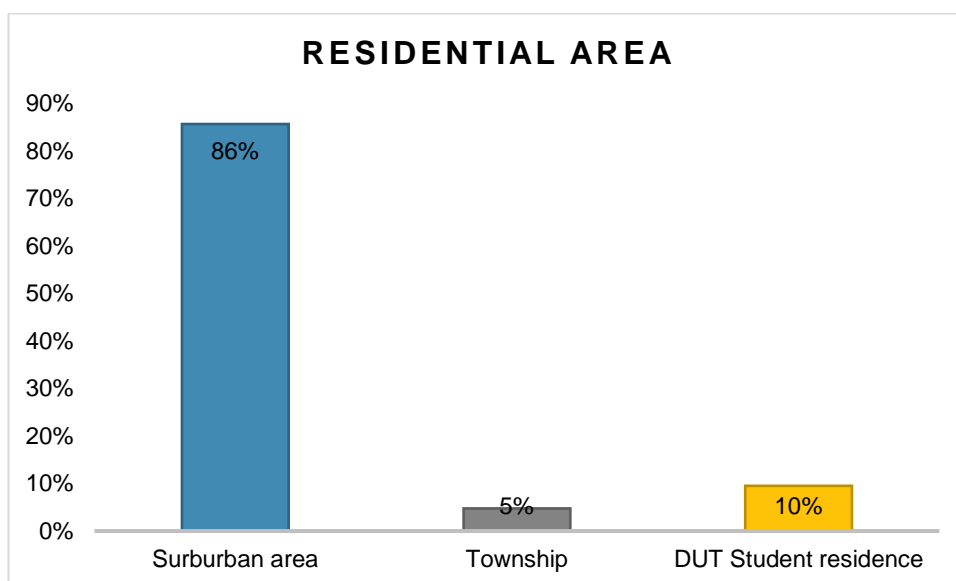


Figure 5-45: Residential area

Table 0-13: Questionnaire One: coded data

TERMS AND PHRASES HIGHLIGHTED FROM TRANSCRIPT	CODES
I live in Springfield Overport	Residing area
I live in Cowies Hill	Residing area
I live in Durban North	Residing area
I live in Botanic Gardens	Residing area
I live in Berea	Residing area
I live in Nagina	Residing area
I live in Kwa Mashu	Residing area
I live in Cowies Hill	Residing area
I live in Alpine student residence	Residing area
I live in Sydenham	Residing area
I live in Tongaat	Residing area
I live in Blythdale Beach	Residing area
I live in Wyebank	Residing area

I live in Westville	Residing area
I live in Westville	Residing area
I live in Sherwood	Residing area
I live in Woodlands	Residing area
I live in Glenwood	Residing area
I live in Montclair	Residing area
I live in Alpine student residence	Residing area
I live in Berea	Residing area

Table 0-14: Questionnaire One: coded significance

CODES	INTERPRETATION
Suburban area	Student lives in a good area with possible access to internet cafes and Wi-Fi hotspot areas.
DUT student residence	Student lives at an institution residence; Wi-Fi access is available for free for the whole year.
Township	Student lives in a township. Possibilities of limited resources relating to internet cafes and Wi-Fi

5.6.1.1 Summary of coded and interpreted data

In order to determine sample demographics, it was imperative that the study considered the residential areas of participants. With regard to this, it would be easier to understand their Internet and Wi-Fi access, and also the feasibility for them of the blended learning integration into Creative Design (I) for Fashion.

5.6.2 Do you use other social media platforms that are not listed above?

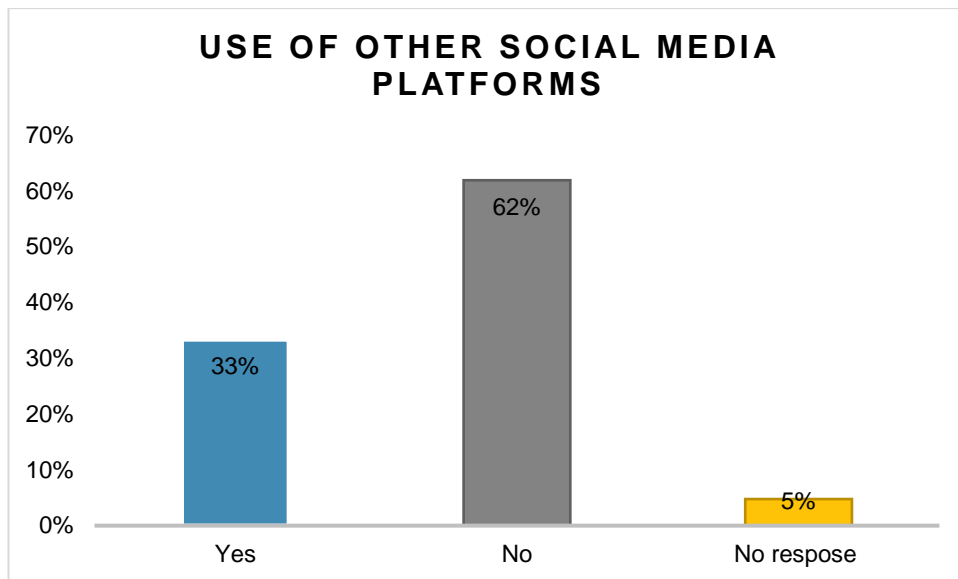


Figure 5-46: Use of other social media platforms

Table 0-15: Questionnaire One: coded data

TERMS AND PHRASES HIGHLIGHTED FROM TRANSCRIPT	CODES
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
Snapchat	Use of other Social Media platforms
Yes, WhatsApp	Use of other Social Media platforms
Yes, WhatsApp and Snapchat	Use of other Social Media platforms
No response	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
No, I used all the above listed	Use of other Social Media platforms

Yes, WhatsApp and Snapchat	Use of other Social Media platforms
Yes, WhatsApp	Use of other Social Media platforms
No	Use of other Social Media platforms
No	Use of other Social Media platforms
Yes, Visco com	Use of other Social Media platforms
Snapchat	Use of other Social Media platforms

Table 0-16: Questionnaire One: coded significance

CODES	INTERPRETATION
Social Media Use	Student uses only the popular social media platforms listed.
Social Media Use	Student uses other social media platforms for communicating.
Social Media Use	Student has no interest in social media.
Social Media Use	Student uses other social media platforms for fun.

5.6.2.1 Summary of coded and interpreted data

This question intended to answer, verify and elaborate on other social media platforms students used or would prefer to use with the integration of blended learning. The majority of the sample (Figure 5-45) firmly stated that they use mostly the social media sites listed on the questionnaire.

