

**THE ADOPTION OF A VIRTUAL LEARNING ENVIRONMENT IN A  
TEACHER EDUCATION INSTITUTION: THE PROCESSES AND  
TENSIONS**

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# **DEDICATION**

**To the loving memory of my parents  
whose love for education and hard work  
has inspired me.**

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I thank God for the many persons He has allowed to accompany me on this very challenging and exhilarating journey. Their willingness to accompany me has given me the courage to persevere and to arrive safely at this important juncture in the journey of my life.

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## ABSTRACT

The study investigates the processes by which a teacher education institution in Antigua and Barbuda learns to use Moodle, a Virtual Learning Environment (VLE), as a tool to offer courses online. Also under investigation were the tensions inherent in this change process. The research employs elements of the Activity Theory framework proposed by Engeström, (1999) namely, the principle of *multi-voicedness* which gives voice to the multiple perspectives of the participants and *contradictions* or tensions which are inherent disturbances to understand the social system under investigation.

In this qualitative research, the data were generated from multiple sources, including multiple interviews with participants, personal journal entries, and workshop evaluations. Most of the data presentation and analysis took place concurrently. The process of learning to use Moodle took place over a three year period and involved 4 main training events. The study points to the critical role of leadership in articulating a clear direction of where the institution wants to go and providing the technological and psychological support to propel the adoption. Other tensions arose as a result of the multiple initiatives to which the participants were adjusting at that time. Tensions also arose when some participants' desire to be professional converged with limited typing and computer skills, unreliable internet service and the additional time required for designing courses for online/blended delivery. Several recommendations are made including, the need for a) clearly articulated vision, b) policies related to mandatory adoption, c) budgetary allocation, and d) assessment of the readiness of the institution to embark on the initiative.

Keywords: Change, professional development Activity theory, and eLearning

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## **ACRONYMS AND ABBREVIATIONS**

ASC	Antigua State College
BOE	Board of Education
CARICOM	Caribbean Community
CSME	CARICOM Single Market and Economy
CHAT	Cultural Historical Activity Theory
CKLN	Caribbean Knowledge and Learning Network
COL	Commonwealth of Learning
CXC	Caribbean Examinations Council
DTE	Department of Teacher Education
Dip. Ed	Diploma in Education
EFA	Education for All
ITEN	Inter-American Teacher Educator Network
LMS	Learning Management System
MOE	Ministry of Education
OAS	Organisation of American States
OECS	Organisation of Eastern Caribbean States
SIDS	Small Island Developing States
SOE	School of Education
UWI	University of the West Indies
VLE	Virtual Learning Environment
VUSSC	Virtual University of Small States in the Commonwealth

# **CHAPTER ONE – INTRODUCTION TO THE RESEARCH**

With the global thrust to integrate technology more pervasively into the curriculum, and the growing use of the online environment to offer instruction, by what process can a teacher education institution adapt to eLearning?

## **1.0 Background and rationale for the research**

As the Head of a teacher education institution, I had often been concerned that many of the reform projects which related to teacher education in Antigua and Barbuda did not seem to include the institution which trained the teachers. I came to realise that I was not alone in my observation. In the Caribbean, where the education sector was undergoing reform in an effort to achieve the mandate of Education For All, Mark (2006) also commented that the plan to improve the quality of education by upgrading the status of the teachers, did not focus on factors which related directly to teacher development, such as teacher education programmes, the quality of teaching and of teacher education. Since the quality of education is directly related to the quality of the teachers and teacher quality is impacted by the quality of the teacher education, (Boei et al., 2015; Celik, 2011) I felt that it was imperative that steps should be taken to ensure that the teacher education programmes and the tutors who teach in those institutions cater to the needs of the teachers who will ultimately impact the schools.

As Mark (2006) proposes,

Teacher Educators have a critical role and function in the education system. They are directly responsible for delivering the programme of initial preparation and for nurturing the professional development of the teacher in in-service programmes. They therefore influence the

quality of the education process in the schools significantly. (Mark, 2006, pp.4-5)

While admitting that there is evidence of change in this regard, many researchers are concerned about the limited research on teacher educators (Murray, 2008; Margolin, 2011; Murray and Kosnik, 2011). This research therefore focusses attention on the training of the apparent non players or forgotten group in the education system.

The research takes place in a small Caribbean twin island state called Antigua and Barbuda which is 176 square miles and has a population of about 90,000 (World Bank). Antigua and Barbuda is considered one of the Small Island Developing States (SIDS). Such states are known (among other things) for their susceptibility to natural disasters, limited funds and limited human resources. The participants in this study all originate from the Department of Teacher Education (DTE) one of 6 departments of the Antigua State College (ASC).

The ASC was established in April of 1977 after the merger of the Leeward Island Teacher Training College and the Golden Grove Technical College. This merger brought together 4 entities: Teacher Education, Commercial, Hotel and Catering and Engineering and Construction. In 1978, The Advanced Level Department was added through the amalgamation of all Sixth Forms in the island's school system. By 1981, the Hotel and Catering Department was moved to Dutchman's Bay where it became the new Hotel Training Centre, now the Antigua and Barbuda Hospitality Training Institute (ABHTI). Over the years, the programme offerings at the ASC have expanded. Notably, the School of Pharmacy was established in 1998. In that same year, through a franchise agreement with University of the West Indies, the now

Department of Undergraduate Studies which offers up to year 2 of the 3 year baccalaureate degree was added. Ten years later, in 1998, the School of Pharmacy was established. Finally, in 2000, the forty-four year old School of Nursing was integrated into the ASC. Currently, the student population is 1200 while the academic staff population is 147 (Full time – 67 Part time – 80).

It is into this landscape that the research was conducted with the teacher of the DTE. (The context of the DTE will be explicated in **1.3**)

### **1.1 The Motivation for the Research**

My interest in the education/training of the tutors was enhanced, when from 2005 to 2008, I represented Antigua and Barbuda at four major workshops hosted by the Organisation of American States (OAS) in response to the challenge of improving the quality of recruitment and selection, initial formation, professional development and evaluation of teachers in countries in the hemisphere. In light of the CARICOM Single Market and Economy (CSME) and other Commonwealth protocols for the recruitment of teacher educators, this OAS Hemispheric project was designed to help the Caribbean to be aligned with international standards with regards to teacher education. This was a very important initiative because Antigua and Barbuda is a member of CARICOM, a regional integration movement (analogous to the European Union) which, among other things, seeks to integrate the economies of the English speaking Caribbean and to facilitate the free movement of goods and services in the Caribbean. An important outcome of that workshop was a document outlining the harmonized policy for teacher education in the region.



In 2006, in a seminar captioned “New Approaches to Policy and Practice for Teacher Educators in the Americas: A Seminar to launch the Inter-American Teacher Educator Network (ITEN)” one of the emphases was “Creating strategies and opportunities for professional development of teacher educators.” An outcome of that workshop was the need for teacher educators (tutors) to be trained. I was so challenged by the need for tutors to be trained, that when the call was made for one of the countries to host the pilot orientation programme for teacher educators (tutors), I eagerly suggested that the pilot be initiated in Antigua. The focus of this pilot programme was to orient the teacher educators to the new vision for teacher educators in the Caribbean. (See Appendix 1A and 1B for the Pilot Programme Structure and Report (respectively) on the workshop held.

Darling-Hammond (2005) refers to teacher educators as change agents and asserts that “reform efforts that have ignored the preparation of teachers have been doomed to fail, as they have assumed change could be achieved without attention to the knowledge, skills and disposition of the primary change agents without whom little transformation is possible” (2005, p.442) While I saw the value of that statement, I also reasoned that reform efforts that do not take into account the education, quality and attitudes of the tutors are also doomed to fail since their (the tutors’) competencies (knowledge, skills and attitudes) will have a significant impact on the teacher candidates or what we refer to as student teachers. Any kind of educational change, however, must have at its root the improving of the quality of education for all students and teachers. Since the DTE was attempting to prepare student teachers to cater to the needs of their students, I felt that attention should also be given to the characteristics and orientation of the students (whom they would be teaching) for

whom web-based and mobile technologies such as blogs, wikis, Facebook, Twitter, seemed to be a part of their natural environment. Furthermore, I felt that webinars and online Learning Management Systems are much too pervasive to be ignored. In this research, the faculty of the DTE was being introduced to Modular Object-Oriented Dynamic Learning Environment (MOODLE), an open source learning management system, which is an alternative to the commercial products such as WebCT and Blackboard. Within a Moodle course, it is possible to add modules such as quizzes, videos, links, forums, websites, and documents. Not only is it open source (free), but it is flexible, easy to use and is housed in the environment (cyberspace) where our students frequent. (There will be further discussion about Moodle in **2.3.4**) Since these newer technologies can provide greater ease of access to information in general and to teaching resources in particular, I felt that both tutors and student teachers could benefit from engaging with them. Up to that point, my interest in the participants of my research was ignited. The next section will outline other factors which motivated my interest in the research.

## **1.2 Factors supporting the need to change**

As I considered education in Antigua and Barbuda generally, and the tutors in the DTE in Antigua in particular, I recognized that there were a number of factors which suggested that we should engage in other means of facilitating learning. Within the past 15 years, there have been a number of changes internationally, regionally and nationally that has impacted education and had motivated me to challenge the faculty to adapt to eLearning by learning how to engage students in the Virtual Learning Environment (VLE) (More will be said about the VLE in Chapter 2.) In the next

sections I will outline the personal, national and regional factors that seemed to propel me to engage in the topic of this research.

### **1.2.1 Personal factors: Enrolment in an Online Programme**

In 2005, a very significant initiative was put in place by the government of Antigua and Barbuda. Civil servants, including teachers, were allowed to leave the system without prejudice while at the same time get a substantial pay package (in spite of the fact that many were not close to the age of retirement). Given this opportunity, a number of experienced and trained teachers took “the package” as it was then called, and left the educational system bereft of many trained and experienced teachers. During that same year, about two years after I had been appointed Head of the DTE, I was enrolled in an online programme. I was so intrigued by the possibility of using the online medium to train the many untrained teachers who were already in the school system and those who would need to be employed, that in the first module of my doctoral programme, my research proposal was designed to “assess the readiness of the Department of Teacher Education at the Antigua State College to be strategically successful in offering on-line education.”

By January 2007, I was one of four team leaders, who represented four regions in the commonwealth, who was invited to identify the professional development needs in our regions which the Virtual University of Small States in the Commonwealth (VUSSC) boot camp (which was to be held in Singapore) should address. As we brainstormed about what should be the focus of the boot camp, the need to widen access to educational resources was so ubiquitous that we decided to explore how to convert our traditional programmes to open and distance modality. Consequently, the

focus of the workshop was “Training Educators to Design and Develop Open and Distance Learning (ODL) materials.” The product of the workshop was a 12 modules facilitator’s guide for conducting a workshop to train educators to develop Open and Distance Learning (ODL) resources. This document was placed on wiki educator and later converted to a pdf file which can be accessed from the website of the Commonwealth of Learning. Apart from the fact that we were encouraged to share our knowledge with our colleagues, as the head of DTE, the main institution responsible for the education/training of teachers, I was enthralled by the opportunity to assist my staff to use another methodology to facilitate learning. Again I thought that if there were more untrained teachers in the system, and our tutors could learn how to convert their resources to ODL materials, then we would be able to increase the number of teachers that could be trained at a given year.

It appeared that I was being further drawn into the change of increasing access to educational resources when, in July 2007, the ASC invited me to attend a workshop in Grenada entitled “Quality Assurance in Online Learning – New approaches to course and student evaluation” and another on “Course development for online learning.” These workshops were hosted by Caribbean Knowledge and Learning Network (CKLN) a project designed to “enhance the competitiveness of Caribbean countries.” One of the ways this project intended to do so was to use information and communication technologies to connect higher/tertiary level educational institutions in the Caribbean, so that they would not just share knowledge, but ultimately offer courses online. Coming out of that workshop, I was more confirmed in my view that online learning was a viable option, not just because it would allow more student

teachers to be trained, but also because it was possible to monitor the quality of the training that the students would receive. However, if tutors were to offer courses online, it was imperative for them to be trained to use the VLE that would make it possible. In 2007 as well, another educational institution in Antigua with which I was affiliated, was offering opportunities for its staff to learn how to use Moodle. Indeed, while I was learning how to use a VLE, I was also being taught quality assurance issues related to its use. As my own competences were being developed, I saw opportunities for me to challenge my staff to explore another avenue, the use of Moodle, to teach the student teachers.

In July 13 -17, 2008, the government of Antigua and Barbuda sent me to The fifth Pan-Commonwealth Forum, (PCF5) on Open Learning that was co-hosted by the University of London External System, the UK Open University, the UK Department for International Development (DFID) and the Australian Government's overseas aid programme, AusAID, held at the University of London. This Forum brought together 729 registered participants from over 70 different countries (most of which are in the Commonwealth). There were 320 papers, workshops discussions covering 4 main themes: Children and young people; Governance, conflict and social justice; Health; Livelihood; and three cross-cutting issues: Appropriate learning technologies; Institutions; and Learner support. All of these discussions focussed on how open and distance education could assist in achieving the Millennium Development Goals. The Education for All (EFA) and the Millennium Development Goals both focus on providing and improving education for all individuals. In that regard, the government of Antigua and Barbuda focussed on ensuring that there was universal secondary education for all. If all individuals are going to be educated effectively, then I

reasoned that tutors should consider how the VLE could assist in facilitating instruction to diverse learners.

In addition to the training initiated by the Ministry of Education (MOE) for the five schools and the ASC in 2008, another tutor and I had also run a three-day workshop over a period of three weeks on “Developing Content for Open and Distance Learning” to share what we had learned/developed in Singapore. This Singapore workshop also provided an introduction to using Moodle. Up to that point, the ASC did not have a web server with Moodle, so I had sought and gained permission from another institution to host our courses for the duration of the workshop. Unfortunately, not many of the workshop participants were able to practise using this VLE beyond the workshop period. The ASC was promised a web server which would allow for Moodle to be installed on the college’s website so that all teaching staff and students could have access. Regrettably, it was not until April 2009 that the ASC was able to begin to train its technicians and a few teachers in the use of SonisWeb, a Web-based Academic Administration System. Administrative staff members and heads of departments were also trained to use the administrative aspect of the software only. Of importance to this research is the fact that SonisWeb also has the capacity to host Moodle, the VLE which the ASC intended to use.

While these changes were occurring on a personal level, the government of Antigua and Barbuda was also instituting a number of changes. With increasing awareness that the new technologies of information and communication could revolutionise our ways and conditions of learning, the government of Antigua and Barbuda was making

every effort to ensure that every household had access to the Internet and that the citizenry was computer literate.

### **1.2.2 Initiative of the Government of Antigua and Barbuda**

So committed was the government of Antigua and Barbuda to bringing about a “technology revolution” in the country, that in 2006 it launched a “community technology programme.” This initiative was spearheaded by the Ministry of Information and Technology with the support of the MOE. The purpose of this initiative was not only to equip every young person with information technology skills, but also to assist each person to be more competitive as he/she prepared for the world of work. The three components of this initiative involved (a) the deployment of “mobile high-tech classrooms,” (Toyota Coaster vans that were retrofitted with touch-screen computers with high speed Internet access), (b) Community Access Centres equipped with high speed Internet so that anyone in the community could learn information technology skills and (c) the deployment of community technology officers (not necessarily trained teachers) who worked particularly in the community access centres. Indeed, this initiative was not limited to young people since it was hoped that every citizen would have access not only to computers, but also access to the Internet. Twenty such centres were commissioned by the Government of Antigua and Barbuda, while another 12 were established in collaboration with Digicel, a regional communication and entertainment company. With the establishment of these centres, the citizenry was encouraged to register for the courses which were free of cost.