5.6.3 Would you use your favourite social media platform for learning?

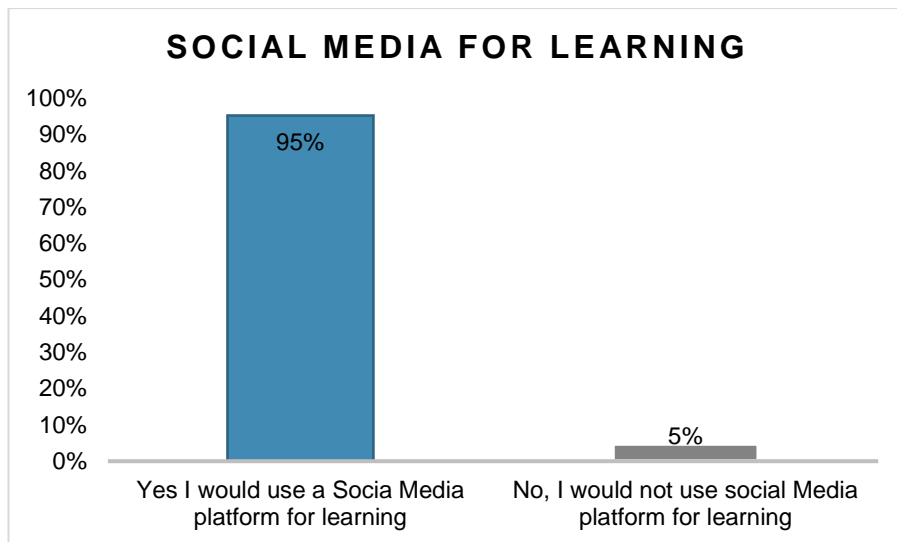


Figure 5-47: Social media for learning

Interviewee one: “Yes, I would. Best thing ever. YouTube videos have saved my life”.

Interviewee two: “Yes. I love YouTube

5.6.4 Do you use the internet for learning and if you do, in what ways do you do so?

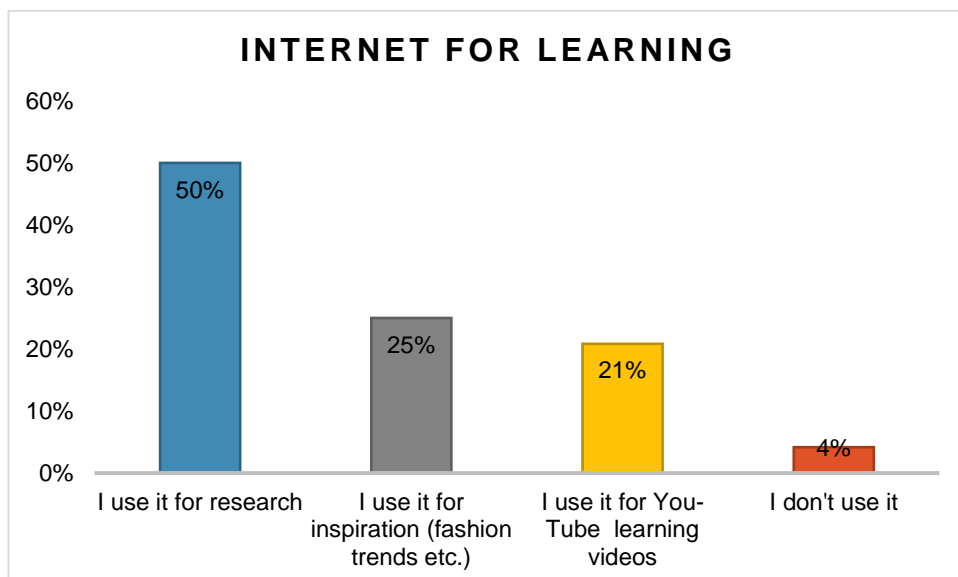


Figure 5-48: Internet for learning

Table 0-17: Questionnaire One: coded data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
Yes, I watch mostly YouTube.	Videos as learning tools
Yes, watching YouTube videos for work that I have missed out on. Learning basics on how to sew.	Videos as learning tools
Yes, keeping up with trends. Reading fashion journals and researching projects.	For research
Yes, to do research on topics.	For research
Yes, I use it for research.	For research
Yes, finding information.	Videos as learning tools
Yes, watching videos, making and printing notes.	For research
Yes, to get more information and research.	For research
Yes, Pinterest – lots of creative ideas and pictures.	To source inspiration
Research.	For research
Yes, for research purposes.	For research
Yes, I use the Internet for terminology I am not familiar with. I use it for inspiration.	To source inspiration

Yes, I do use the Internet for learning because it's quick access to learning.	For research
Yes, research	For research
Yes, I use YouTube for tutorials.	Videos as learning tools
Yes, to research or gain more background knowledge of a topic, question, or subject that I don't understand fully, or would simply like to know more about.	For research
Yes, when I want to do research about something. I access Internet from my phone.	For research
No, I have never.	No, I don't use it
Yes, Google Scholar offers accurate information.	For research
Yes, I normally use it for research ideas, projects, etc. I like to get a better understanding of topics by seeing what others have to say about it.	To source inspiration
Pinterest has a lot of patterns and styles I like to use and understand. YouTube has a lot of videos I practice with.	To source inspiration

Table 0-18: Questionnaire One: coded significance

CODES	INTERPRETATION
Internet and research	Helps me expand my knowledge
Videos as learning tools	I learn better with videos
Internet and research	I use it for research
For sourcing inspiration	I use the internet to source inspiration for my projects
Internet for learning.	No, I do not use the internet.

5.6.4.1 Summary of coded and interpreted data

The overall message for the application of social media and the Internet into Creative Design (I) was very positive, with 95 percent of the study's sample indicating that they would use social media platforms for learning (Figure 5-48).

5.6.5 Would you be interested in using social media platforms for learning? If yes, which social media platforms do you think can be utilised for learning?

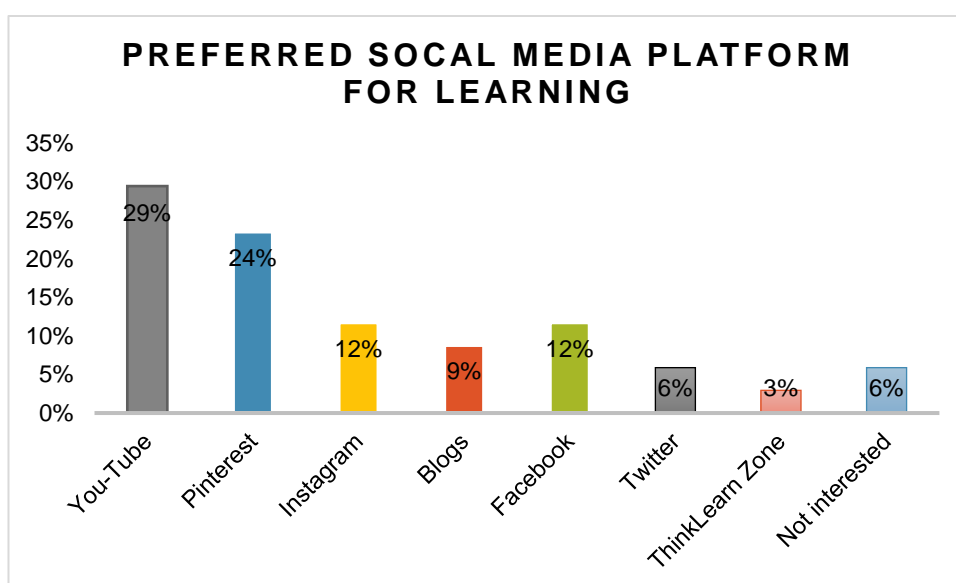


Figure 5-49: Preferred social media platform for learning

Table 0-19: Questionnaire One: coded data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
Yes, YouTube and Pinterest.	Videos for learning/enhancing visual vocabulary
YouTube, Blogs and Instagram (Yes).	Videos for learning/enhancing visual vocabulary