In 2008, the Ministry of Information, Broadcasting, Telecommunications, Science and Technology showed further commitment to bringing about the local technological revolution by offering laptops for rental to all students and teachers at the ASC and establishing Internet “hot spots” at the main campus and the Nugent Avenue campus (that housed the DTE at that time). Furthermore, under the laptop rental programme, participants also benefitted from free Internet access at their homes for the period of the rental. To further support the plan, in separate media broadcasts, the Prime Minister of Antigua and Barbuda, the Minister of Information Science and Technology and the Governor General reiterated that the government of Antigua and Barbuda was building a knowledge-based society where all its citizens would be globally connected. To ensure that the government’s technology driven environment was realised, the Ministry of Information indicated its commitment to put measures in place to enable every home in Antigua and Barbuda to have a personal computer and broadband Internet by 2012.

Additionally, in an effort to modernise instruction to mirror the ‘new environment’ that was available to us, in 2008, the MOE embarked on a pilot project designed to assist the teachers at the ASC (of which the DTE is a part) and 5 of the 9 government (public) secondary schools (each of which had one computer lab), to integrate information technology into the curriculum. About 80 teachers were involved in this initiative. It was hoped that by engaging in these projects there would not only be the possibility of integrating the technology into the current classroom mode of delivery, but that there would also be the potential for widening access to educational opportunities through distance learning. This initiative of the MOE furthered my desire to ensure that the tutors’ knowledge base in Information and Communication



Technologies (ICT) was commensurate with, if not ahead of, the skills of the populace. Not only did the initiative of the government of Antigua and Barbuda fuel my interest, but so too did the strategic plan of the ASC. In the next section, I will consider how the initiative of the ASC further enhanced my interest in the VLE.

### **1.2.3 Antigua State College Initiatives**

In a strategic planning session held mid-2008, the ASC proposed to offer courses online in one year (by 2009). The draft strategic plan 2009-14 section 3.6 reads as follows:

“3.6 Improve ICT infrastructure for use in administration and blended/distance learning:

- Many of ASC’s current business systems and administrative tasks (e.g. registration, issuing of transcripts, timetabling, accounting procedures, and grade storage) are executed manually, making the tasks time-consuming and subject to error. The availability of a server, dedicated computers, and trained staff to create an electronically-enhanced administrative system that stores and manages students’ data and manages administrative systems for the students’ life cycle is an urgent need of the College.
- While some staff training has already begun to enable the College to participate in CKLN’s creation of a regional tertiary learning community offering blended and on-line courses, *more training in the use of the Moodle Learning Management System (LMS) and further staff training in course translation and development for blended or distance learning are still required.*” (Italics mine) Excerpt from Antigua State College Synopsis of Draft Strategic Plan 2009 – 14.(Appendix 2)

The ASC recognised the need for staff training if their objective were to be realised. Part of the rationale for offering courses online was the fact that there was not enough physical space to accommodate all the candidates who desired to attend the ASC. Indeed, the vision of the College is to allow persons, both locally and regionally, the opportunity to access its courses online. Aware of the excellent programmes offered

in the DTE and the need for trained teachers in the system, I, as head of the DTE, was eager to assist the college to realise that vision.

Not only did the ASC want to offer courses online, but it also wanted to ensure that faculty members begin to use some innovative technological tools. Consequently, in 2008, for the first time, the DTE received the following technological tools: a laptop, a LCD projector, a visual presenter and an interactive white board. It was in that year that I thought of examining the extent to which the tutors use information and communication technology, and examine their psychological and 'pedagogical' readiness for the change.

So committed was the ASC to achieve its objective, that in 2008, the year of the strategic plan, the principal invited me to enrol in training to facilitate online learning. That year, I successfully completed the course, "Managing and Facilitating Online Instruction." I was then deemed to be a Certified VUSSC/and the University of the West Indies (UWI) Open Campus Online Instructor.

Additionally, by the following year, the ASC sent me, as part of a team of five persons from the ASC, on a 'Study tour to Canada' to "gain as much historic and first-hand experience in the development and delivery of on line and distance modalities." It was hoped that "the lessons learnt will provide the basis for building institutional capacity for the delivery of courses on line."

The stated outcomes of the visit were:

- "The team will have a clearer view of the challenges of implementing delivery of courses in open and distance learning modality to
  - provide the leadership required to introduce on line and distance learning.

- become the collective champion for the promotion of on line and distance learning at all campuses of the Antigua State College.
- develop and document a plan of action to encourage and facilitate wider participation in online/distance education activities at the College
- build the capacity of the College to meet the demands as outlined in the preliminary statements.
- review the practical experiences of pioneers in this field which will inform the implementation ODL at the Antigua State College in terms of challenges for students, staff and other stakeholders.
- ensure that the appropriate technological infrastructure and information resources will integrate for the effective delivery of online programmes.
- contribute fully in the development of the proposed consortium of courses/programmes through the CKLN initiative.

Excerpt from ASC 'Proposal for a Study Tour to Canada to Visit Institutions Involved in Open and Distance Learning.' (2009 bullets mine) Appendix 3B

The document also outlined a number of forces that were driving the demand for providing more flexible modes of delivery in Teacher Education to include: a) the newly developed national policy that persons entering the teaching profession need to be certified as teachers before entering the educational system, and b) the need to fast track the training and education of untrained teachers already in the system, particularly in light of the fact that over 200 teachers who were already in the system had opted to take early retirement when the government of Antigua offered a voluntary separation package to all civil servants. While from a governmental and College level, there appeared to be a policy imperative to embrace technology generally and to offer courses online, there was yet another factor that propelled my desire to engage in this research. The next section therefore focusses on the regional factors which propelled my desire to engage in this research.

#### **1.2.4 Regional Factors: Free Movement And Harmonisation**

With the advent of the CARICOM Single Market and Economy (CSME) – comparable to the European Union – which allows for the free movement of goods and services throughout the Caribbean region - the Caribbean and Latin American countries were working towards a harmonized policy for teacher education in the region and the need to set up a Caribbean Council for Teaching and Teacher Education. Other regional initiatives were calling for harmonisation of policy for curriculum, for Information and Communication Technology (ICT) and for a Council for Teaching and Teacher Education and for the establishment of an intranet to link schools, colleges and Ministries of Education in the Organisation of Eastern Caribbean States (OECS) using the technology. Indeed, CKLN was supporting staff members from the Caribbean institutions to develop capacity to deliver online learning to Caribbean tertiary education students. In my mind, these initiatives pointed to the need for tutors in the DTE to not only model the use of ICTs in the classroom so that students could develop an appreciation for their usefulness as tools for learning and communication, but also learn to use software to enable online learning.

So far, I have highlighted the personal, national and regional factors that have fuelled my desire to engage in the research. Table 1 below which graphically presents these factors also reveals that except for 2008, each year, there was an activity related to at least one of these areas: education of teacher educators, online learning, Internet access or 21<sup>st</sup> Century tools. From 2005 – 2008, the OAS workshops which focused on improving the quality of teacher education emphasised that the tutors in the Teachers' Colleges in the Caribbean were not targeted for any kind of training

including ICTs. In light of the initiatives nationally and regionally and the fact that the tutors had not received any specialised training to accomplish their tasks, I saw an opportunity to engage in applied research in the context of the DTE.

**Table 1: Summary of Factors Motivating the Research**

<b>Year</b>	<b>Personal</b>	<b>ASC/National</b>	<b>Regional</b>
2005	Started online programme	Voluntary separation package (need to train new teacher)	OAS Workshops concerning improving the quality of teacher education (2005-2008)
2006	Attended a seminar captioned “New Approaches to Policy and Practice for Teacher Educators in the Americas”	Launch of “community technology programme” providing Internet access and web based courses to communities in Antigua	OAS launched the “Inter-American Teacher Educator Network (ITEN)” to create strategies and opportunities for professional development of educators.
2007	Attended 3 week VUSSC boot camp on “Training Educators to Design and Develop Open and Distance Learning (ODL) materials.”  Attended two workshops hosted by CKLN related to online learning		CKLN workshop on “Quality Assurance in Online Learning – New approaches to course and student evaluation”  CKLN workshop on “Course Development for online learning.”
2008	Conducted workshop for faculty at ASC on “Developing Content for Open and Distance Learning” (Including an introduction to Moodle) Attended the fifth Pan-Commonwealth Forum, (PCF5) on Open Learning  Successfully completed the “Managing and Facilitating Online Instruction’ course and deemed to be a Certified VUSSC/Open Campus Online Instructor	Strategic plan of ASC to offer courses online by 2009.  Laptop rental programme and Internet “hotspots” provided to the ASC by Min. of Information and Technology DTE received four technological tools  Workshop designed to integrate information technology	
2009	Commenced the data collection for the research	ASC trained technicians and tutors in the use of SonisWeb and Moodle.	Study tour to Canada to gain historic and first-hand experience in the development and delivery of on line and distance modalities.