No.	Not interested
Yes, YouTube.	Videos for learning
Yes, Pinterest and blogs.	Enhancing visual vocabulary
No response.	Not interested
Yes, Facebook.	Socialising
Yes, Think Learn Zone.	Learning
Yes, Pinterest.	Enhancing visual vocabulary
Yes, Internet and YouTube.	Videos for learning
Yes, Pinterest.	Enhancing visual vocabulary
Yes, Facebook can be utilised for learning – many people are familiar with Facebook.	Socialising
Yes, Facebook, Twitter, Instagram and YouTube.	Socialising
Yes, Instagram and Twitter.	Enhancing visual vocabulary
Yes, YouTube.	Videos for learning
Yes, I believe Instagram, Pinterest and YouTube would be the most effective platforms for learning-specifically for this Fashion Design Course.	Enhancing visual vocabulary
Yes, Facebook.	Socialising
Yes, blogs and YouTube	Videos for learning/enhancing visual vocabulary
Yes, Pinterest can offer a visual learning platform which also provides links to websites and blogs.	Enhancing visual vocabulary
Yes, YouTube and Pinterest especially for fashion trends, sewing methods, etc.	Videos for learning/enhancing visual vocabulary

YouTube and Pinterest.	Videos for learning/enhancing visual vocabulary
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Table 0-20: Questionnaire One: coded significance

CODES	INTERPRETATION
YouTube	Videos assist in improving student learning – good for remembering.
Pinterest and Instagram	Certain platforms assist in enhancing visual vocabulary such as Pinterest and Instagram.
Facebook and Twitter	Other students would prefer to use more “sociable” sites like Facebook and Twitter.
Technology in Creative Design (I)	Not interested in using such platforms.
Blackboard	Think Learn Zone – for learning.
Blogs	Journaling.

5.6.5.1 Summary of coded and interpreted data

Following up on the high interest in incorporating social media platforms into the blended learning process, YouTube appeared to be the volunteer students’ preferred platform (Figure 5-49).

Annexure Q – Questionnaire Two of Cycle Two – Section A

QUESTIONNAIRE TWO OF CYCLE TWO- SECTION A

5.7.1 The instructions for logging onto blackboard were easy to follow

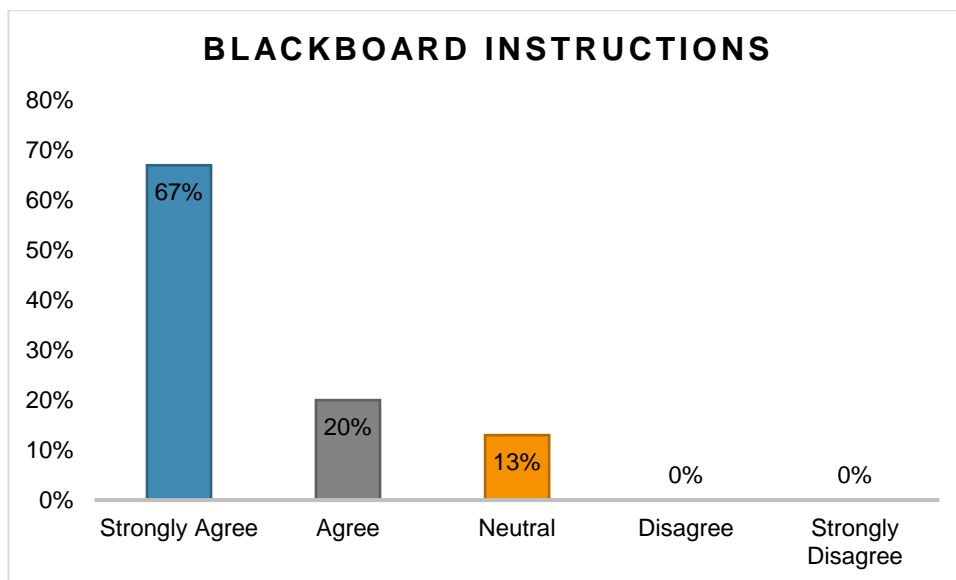


Figure 5-50: Blackboard instructions

5.7.2 It was easy for me to access a computer in the lab or library when on campus

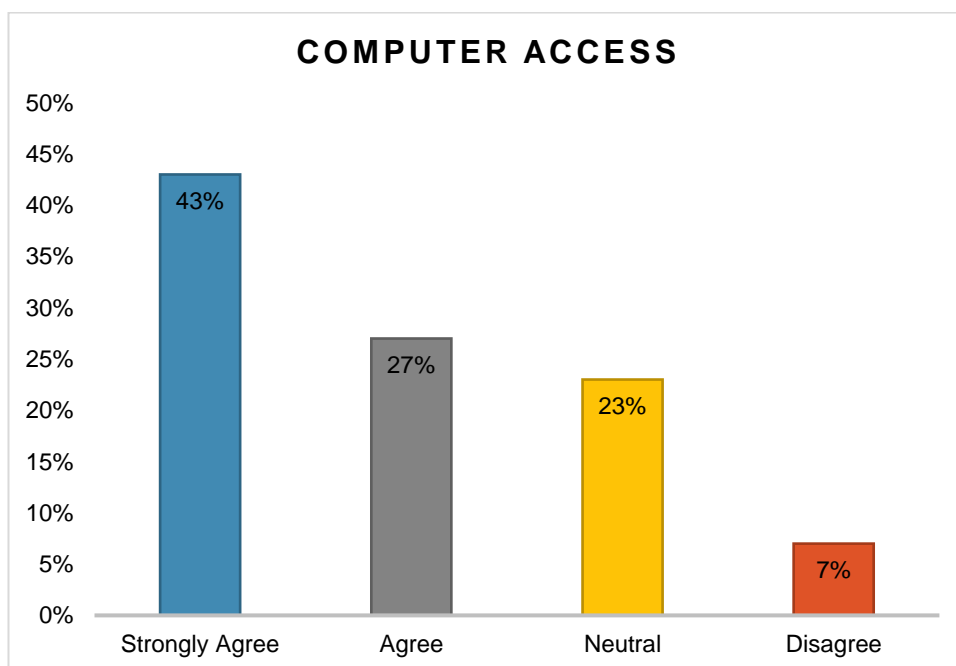


Figure 5-51: Computer access

In Cycle One, students indicated that a Blackboard induction and introduction for the Creative Design (I) online classroom would be necessary going forward into the new academic year. This would assist first-year students in understanding the importance of Blackboard as a LMS. A Blackboard induction was done by a CELT and FYSE representative within the first term of the 2017 academic year. In addition to this training, each individual lecturer within the Fashion and Textiles Department conducted their own subject-related induction for Blackboard. This implementation greatly assisted in first-year student Blackboard understanding.