The changes that had taken place from 2005 – 2009 were of such a scale that they demanded documentation. However, they were not the only factors that were

propelling the research; the mind-set of the students was another issue that compelled me to explore another modality to facilitate teaching and learning.

The next section therefore focusses on student issues/characteristics which suggested that we consider another way of engaging the students.

### **1.2.5 Student factors**

In addition to the impelling factors on an international, regional, local and personal level, there are factors related to the students. The characteristics of the students whom we are preparing our student teachers to teach, and (to a less extent) the student teachers themselves, suggested that we should reconsider the way in which we organise the teaching and learning situation. According to Behrstock and Clifford (2009, p.2), persons born between 1977 and 1995 are considered to be “extremely comfortable with technology and are dissatisfied with disconnected or technologically inferior workplaces, giving them the nickname, “Gen Y’erless.”” Even if we do not accept this view, we should consider that the world view of individuals is usually determined by the conditions/events to which they are exposed or socialised, and these generation Y students have grown up in an era when the Internet has been in full bloom. Additionally, they have grown up with technologies such as cell phones, instant messaging, wikis and Facebook, YouTube and Twitter. In light of this, it would seem to me that we should incorporate the newer technological tools into our teaching.

Given the view that a teacher will generally teach in his or her area of competence/intelligence, Christensen (2008, p.35) asks a provocative question: “Can the system of schooling designed to process groups of students in standardized ways

in a monolithic instructional mode be adapted to handle differences in the way individual brains are wired for learning?” Since the goal of every nation, Antigua and Barbuda included, is to educate every child, Christensen (2008, p.38) suggests that: “Computer-based learning, which is a step on the road toward student-centric technology ... is emerging as a disruptive force and promising opportunity.”

There is also the hope that students access to and familiarity with the Internet and the newer technological tools for social and collaborative endeavour will result in their use of these tools for educational purposes. Additionally, whereas in the past online learning had seemed to be the domain of the adults, it would appear that the ‘mindset’ of this generation was suggesting that we consider the new environment and modality for engaging our students. In that regard, I was eager to find out about the growth of online learning.

### **1.2.6 Growth of online learning**

In reference to higher education in the United States of America, the 2010 Sloan report reveals that the growth rate for online enrolments was 21% while the growth rate for the overall higher education student population was 2% (Picciano, & Seaman, 2010). The Sloan report also reveals that online learning is not limited to higher education, “The overall number of K-12 students engaged in online courses in 2007-2008 is estimated at 1,030,000. This represents a 47% increase since 2005-2006.” (Picciano, and Seaman, 2009, p.1) The new future where education can take place when and where we want it suggests that we as educators must now examine whether we are catering to the needs of the students. As Madhusudan (2002, p.40) indicates, “The power of today’s technology tools enables the creation of newer education

models that can leverage multimedia, provide ease of access, support collaboration and sharply reduce the traditional constraints on access to effective teachers, teaching resources and cost structures.” I therefore reasoned that if there were benefits to be derived, then it may be useful for us to explore this new avenue for teaching.

I felt that the new possibilities available via the Internet suggested that very soon one of the courses that the teacher education colleges may soon have to offer is online pedagogy/managing and facilitating online learning since elementary, secondary and higher education was engaged in online learning. As Christensen (2008, pp.228-229) argues, “Continuing to train teachers to perform in a world of monolithic, teacher-led delivery, where the key skills are in holding students’ attention to subjects that are being taught to the dominant type of learner in each subject, trains teachers for the past.” It is for this reason that this research focusses on the professional development of the tutors as it investigates the process by which the DTE learns to use Moodle. Given the foregoing, the next section outlines the context in which the research takes place.

### **1.3 The context**

This section outlines the context in which this research takes place. It presents aspects such as the origins of the DTE, quality control issues and the programmes that are offered.

#### **1.3.1 Origin of the Department of Teacher Education**

Teacher educators (tutors) have been playing a significant role in Antigua since 1834. Fergus (2003) asserts that Antigua was the first of the British Leeward Islands to



"initiate teacher training" and was responsible for training teachers who resided not only in Antigua but in the other Leeward Islands as well. In Antigua, the training of teachers began as early as 1834 when the Moravians opened a training establishment for females, called Mico Teachers' College, which became the Spring Gardens Teachers College in 1854. At that time,

A skilled or qualified teacher instructed the young teacher apprentice both in the material needed for teaching and in the method of delivering it... In some cases the teacher/instructor had no formal training but merely drew on experience gained and skills acquired in the classroom (Fergus, 2003, p.86).

In 1959 the Spring Gardens Teachers College gave way to the Leeward Island Training College which admitted both male and female students from 15 Eastern Caribbean and Windward Islands. The then government-run entity merged with the Island College in 1977 and gave rise to the Antigua State College. It was at that time that the Teacher Training College became a department of the ASC. (Roberts, 2006)

### **1.3.2 Quality Control of the Programme**

The State, as the employer, mandates the DTE of the ASC, to provide the professional training for the teachers, but the State does not determine the content of the courses that are offered. It is The School of Education (SOE) at the University of the West Indies (UWI) in Barbados that develops the course outlines for the programme which are administered under the auspices of the Eastern Caribbean Joint Board of Teacher Education. The tutors at the DTE facilitate instruction in a face-to-face modality and use Lecture/Discussion and group work as the main delivery strategies. They also provide the UWI with feedback on the programmes and suggest sample questions for the examinations which are conducted at the end of a 14-week semester. Once the tutors at the DTE mark the scripts, they are sent to the UWI where they are moderated

by a team of tutors from the various islands, including Antigua, that offer the programme. After the students have successfully completed all the courses, the UWI provides certificates to the candidates who have completed the programme. Once successfully completed, this programme qualifies candidates to access Level II Bachelor in Education courses in specified areas of professional specialization at the Cave Hill Campus of the UWI. Periodically, the SOE, with the input of tutors in the teacher education institutions reviews the programmes to ensure their quality and relevance.

It should be noted that during the time of the research activity, the UWI was in the process of reviewing its courses. While some courses were added or upgraded, there was no requirement for the tutors to use a VLE to provide instruction to the student teachers. On the other hand, in recent years, the SOE had required that the tutors assess the student teachers use of technology while they were engaged in teaching practice exercises. This suggests that it was felt that demonstration of technology use was one of the criteria for effective teaching.

### **1.3.3 Programmes offered**

Traditionally, the tutors in the DTE had trained teachers to work in the Primary Schools only. Upon successful completion of a series of examinations, at the end of a two-year period, the candidates received a Certificate in Teaching. In 2000, the DTE began training teachers to teach at the Secondary School level as well. The DTE prepared the student teachers to specialise in a wide variety of disciplines as it sought to ensure that all students in the school system were taught by trained teachers. These disciplines included Mathematics, Science, Social Studies, Modern Language,

English, Music and Geography. By 2011, candidates were able to pursue an Associate Degree specialising in Early Childhood. Additionally, a one year post graduate Diploma in Education (Dip. Ed) programme was offered to those teachers in the secondary and tertiary institutions who possessed a baccalaureate degree but who had not been trained previously. This increase in the student teacher population, from the traditional (approximately) 50 to about 180 helped to fulfil the mandate of the government of Antigua and Barbuda to train all teachers in the system by 2013. On the other hand, it created major challenges with regards to the physical resources and human resources (staffing) because the secondary programme offered more options from which the students could choose. Generally, except for English and Mathematics, there was generally only one tutor for each subject discipline.