5.7.3 Having the Creative Design classroom on blackboard has given me more independence in my learning process

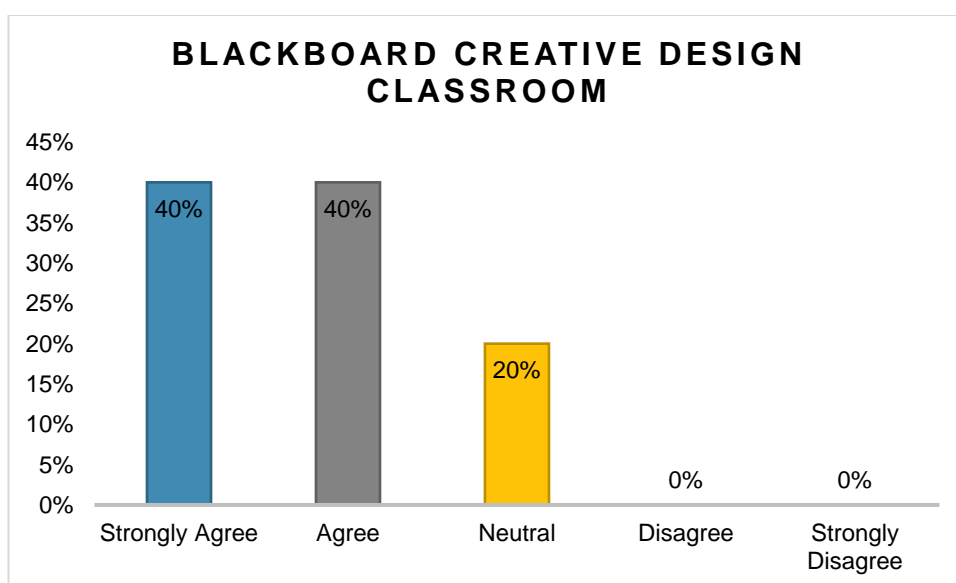


Figure 5-52: Blackboard Creative Design classroom

With the inclusion of Blackboard in Creative Design (I), participants indicated positive feedback in stating that it had given them something of a level of independence in their learning (Figure 5-51).

5.7.4 The DUT computers did not give me any problems

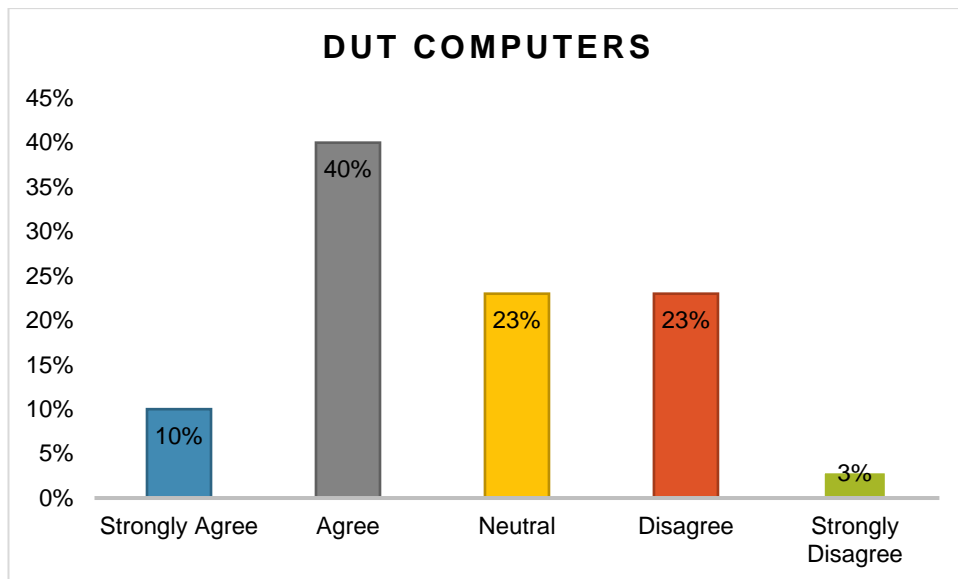


Figure 5-53: DUT computers

By comparison to the dissatisfaction of the first sample expressed with on-campus computers, the second group appeared to view on-campus computers more favourably (Figure 5-53).

5.7.5 Logging onto blackboard from home was not a challenge

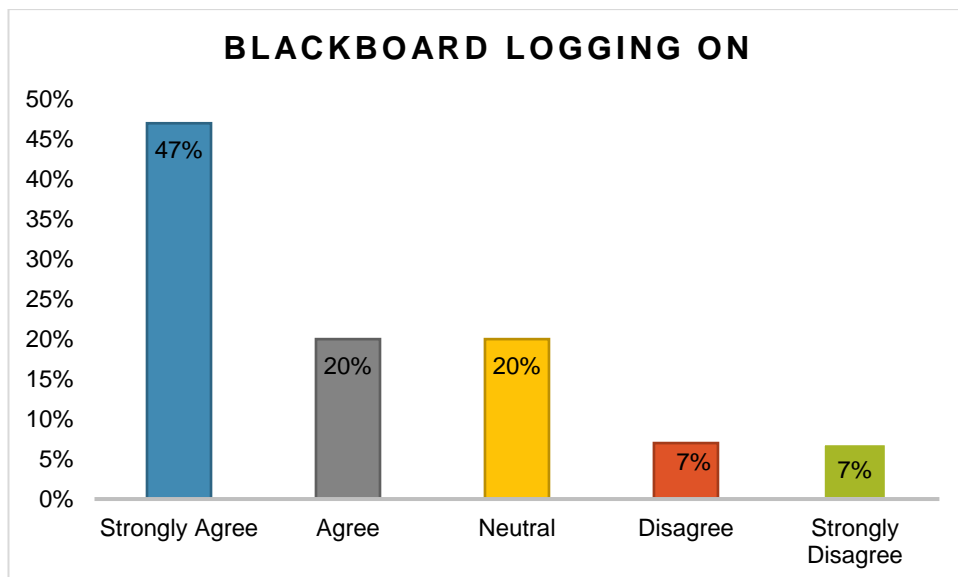


Figure 5-54: Blackboard logging in

Based on early Blackboard induction and introduction from lecturers and DUT representatives, the 2017 students did not appear to have any issues logging in to the Blackboard LMS.

5.7.6 I had constant internet access at home or on campus in order to use Blackboard

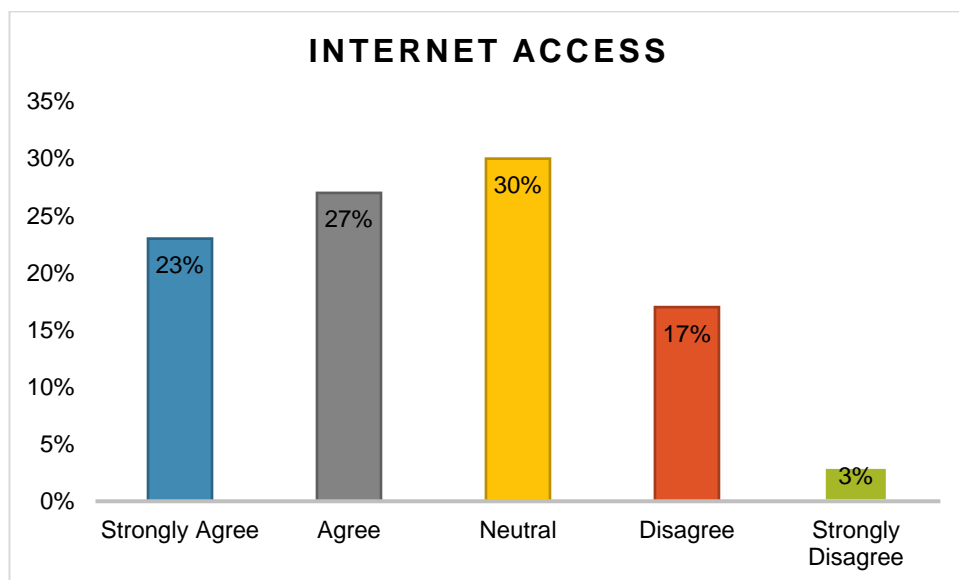


Figure 5-55: Internet access

Participants appeared to have mixed feelings about having constant internet access on campus or at home. Their responses varied because of variable on-campus connectivity issues, and also a lack of data where students needed to access online work from home (Figure 5-55).

5.7.7 I benefitted from incorporating technology into my work in a Creative Design project

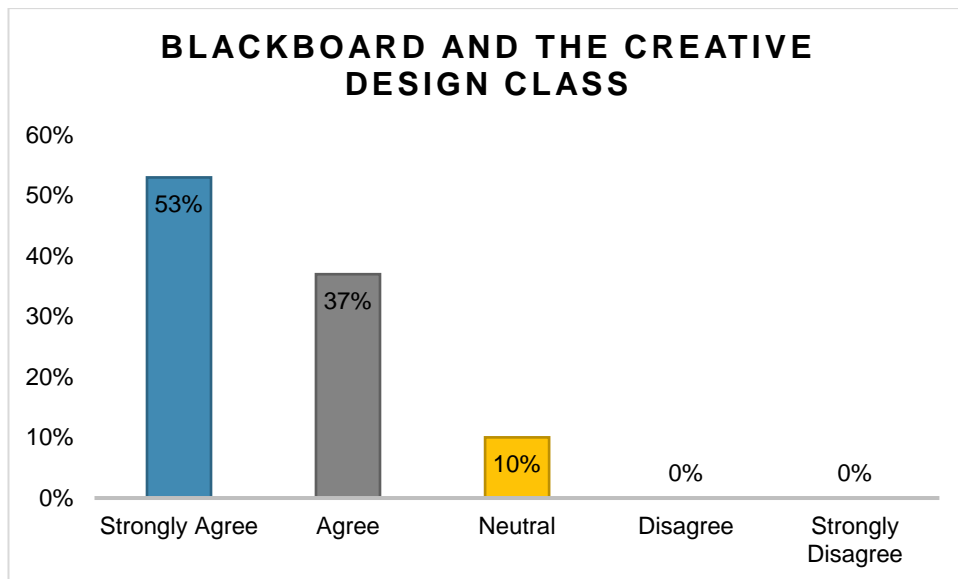


Figure 5-56: Blackboard and the Creative Design (I) class

5.7.8 I have benefitted from incorporating social media platforms with blackboard in a Creative Design (I) project such as Project Runway and Little Black Dress

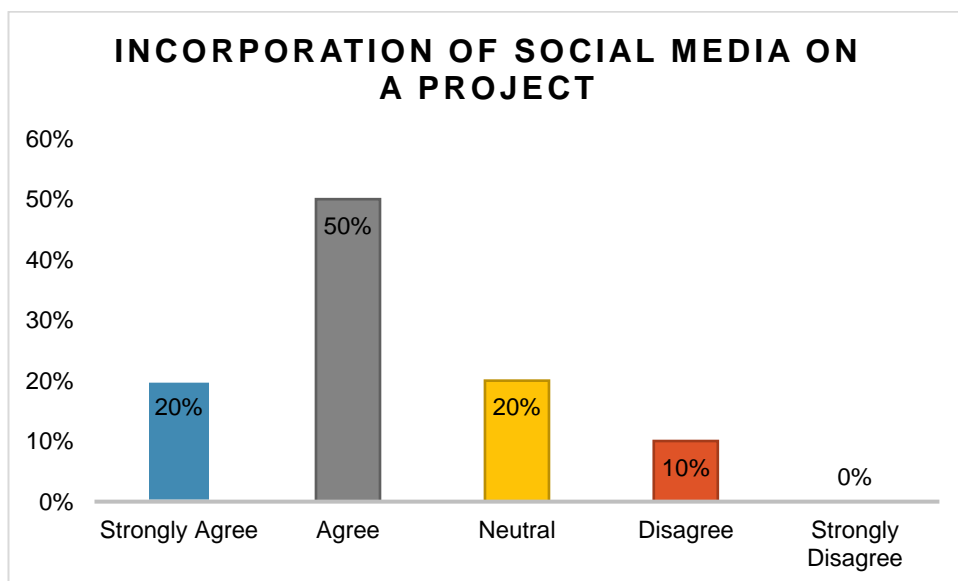


Figure 5-57: Incorporation of social media on a project

During the second cyclical process, Blackboard was integrated in-depth with the Creative Design (I) course. This was particularly to make use of the various projects tools it contained, such as the online journal, discussion board, lesson

plans, files, Blackboard email (which emails directly to peers and lecturer), folders, and web-link guides to trend websites. A large proportion of study participants agreed that this integration was beneficial (Figure 5-57).

5.7.9 I have benefitted from using the online Creative Design classroom: using Blackboard as a tool in the Creative Design class has improved my learning