While the MOE was committed to ensuring that all the teachers in the school system were trained, and that reform strategies such as Universal Primary and Secondary Education initiated on a regional and national level were implemented in the schools, no systematic plan had been put in place to upgrade the academic qualifications or pedagogical/andragogical skills of the tutors.

It is into this environment that the tutors, the research participants, challenged the student teachers to become innovative and reflective problem solvers. The research participants are all faculty members of DTE. This department was no stranger to change. In fact, to ensure that teachers in every discipline in the school system are trained, every year, from 2004 – 2010, the department added either another course or another programme to its curriculum. It may be argued that these changes were external to the tutors since they continued teaching the way in which they had been

teaching. In some cases, they simply taught another course. As these courses and programmes were added, there were no demands for tutors to change their pedagogical style or change the teaching and learning environment. On the other hand, the vision and initiative of the ASC required that they made changes in all these areas.

#### **1.4 Purpose of the research**

On a regional, national and College level structures were put in place to encourage an eLearning approach to teaching and learning. The technological revolution seemed to have opened up a variety of modalities for engaging our students. This research is a response to these initiatives as I, one of the ‘champions’ from the Canada mission, engaged in teaching the tutors to use Moodle, a VLE. I was hoping that this applied research would position the tutors to be in the vanguard for school reform as we prepared the student teachers to provide quality education in the new IT centric learning environment. The research activities were therefore intended to offer the professional training which the tutors needed to facilitate learning online.

It explores the experiences of the DTE as it attempts to respond to the changes in the teaching environment as the tutors develop the skill and pedagogy that would assist them as they transition to a hybrid e-learning, a new modality to facilitate learning. The investigation does not focus its attention on the technical support necessary (though this is important); rather, it focusses on the tutors, critical players in school reform since tutors’ teaching methodology/style will impact the student teachers who will ultimately affect the way in which they organise instruction in the schools. Finally, although many of the factors that propelled my interest seem technology

driven, since my area of specialisation in this doctoral programme is teacher education, I have chosen to focus on the human aspect (tutors) rather than the technological aspect of change.

While other studies have been done on e-learning adoption, no research has ever been conducted in Antigua and Barbuda on adapting to a VLE. This study could therefore enrich the debates on adoption to VLE in small developing countries. The results of the study could be a resource (not a manual) which would include important guidelines/principles that may prove beneficial to other institutions with similar context that wish to adapt to e-learning modality.

As we engaged in this change process, I hosted short term competency-based training (workshops), provided online tutorial and handbook, and encouraged peer tutoring and offered just-in-time support to ensure that the participants transition to eLearning modality. Finally, since this is a qualitative study, I attempted to gain a greater understanding of the process and its impact on the tutors, by engaging in observations, interviews, and informal conversation.

## **1.5 Organisation of the thesis**

**Chapter 1** outlines the motivation for the research. Factors suggesting the need to prepare the teachers of student teachers for the Virtual Learning Environment are also elucidated.

**Chapter 2** examines literature surrounding critical factors to be considered in a change process as we transition from face-to-face teaching to a VLE. The literature

discusses 4 areas a) *what* is the change that is being proposed, b) *who* are involved in the change and c) *how* such changes occur.

**Chapter 3** presents the methodology guiding the research. It also outlines the epistemological underpinnings of the research. I also provide biographical information on the participants as well as the method of data collection and analysis.

**Chapter 4** discusses the theoretical framework underpinning the presentation and analysis of the data; namely, elements of the Engeström's Cultural Historical Activity Theory (CHAT) tool. I also propose the aspects of the framework that are of particular importance to this research.

**Chapter 5** presents the analysis of data addressing two research questions: *What is the process by which the DTE learns to use Moodle? What were the systemic contradictions/tensions within the activity system as the DTE adapted to eLearning?*

**Chapter 6** examines the third research question, *What were the participants' retrospective perspectives on the process of learning to use Moodle?*

**Chapter 7** presents a summary of the findings, suggests the significance of the research, and proposes other areas for research.

## **1.6 Conclusion**

In this chapter, I provide the background and motivation for this research. Also outlined is the context of the research as well as the organisation of the entire thesis. I also make reference to the purpose of the research and the promise it holds not only in Antigua and Barbuda, but also for institutions in small developing states that desire to engage in a VLE.

## CHAPTER 2 – LITERATURE REVIEW

### 2.0 Overview

In an effort to understand the experiences of the tutors as they respond to the changes in the new teaching environment, in this chapter, I examine the literature related to change in education and more specifically issues related to transitioning from face-to-face to a Virtual Learning Environment (VLE). The sections will be introduced under the following headings: a) introduction, b) the change process, c) what is the proposed change, c) who are involved in the change, and d) how does such a change occur.

### 2.1 Introduction

After examining the literature on organisational change and development, the factors that influence teachers to adapt to reform strategies, and the change process as well as the important elements of a learning experience, a number of common issues emerge. Herold and Fedor (2008) encapsulate the main issues under consideration in their proposal of the key components of a change framework. They assert the importance of understanding *what* has to change, *who* is involved in the change and the *context* in which the change should occur before considering *how* to change. I will therefore use these components as a guide in reviewing the literature. Since in chapter 1, the context in which the change will occur was outlined, I am interested in understanding the nature of the new environment in which the participants will operate, the characteristics of the persons involved in the change, and what model can be used to effect the change. Critical to appreciating *how* the change will occur is an

understanding of the change process, so using the components proposed by Herold and Fedor (2008) as a guide, this literature review focuses on the following areas:

- The Change Process
- WHAT is the proposed change
- WHO are involved in the change
- HOW does such a change occur

## **2.2 The Change Process**

This section introduces the change process in the context of an educational organisation by first examining critical aspects of organisational change. Since the change that is being considered involves introducing an innovation in an educational institution, the literature on educational and organisational change is very relevant. As such the main areas to be addressed in this section are as follows: a) organisational change, b) educational change, and c) change enablers.

### **2.2.1. Organisational Change**

Werner and DeSimone (2006, p.563) view organisational development as a “process used to enhance both the effectiveness of the organisation and the well-being of its members through planned interventions.” The three components of the definition, therefore, are effectiveness, well-being, and interventions. Inherent in the word *effectiveness* is the view that organisational goals and objectives are achieved. *Well-being* incorporates the idea of enhancing personal and work satisfaction, while *planned interventions* are structured activities in which selected organisational groups



or units engage. Herold and Fedor, (2008) on the other hand, focus more specifically on the individuals, when they refer to organisational change as

something initiated by one or more organizational leaders, intended to achieve certain results through the modification of other people's behaviors or routines, with the success or failure to achieve these modifications having consequences for the particular organizational unit or the organization as a whole (2008, p. xiii).

Given these two different lenses through which we can see organisational change, I am adopting the view that organisational change improves the effectiveness of the organisation by developing planned activities which ultimately modify the behaviours or routines of the individuals involved. Since an educational institution can be seen as an organisation, I will now highlight some important elements that should be considered when focussing on change in an educational institution.

### **2.2.2 Educational Change**

In addressing the meaning of educational change, Fullan (2001), Fullan, (2007) and Holland (2005) advance the view that it involves *change in practice* and that this change is not a single entity; rather, it is “multidimensional;” consequently, (Fullan 2007, p.30) suggests that implementing any new program or policy would involve at least three concerns: “(1) the possible use of new or revised materials (instructional resources such as curriculum materials or technologies), (2) the possible use of new teaching approaches (i.e. new teaching strategies or activities), and (3) the possible alteration of beliefs (e.g., pedagogical assumptions and theories underlying particular new policies or programs)” – all three of which are typically involved if significant educational change is to take place. While the purpose of the change is to assist the teacher and or students in performing more effectively, Fullan argues that any significant educational change “consists of changes in beliefs, teaching style and

materials, which may come about through a process of personal development in a social context” (Fullan 2001, p.166). Bearing my definition about organisational change in mind (2.2.1), it is my view that educational change can be initiated with planned activities which cause a change in belief and assumptions about the profession, which ultimately results in change in practice.