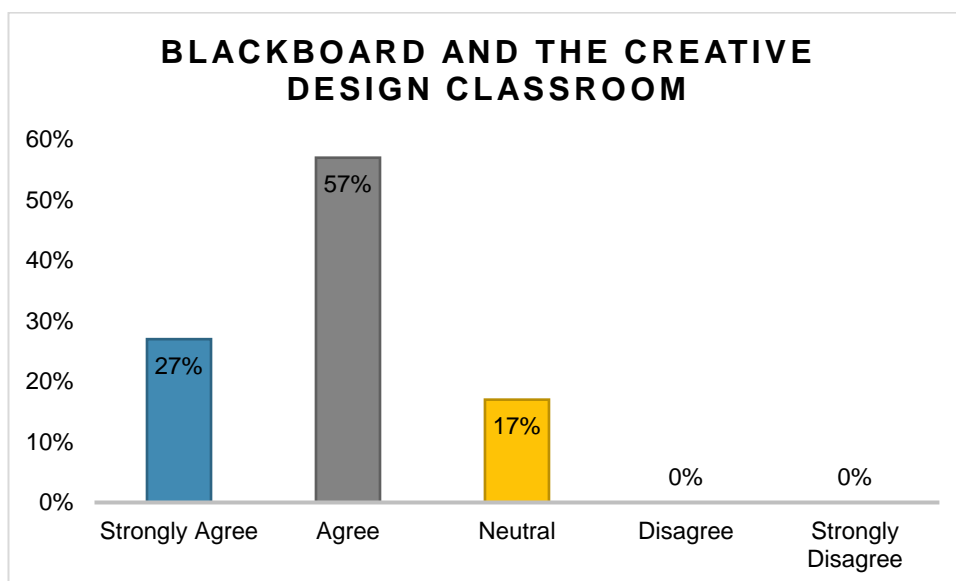


Figure 5-58: Blackboard and the Creative Design classroom

5.7.10 I enjoy using Blackboard for learning

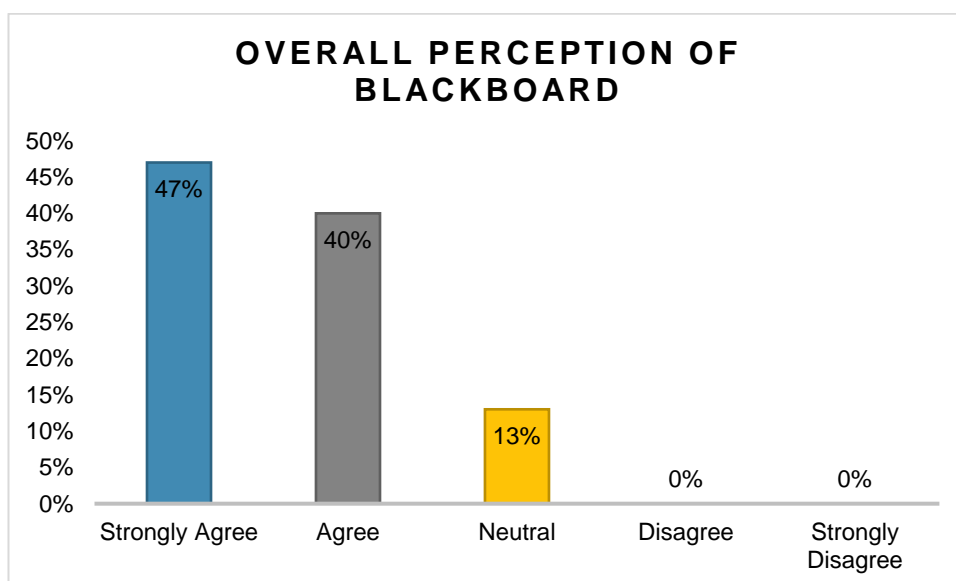


Figure 5-59: Overall perception of Blackboard

Overall, participants enjoyed the integration of blended learning through Blackboard for Creative Design (I) and found great benefit in it for their learning.

Annexure R – Questionnaire Two of Cycle Two – Section B

QUESTIONNAIRE TWO OF CYCLE TWO- SECTION B

5.8.1 What have been the highlights of using the Blackboard Creative Design classroom

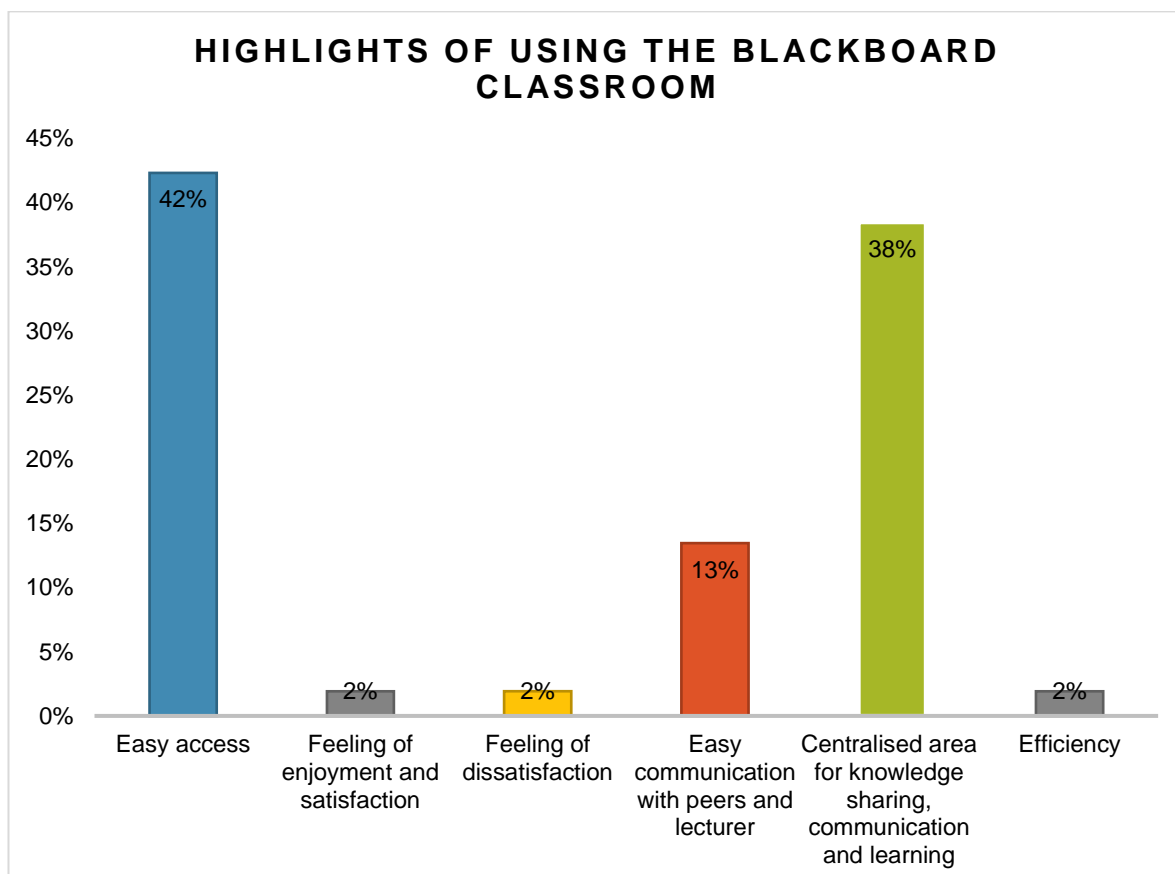


Figure 5-60: Highlights of using the Blackboard classroom

The coded data contained in Table 5-25 has been extracted directly from the online survey questionnaire answer sheet. No amendments in spelling have been attempted on the direct quotes provided, so as to give a truer reflection of the findings.

Table 0-21: Questionnaire Two Section B: coded data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
Easy access to information.	Access
It is easy to access once Blackboard allowed me to login and I now like that it can be used as a way to communicate effectively.	Access and effective communication
All my notes (extra and from class) for all my modules can be found in one place.	Access/Centralised place for communication and learning material
It's easy to access them at home.	Access
The app on my phone notifies me when new content is added.	Access/App notification
Easy and efficient.	Efficiency
The perks of this advantage is that you can communicate with the lecturer easily.	Access and effective communication
I can go over PowerPoint presentations and notes at home and go over briefs before the lesson to be prepared.	Access/Centralised for communication and learning material
Using the discussion board as a way to communicate with other students regarding anything.	Effective communication
Being able to browse through the trend sites on the brief provided on blackboard.	Centralised place for learning material
Learning to send emails on blackboard.	Communication
Easy learning and access to the classroom.	Access
The extra notes have helped me, as I am a slow learner.	Centralised place for learning
Being able to submit work online, access instructions when I needed to refer back.	Access/Centralised place for learning
Learning and researching.	Centralised place for learning

Instructions are easily accessible for our assignments.	Access
We are able to have an overview about what the lesson will be about before we have the lesson as the information about the lesson is on Blackboard.	Access/Centralised place for learning
To find project and learn about what's on it.	Access/Centralised place for learning
The fact that we are continuously updated as to what is happening in class.	Effective communication
Discussions and lesson plans.	Centralised place for learning
I get almost 80% of all the information I need for my learning, and it also keep me posted every time I log in.	Access/Centralised place for learning
Writing journals.	Communication
Being able to find briefs that I might lose in the future, as well as having extra information to study from.	Access/Centralised place for learning
It has improved the way I go about studying, it also gives me constant access to my lecturers and helps me plan for due dates, etc.	Access/Centralised place for learning
Because some aspects of Creative Design (I) require research and the use of Internet, the online classroom made it easy for me access information online while still using tools and information in the online classroom, which proved to be very convenient on my behalf.	Access/Centralised place for learning
The announcements we have received and knowledge that all the courses study notes are on Blackboard for our use is very helpful.	Access/Centralised place for learning
Creating journals which was not good at all!	Feeling of dissatisfaction