With the advent of 21<sup>st</sup> century Information and Communication Technologies (ICT) tools, many educational institutions (and in particular, the faculty members) are often encouraged to incorporate these tools into their teaching. Using these new tools could challenge their beliefs, values, routines and norms that they had built up over time or could be a welcomed avenue to improve what they had been doing. However, some researchers, including Mitchell and Geva-May (2009); Friel et al. (2009) and Allen and Seaman (2006) have proposed that while there has been increased acceptance of online learning, a new teaching and learning approach in the educational landscape, by administrators, the rate of adoption by faculty has lagged behind. Fullan (2007) and Whelan-Berry and Somerville (2010) suggest that there is need for the vision to move from administrator to the individual level. “If felt-need is low in the group or organization, introducing change becomes problematic.” Burnes (2004, p.984) On the other hand research conducted by Stoltenkamp and Kasuto (2011) at the University of the Western Cape in Cape Town, South Africa, highlights how they were able to achieve cultural change in a resistant environment. This was accomplished through non-coercive means of “persistent communication” (by emails, blogs, colloquiums and seminars), continuous training and support, and incentives. As a result, they were able to realise a 26% adoption to eLearning from September 2005 – March 2009.

Fullan (2001) indicates that the last thirty years of research on educational change suggests three broad phases of educational change: Initiation, Implementation and Institutionalization. These stages correspond to Rogers' (2003) five stages of the innovation-decision process, "the process through which an individual (or other decision-making unit) passes from gaining initial knowledge of an innovation, to forming an attitude toward the innovation, to making a decision to accept or reject, to implementation of the new idea, and to confirmation of this decision" (Rogers, 2003, p.168). In Table 2.1 below, I propose a parallel between the change process suggested by Rogers (2003) Fullan (2001) and Lewin (1961) all of whose statesmanship in the field of change management is renowned. Rogers' first three phases, knowledge, persuasion and decision are subsumed in initiation and unfreeze stage of Fullan and Lewin respectively. The implementation stage of Fullan and Rogers and the change stage of Lewin are followed by institutionalization of Fullan, Rogers and refreeze of Lewin respectively.

**Table 2.1 Stages of Change**

<b>Stages</b>	<b>Rogers</b>	<b>Fullan</b>	<b>Lewin</b>
1	Knowledge Persuasion Decision	Initiation	Unfreeze
2	Implementation	Implementation	Change
3	Institutionalization	Institutionalization	Refreeze

Since the change process could disrupt the environment and the environment could contain resistance that could disrupt the change process, it is important to use strategies to create awareness that the areas such as their old practices, thinking or processes may be hindering their progress or the progress of the organisation. In a

social environment which is considered stable and both students and teachers are relatively satisfied with their academic achievement, it may take reason (persuasion) and knowledge (through persistent communication or continued professional development) to create in the minds of the teachers a “felt need” (Stage 1). Indeed, it is through such strategies that the individuals become aware of the innovation, form an attitude about it and then decide to accept or reject it. (Rogers, 2003) Rogers (2003) also refers to this change process in which an innovation is being introduced into the social system as *diffusion*. According to Rogers (2003),

An innovation is an idea, object, or practice perceived as new by an individual or other unit of adoption. It matters little, so far as human behaviour is concerned, whether or not an idea is “objectively” new as measured by the lapse of time since its first use or discovery (Rogers, 2003, p.12).

Essentially, significant educational change involves learning how to do something new; however, “the psychological process of learning and understanding something new does not happen in a flash” (Fullan, 2007, p.3). The desire to move from that stable state would be dependent on the value the individuals place on *what* change is being implemented and whether it is aligned to their theories of education. Their perspectives on *how* the change is implemented and whether it is aligned to their theories of change is another important consideration (Fullan, 2007). In referring to this first stage, Burnes (2004) argues that, since change is a psychological process, “those concerned have to feel safe from loss and humiliation before they can accept the new information and reject old behaviours” (p.985). It is at that point that they unfreeze. After the *unfreezing*, the innovation can be introduced.

In the second stage – change – which comes about through the implementation of the innovation, the change agents are critical. They should supply a blend of support and

pressure (among other things) to encourage permanent change (Fullan, 2003). Once the change has been initiated, it is important to reinforce the new order of things (Refreeze). It is at this point that the change becomes institutionalised (that is, made permanent, for a while before further possible changes are made). It should be noted that even though Lewin's change process appears to be linear, it appears that he was conscious that organisational change is not linear, since it was Lewin that coined the term *Action Research* (to be discussed in Chapter 4 ) which is an iterative process. Indeed action research which embraces planned change involves opportunities to reflect, plan, implement, and reflect again (McIntyre, 2008; McNiff and Whitehead, 2002; Cohen et al. 2007; Acosta&Goltz, 2014; Burnes, 2004; Whelan-Berry & Somerville, 2010).

In summary, educational change does not take place overnight because human beings have agency (they are not passive subjects). They may interpret and value situations differently depending on what is happening or what has happened in their lives. Nonetheless, educational change is a process, often iterative, which causes individuals to change their beliefs and assumptions about their practice. This change in beliefs would ultimately give rise to a change in practice (actions). In the next section, I present some factors or conditions that encourage this change.

### **2.2.3 Change Enablers**

In examining change enablers, section **2.2.3.1** considers the qualities of the innovation that would cause it to be more easily adopted or diffused into the social system, then the next section (**2.2.3.2**) more specifically examines change enablers (or what is often referred to as critical success factors) for technology adoption.

### **2.2.3.1 The Quality of the Innovation**

There are a number of factors that cause the adoption of an innovation. Researchers have found that adoption of an innovation is influenced by characteristics of the innovation, including relative advantage, complexity and cost (Damanpour and Schneider, 2009; Rogers, 2003; Bolliger and Wasilik, 2009)

According to Rogers (2003) the diffusion of an innovation could be enhanced if the innovation has the following five characteristics:

1. Relative advantage: the degree to which an innovation is perceived as better than the idea it supersedes...
2. Compatibility: the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters
3. Complexity: the degree to which an innovation is perceived as difficult to understand and use...
4. Trialability: the degree to which an innovation may be experimented with on a limited basis. ..
5. Observability: the degree to which the results of an innovation are visible to others. (Rogers, 2003, pp.15-16)

Emanating from Rogers' view is the suggestion that the prospective adopters must perceive this innovation better than its antecedent. There is also the suggestion that they should also have the freedom to make limited use of the innovation on a trial basis while at the same time making the results seen by others. On the other hand, the change agent usually desires wholesale adoption of the innovation. Admittedly, while Rogers refers to the introduction of an innovation from a general stand point, it is important to examine whether there are other considerations when the focus is on the adoption of a technological tool into a social system.

### **2.2.3.2 Change Enablers in Technology Adoption**

Research on the factors that influence both teachers and students to engage in technology and online learning suggest that similar factors affect both users. Studies which use Technology Acceptance Model (TAM) proposed by Davis et al. (1992) as the underlying theory to forecast technology adoption indicate that an individual's perceived usefulness and the perceived ease of use of the innovation was a strong predictor of the technology adoption of students (Lee, 2006; Šumak et al.2011; Ahmed, 2010) and faculty (Bolliger and Wasilik, 2009; Stewart, et al., 2010). Behavioural intention is also seen as an important factor in technology adoption (Šumak et al.2011; Lee, 2006) However, while perceived usefulness and perceived ease of use may be determinants of behavioural intention to use, competing intentions (or choices) may be another consideration in the adoption process (Lee 2006). Lee's research on college students also suggest that when student were allowed to choose whether to use the VLE or some other media, the adoption was less impacting.

Bolliger and Wasilik, (2009) conducted research on the factors influencing faculty satisfaction with online teaching and learning in higher education and highlight factors related to student, instructors and institution which influence faculty satisfaction in online learning. Using the three categories proposed by Bolliger and Wasilik, (2009), I will now discuss other related enablers under three headings: student related factors, instructor related factors and institutional related factors.

*Student related factors* relate to the perceived benefit to the students. When the teachers perceive that the students will benefit from greater interactivity with peers

and teachers, or if the teachers perceive that the students will gain greater access to higher education, the adoption rate is greater. (Bolliger and Wasilik, 2009)

*Instructor related factors* refer to factors related to the teachers. It is therefore concerned with whether the teachers are interested in technology, love an intellectual challenge or are interested in their professional development (Bolliger and Wasilik, 2009). Other factors relate to whether teachers see the value of engaging in VLE (Mitchell and Geva-May, 2009) or whether they consider that this new approach is compatible with the courses that they teach (Stewart, et al., 2010).

*Institutional related factors* related to the degree to which the institution provided an enabling environment. This can be achieved through providing “release time for course development”, recognition and compensation (particularly with the consideration that it could take 10 hours to design 1 hour of instruction) and overall general support including adequate funds. (Bolliger and Wasilik, 2009)

Bhuasiri et al. (2012) argue that the purpose for engaging in eLearning is different in developed as opposed the developing countries. According to them, in developing countries the purpose is to provide basic education to poor students while in the developed countries the purpose is to “develop an effective knowledge economy and enhance lifelong education” (Bhuasiri, 2012, p.844). They further affirm that since eLearning is in its early stages of adoption in developing countries, other factors must be taken into consideration. Their research findings from 82 e-learning experts in 25 developing countries from Asia, the Middle East, South America, Africa, and Europe indicate that eLearning implementation strategies in developing countries should take into account factors such as a) computer literacy of the participants, b) the need to promote eLearning awareness, b) the enhancement of broadband infrastructure c) the



provision of incentives, d) training programmes, and e) increased infrastructure and system quality and reliability..

#### **2.2.4 Conclusion**

This section focussed attention on the change process with special emphasis on the change involving use of technology in an educational institution. The literature suggests that educational change is a process which takes place over time through the alteration of the individuals' beliefs and assumptions. Ultimately, the change in belief could lead to change in practice. Also identified are a number of change enablers which, if addressed effectively, can hasten the rate of adoption of the innovation. So what is the innovation that is being considered in this research? The next section provides details of the proposed change with particular reference to the innovation that is being introduced.

### **2.3 What Is the Proposed Change**

Fullan (2007) like Herold and Fedor (2008) suggests that educational change involves a consideration of *what* is being implemented and *how* it is implemented. The innovation that is being introduced would impact the learning environment and the mode of supporting learning. In that regard, this section focusses on the following: a) the learning environment, b) modes of eLearning facilitation and d) learning management system.

### **2.3.1 The Learning Environment**

The change that is being proposed is an introduction to a new learning environment in which student learning can be supported. Traditionally, teaching is conducted in a face-to-face manner with students and teachers in the same room or some other physical space. As Dourish (1996) proposes, “Space is the structure of the world; it is the three-dimensional environment, in which objects and events occur, and in which they have relative position and direction” (p.2). He, however, argues that even though a place exists in a space, the concept of “place” incorporates the “cultural understandings” and “behavioural appropriateness”. (Dourish, 1996, p.3) Each place has a socio-cultural history with rules and norms that guides the activities of the individuals. (For example, in this face-to-face setting teachers are given a specific time in which to meet the students in predetermined place.) With today’s 21<sup>st</sup> century technologies, there is an additional “space” in which students can interact. According to Boettcher (2007), the learning environment can now be simple or complex and the learner may therefore interact with one or more resources, in a variety of meeting places including a library, classroom, a laboratory, a community space or in a synchronous or asynchronous virtual meeting place. This proposed eLearning environment is a virtual environment that is a much wider environment than spatial directionality and therefore is not confined to a physical space. In light of the forgoing, what is eLearning and what are the affordances of this environment?

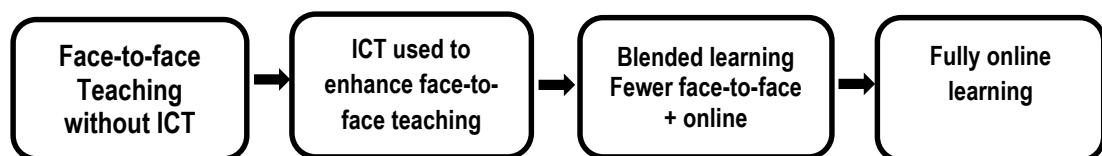
### **2.3.2 ELearning**

Over the years, researchers have proffered varying definitions of eLearning. While acknowledging the definition of eLearning by Baumgartner, Häfele and Maier-Häfele (2001) as “software supported learning” and the emphasis of Rosenberg (2001) as

“typically a networked form of learning,” Tavangarian et al. (2004), basing their definition on the constructivist learning model, define eLearning as

... all forms of electronic supported learning and teaching, which are procedural in character and aim to effect the construction of knowledge with reference to individual experience, practice and knowledge of the learner. Information and communication systems, whether networked or not, serve as specific media (specific in the sense elaborated previously) to implement the learning process.” (Tavangarian et al. 2004, p.274)

The idea emanating from these definitions is that eLearning incorporates the use of electronic media to support teaching and learning. On the other hand, Bullen (2014), who has had over 30 years’ experience in distance education, e-learning and educational technology, presents another perspective of eLearning. He argues that eLearning should be seen as a continuum with face-to-face on one end of the continuum and fully online on the other end of the continuum (as seen in Figure 2.1 below). On one end is our traditional mode of face-to-face without the use of ICT. Moving along the continuum, ICT is used to enhance face-to-face teaching. In blended learning, there are few face-to-face sessions and the technology is used to facilitate teaching and learning. At the end of the continuum is fully online learning in which there is no face-to-face teaching. He further proposes that eLearning begins from the point that the use of the technology replaces some of the face-to-face teaching.



**Figure 2.1 eLearning: a continuum** (adopted from Bullen, 2014)

Bullen's definition is very useful because it suggests that individuals can be at varying stages of eLearning adoption. Other researchers, though not stating that eLearning is a continuum, suggest a similar view by quantifying the extent of use of the VLE in their discussion of eLearning. Allen & Seaman (2007) and Pirani (2004) highlight three different models for offering courses online:

- Online — Course where most or all of the content is delivered online. Defined as at least 80% of seat time being replaced by online activity.
- Blended/Hybrid — Course that blends online and face-to-face delivery. Substantial proportion (30% to 79%) of the content is delivered online.
- Web-Facilitated — Course that uses web-based technology (1 to 29% of the content is delivered online) to facilitate what is essentially a face-to-face course (Allen & Seaman, 2007, p.2)

The focus of this research is not the adoption of pure online courses; rather, it is an attempt at a blended approach which integrates different learning practices: face-to-face and use of the VLE. I support the view proposed by Bullen (2014) that blended learning is more than just adding the technology. It should change the nature of the face-to-face sessions which should now be more collaborative and discussion oriented. While it may be useful to see eLearning on a continuum, it is critical to note that whether the learning takes place in a blended/hybrid or fully online modality, eLearning allows an additional 'space' in which the learning takes place. To understand the nature of the change that is being proposed in this research, I will now discuss the Learning Management system which would facilitate blended and online learning.

### **2.3.3 Learning Management System**

A Learning Management System (LMS) is a web-based application that provides a platform which educators can use to facilitate online learning. While acknowledging that this “system” is also called a Course Management System (CMS), Learning Content Management System (LCMS), Learning Support System (LSS), Virtual Learning Environment (VLE) or Learning Platform (LP), Thorsteinsson and Page (2007) refer to it as a Managed Learning Environment (MLE), and state that it is “a software system designed to help teachers to facilitate the management of educational courses, especially by helping them and the learners with course administration. The system can often track the learners' progress, which can be monitored by both teachers and learners.” (2007, p. 293). Since in this research I argue that the *learning environment* – a space where both teachers and students can interact will change, I support definitions which include the idea of a virtual environment; however, the terms could be used interchangeably. Some VLE such as Moodle, Sakai, or Angel Learning are open source and are therefore available for use at no purchase cost, though there may be set up cost and maintenance costs, while others such as Desire 2 Learn, Blackboard and Elluminate are proprietary. With the widespread availability of digital learning technologies, it is now possible to integrate computer based activities and the VLE with the face-to-face activities for the purpose of a blended approach which this research attempts to achieve. To facilitate the online aspect of the instruction, a VLE such as Moodle can be utilised.