What has been my highlights of using Blackboard Creative Design (I) online classroom is that I gain more understand that there was a wide range of choices freely given to us to make our lives easier.	Access/Centralised place for learning
The access to the wsgn brief before class.	Access/Centralised place for learning
Able to interact with each other and we are able to talk to the lecturer and all the important notes are put up.	Access/Centralised place for learning/Communication
It made my life so much easier and I'm grateful that they introduced Blackboard to us!!!	Feeling of satisfaction
Blackboard has been helpful especially when we are doing assignments. It keeps us updated.	Access/Centralised place for learning
I can be prepared before a lesson and also gather information about tasks at home.	Access/Centralised place for learning
Group discussion and the class content.	Access/Centralised place for learning

Table 0-26: Questionnaire Two: coded significance

INTERPRETION	CODES
Easy access	Easy access from mode and home.
Easy to communication	Easy to communicate with Lecturer and peers.
Centralised area for knowledge sharing, communication and learning	Read over notes and briefs before class.
Notifications (Access)	I get notified of new information if and when its loaded.
Feelings of satisfaction and dissatisfaction	I did not enjoy the journal.
Access	Blackboard has made my learning more accessible.

Centralised area for knowledge sharing, communication and learning	I use it for learning and research.
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5.8.1.1 Summary of coded and interpreted data

As already mentioned, Cycle Two of the study received much fuller responses from the volunteering first-year student participants. The positive response in a willingness to participate gave the study a clearer reflection of student perceptions on the integration of blended learning. Students highlights for using Blackboard were its easy access, and having a centralised area for knowledge sharing, communication and learning. However, students shared similar sentiments with the first cycle's group – they did not receive a feeling of enjoyment whilst using the LMS.

5.8.2 Did you experience any difficulties when using the Blackboard Creative Design online classroom? Please expand on your answer

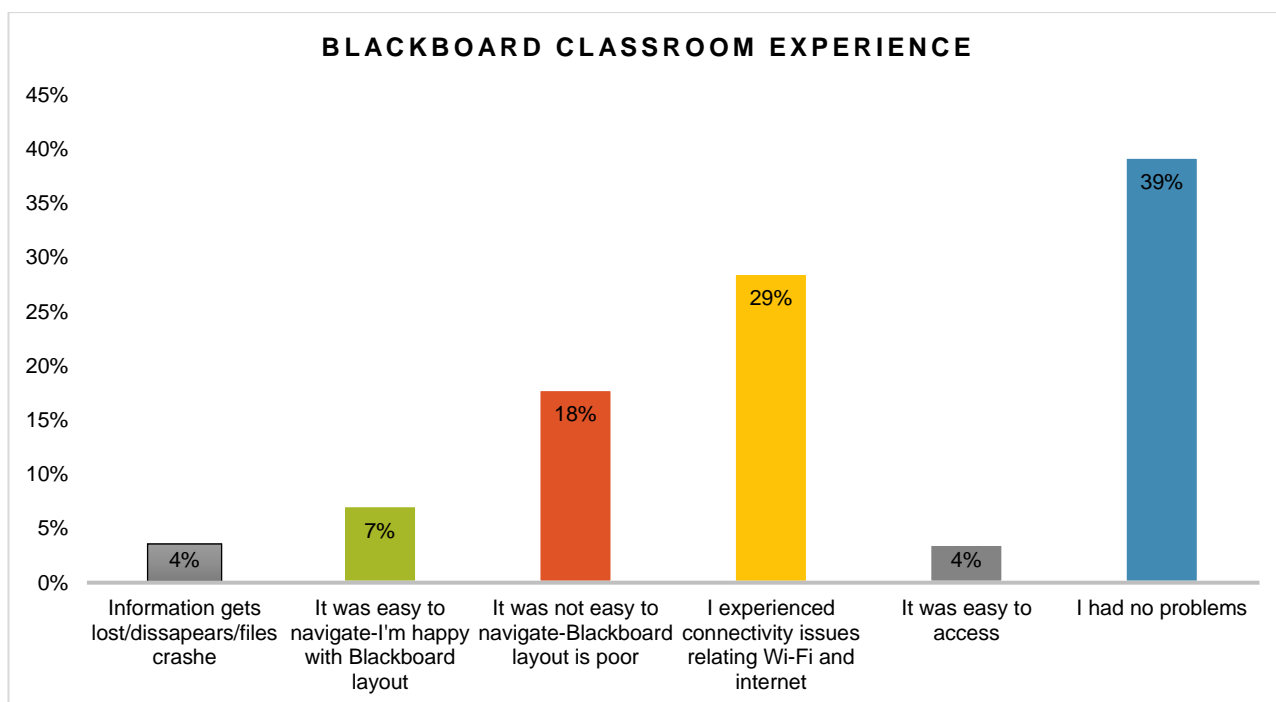


Figure 5-61: Blackboard classroom experience

The coded data provided in Table 5-27 has been extracted directly from the online survey questionnaire answer sheet. No amendment in spelling has been

attempted, and direct quotes have been made so as to provide a truer picture of the findings.

Table 0-22: Questionnaire Two Section B: coded data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
One file refuses to open but otherwise no.	Crashing content
I have never, the layout of Blackboard makes its simple to navigate the site.	Easy to navigate
Yes; sometimes it is quite difficult to navigate where certain of the additional features are, such as the journals, and group discussions.	Difficulty in navigating/Additional features are hard to navigate
I only ever seem to be able to find the notes.	Difficulty in navigating
The placement of some of the briefs, tasks, etc. were difficult or took a long time to find. It would be a huge help if the tasks were set out in a quick, easy to click format.	Difficulty in navigating
No, it was straightforward.	Easy to understand and navigate
Only problem I experienced was logging in and I am still experiencing that problem.	Difficulty in logging on
None at all.	No problems
Yes, when the Wi-Fi drops it staggers the process.	Connectivity issues/Unreliable networks and Wi-Fi
Yes, I sent my journals but it didn't go through.	Connectivity issues/Unreliable networks and Wi-Fi
No.	No problems

No. But it becomes a bit of a hassle to access Blackboard when I am at res, because the only Internet access I have is via my phone which can sometimes be problematic in terms of the poor Wi-Fi connection, insufficient data and poor connection.	Connectivity issues/Unreliable networks and Wi-Fi
I haven't experienced any difficulties as yet while using Blackboard.	No problems
No, I do not. Everything works properly and all links open correctly.	No problems
No, I did not.	No problems
No, I've only had a problem with Internet access.	Connectivity issues/Unreliable networks and Wi-Fi
No.	No problems
Yes, I was given a task to complete using eBook on Blackboard but I could not find it online until this far.	Difficulty in navigating
Yes.	Experienced difficulties (no elaboration)
No.	No problems
No, I have not yet, and hopefully I will not.	No problems
No, only at first because there were a lot of categories, which overwhelmed me. Besides that, it has been a breeze.	Difficulty in navigating
No, it is very simple to understand.	No problems/simple to understand
The only issue would be problems with connecting to the network.	Connectivity issues/Unreliable networks and Wi-Fi
No problems at all.	No problems

No, although I do not always have home Internet access.	Connectivity issues/Unreliable networks and Wi-Fi
No I didn't, it was easy to access.	No problems/easy to access

Table 0-23: Questionnaire Two: coded significance

INTERPRETATION	CODES
Information gets lost/crashing PDF files.	Lost information
Easy to navigate.	Good layout
Additional features and files are hard to find.	Poorly laid out
Not easy to navigate.	Poor layout
Logging in issues/Blackboard sometimes rejects passwords.	Connectivity issues
Connectivity issues/Unreliable networks and Wi-Fi.	Connectivity issues
Easy access.	Access

5.8.2.1 Summary of coded and interpreted data

Highlights that came out of as negative experiences in using the LMS were that participants did not find Blackboard easy to navigate – this is a possible indication of the system layout template not being user-friendly. Also, the study participants experience connectivity issues whilst on the system with crashing files and rejected passwords.

5.8.3 Please share your recommendations for improving the Creative Design online classroom.

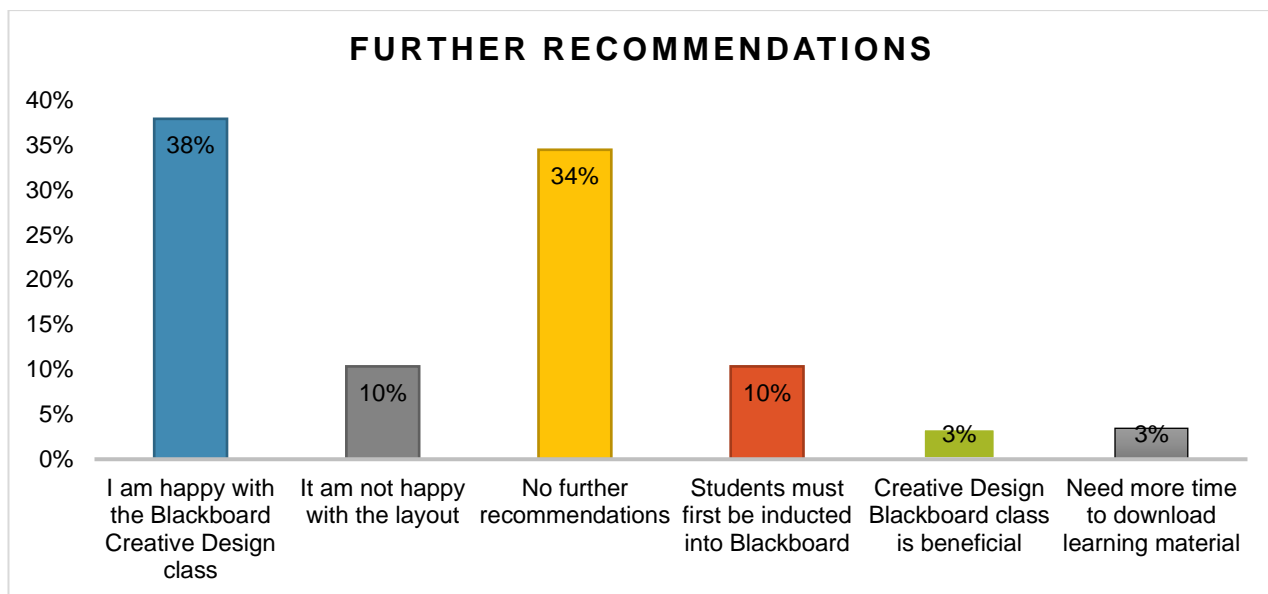


Figure 5-62: Further recommendations

The coded data provided in Table 5-29 has been extracted directly from the online survey questionnaire answer sheet. No amendments in spelling have been attempted, and direct quotes have been made so as to give a truer picture of the study findings.

Table 0-24: Questionnaire Two Section B: coded data

TERMS AND PHRASES AND HIGHLIGHTED FROM TRANSCRIPT	CODES
It is beneficial the way it is.	Satisfied with current state
Make things easier to find... Meaning that it would be better if not everything was hidden within a folder and then another subfolder, etc. It can become very confusing otherwise.	Re-design layout-needs to be easy to navigate
I have none.	No recommendations
Nothing for now.	No recommendations
I have no recommendations at the moment.	No recommendations
No.	No recommendations

It's not that bad to learn online but you need to know what you are doing.	Online learning is good however one needs to be inducted first
None at the moment.	No recommendations
Have a link on the announcement so that when we click it from the announcement page it takes us to the actual uploaded work.	Needs to be easier to navigate
It's perfect.	Feeling happy/satisfied
There are no improvements needed.	Satisfied with current state
We should be given little bit of time to download content and all the learning materials. Time to access the Internet on campus, 'cause we don't.	Need more time to download learning material
In my opinion the creative classroom on Blackboard is fine, it's very interactive and very informative as well as easy to navigate.	Creative Design (I) Blackboard classroom is a beneficial central place of learning
There are no ways I could think of to improve this online system, which from what I've seen this far runs very well.	Feeling happy/satisfied
No, it's perfect as it is.	Feeling happy/satisfied
Possible easy links and titles for accessing tasks, etc (i.e. not trying to find it after a few clicks elsewhere).	Re-design layout – needs to be easy to navigate
I have none, 'cause it was straightforward.	Feeling happy/satisfied
I do not have any recommendations as to how to improve Creative Design (I) online classroom, 'cause for me it seems quite fine. But when a problem arises I will let you know.	Feeling happy/satisfied
I do not have any recommendations.	No recommendations
Everything is provided, so for now I'm satisfied.	Feeling happy/satisfied


No, its fine. It's just that my computer skills are very low.	Online learning is good however one needs to be inducted first
None.	No recommendations
I'm happy for now and haven't seen any problem in need of improving.	Feeling happy/satisfied
There's nothing I could add. I can only be thankful that Blackboard appeared.	Feeling happy/satisfied
None.	No recommendations
I think it perfect for learning easy to access for those who don't.	Satisfied with current state
I have no recommendations.	No recommendations
We should be given more useful information on how to do tasks/assignments.	Online learning is good however one needs to be inducted first
 no need	No recommendations

Table 0-25: Questionnaire Two: coded significance

INTERPRETATION	CODES
I am satisfied with the Creative Design (I) Blackboard class.	Feeling of satisfaction
It is not easy to navigate. Layout needs to be improved.	Poor layout. Layout must be reviewed
I have no further recommendations.	Uncertain whether student is satisfied or not
Online learning is beneficial, but only once you are familiar with using it.	Blackboard induction is necessary
The Creative Design (I) classroom is a beneficial space for learning.	Central place for sharing knowledge and learning

5.8.3.1 Summary of coded and interpreted data

To conclude the study's perception feedback questionnaire, further recommendations were requested from students. Participants were encouraged to answer sincerely, as this was to assist in the further integration of blended learning within Creative Design (I) for Fashion. Students stated that the Blackboard layout definitely needed to be reviewed so that learning material is simpler to find. However, 34 percent of the sample did not make any recommendations and 38 percent are happy with the integration, although they did not elaborate on their answers (Figure 5-61).