### **2.3.4 Affordances of Moodle**

As stated before, Moodle is known as a Course Management System. It consists of a variety of modules which allow interactivity between learner and learner, learner and content, and learner and teacher. (Rowley and O’Dea, 2014) Since as an ICT it

allows the capture of a variety of materials, including video and audio, (Naidu, 2006) Moodle has the potential to provide a continuous and permanent record of the resources that have been posted by the teacher (Solimeno, 2008), or learners. It also stores the interaction of the learners with other learners, teacher and the content (for future access) wherever and whenever the students desire to view them. Although students may have different experiences which according to Heirdsfield, et al. (2011) may stem from logistical rather than pedagogical concerns, research findings from a study conducted at two teacher education institutions in Australia revealed the affordance of eLearning which Moodle allows;

... eLearning helps student to: expand learning through other direct links; facilitate and motivate learning before class; tests knowledge and examines the students' stages of learning; provide a storage site for now and in the future; and provide a place for instant feedback from peers and teachers. (Rowley and O'Dea, 2014, p.139)

Conceptually, the flexibility of Moodle would allow the teachers to use as many or as few of the features available to offer fully online or blended instruction. In addition, the literature suggests that using a VLE is not just another way of supporting student learning, but it is a useful tool to engage the students. However, depending on their facility with Moodle use, each individual could be at different areas on the continuum. Given the benefits of using this VLE, the question now remains, what are the characteristics of the participants in the proposed new environment?

## **2.4 Who Are Involved In the Change**

In discussing who is involved in the change, it is important to consider the setting or the social context in which the research is set – a teacher education institution. It may be argued that the students are more than the beneficiaries of the change; they are

participants of the change (Fullan, 2007). While I support that view, I contend that the teachers of these student teachers are also participants of the change. As I indicated in chapter 1, the focus of this research is the teacher educators who are described as the “under researched and poorly understood occupational group” (Murray and Kosnik, 2010, p. 243). Since the focus group for this research is the teacher educators, this section focusses on two aspects: a) the characteristics of the learners/teacher educators and b) the role of the facilitator.

### **2.4.1 The Learners**

While in many learning experiences the learners are children from birth to adolescence, in this research the learners are the tutors – adult learners. Not only are they adults who teach adults, but they are also teachers of adults who are learning to teach. Notably, their role involves not just the teaching of content, but also practising what they teach by modelling good pedagogical skills and professional attributes (Murray, 2008; Celik, 2011). This section highlights the characteristics of adult learners and their propensity to adapt to eLearning under the following subheadings: a) Characteristics of Adult Learners, b) The Challenge of Adapting to ELearning and c) Teachers’ Attitude to Change

#### **2.4.1.1 Characteristics of Adult Learners**

The literature on adult learners indicates that adult learners *generally* have the following characteristics. They a) are autonomous, b) are self-directed and highly motivated, c) have a foundation of life experiences and knowledge, d) are goal/task-oriented, e) are relevancy-oriented, f) appreciate practical involvement, and g) need to

be shown respect. (Knowles, 1980; Cercone, 2008). They have various “responsibilities” (as it relates to their families, communities and jobs) and “personal ecologies” which Zachary (2000) describes as “a web of relationships... and forces at play in our lives at any given moment” (p. 18) which could impact their attitude, behaviour and thinking. Given these characteristics, “Andragogical practice treats the learning/teaching transaction as the mutual responsibility of learners and teacher. In fact, the teacher’s role is redefined as that of procedural technician, resource person, and co-inquirer; more a guide than a wizard.” (Knowles, 1980, p.48) As a result, according to Broad and Evans (2006) after their review of the literature with regards to professional development processes/practices for experienced teachers, “Motivation theories support the need for relevance, self-direction, purpose and meaning in the learning of experienced teachers.” (p. 40)

Another consideration is that these learners/tutors have been referred to as ‘digital immigrants’. Prensky (2001, p.1) coined the terms ‘digital natives’ and ‘digital immigrants,’ and argues that “Today’s students – K through college – represent the first generations to grow up with this new technology. They have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age.” As such, they are digital natives (born between 1980 and 2000 when networked digital technologies had become widespread). Many of the adults who teach them, on the other hand, are considered “immigrants.” They are not born into the digital world, but they have adopted some aspects of the new age/technologies. According to Prensky (2001), based on how they were socialised, these immigrants prefer a step-by-step approach, to learning, while the digital natives value multi-tasking, random access instant



gratification and frequent rewards and being networked. Accordingly, Prensky (2001) argues that the problem with education now is that students are taught by instructors who speak a different/outdated language to their students. Although this ‘language’ is used by the digital natives mainly for social networking, the general assumption is that their interest in the technology will predispose them to use it for educational purposes.

Declaring that there is no convincing evidence to support these claims, Bullen and Morgan (2015) argue that digital natives are not fundamentally different to the previous generations. While there is a growing use of digital networked technology, Bullen and Morgan (2015) affirm that the use is a more social than generational issue. Their research, conducted in 6 different countries and at a range of institutions, suggests that,

“...today’s learners, regardless of age are on a continuum of technology access, skill, use and comfort. They have differing views about integration of social and academic uses and are not generally challenging the dominant academic paradigm.” (Bullen and Morgan, 2015, p17)

Even if we argue against the technological imperative suggested by the proponents of the digital natives discourse, in the context of teacher education the integration of a VLE should be considered. Why? Since eLearning can offer benefits to 21<sup>st</sup> century students, it would be strategic for the tutors to learn how to teach using this tool while at the same time model the integration of the 21<sup>st</sup> century technology into their teaching. On the other hand, like any other change process there are challenges to adapting to the VLE.

Apart from being adult learners and *possibly* being digital immigrants, teacher educators are considered different. Some of these differences will be outlined below. While there seem not to be consensus on the professional standards for teacher educators, (Murray, 2010; Celik, 2011) there is agreement on some matters. All teachers are expected to be self-aware, know the subject knowledge (didactical knowledge), help students to gain that knowledge (pedagogical knowledge) and understand the socio-cultural context in which the students learn. In addition to possessing these qualities, the teacher educator must be able to articulate their knowledge about teaching to the student teachers. Like teachers, they are expected to be self-aware, but they have the additional role of assisting the teachers to become reflective practitioners. Just as a commitment to lifelong learning and research is deemed important, a critical role is also to *model* the knowledge, skills and attitudes that reflect best practices in teacher education to their student teachers (Murray, 2010; Celik, 2011). These differences in the roles of teacher educators may have implications for how they approach the challenge of adapting to eLearning.

#### **2.4.1.2 The Challenge of Adapting to ELearning**

Any attempt to effect change in teaching and learning must take into account not just the characteristics of the teachers, but also their propensity to change. Teachers' individual attitude towards new technologies, their beliefs about the consequence of adapting to new technology and their willingness to promote collaborative learning influence whether or not they would be willing to adapt to eLearning (Solimeno et al. 2008; Fullan, 2007; Sugar et al., 2004). Given the limited literature on teacher educators, we can assume that the discussion which follows regarding eLearning adoption also applies to them since they too are teachers.

In reference to online learning adoption, in a study involving 5 higher education institutions, Mitchell and Geva-May (2009) consider 4 variables which affect eLearning implementation: a) level of *support* b) *cost* c) institutional and job *change*, and d) the *intellectual reluctance* which they consider to be “rooted in questions regarding the value and legitimacy” of online learning. (Mitchell and Geva-May 2009 p.74) Of greatest concern were institutional change, support, cost benefit and intellectual resistance (in order of concern). From these findings, I surmised that the teachers’ greatest concern related to the change in the culture of the institution. Change in culture would possibly mean change in areas such as teachers’ routines, skill requirements, teaching approach and time. This supports the view the educational change involves changes in beliefs and teaching style, which may come about through a process of personal development in a social context. Facilitating this change in culture would necessitate adequate support to the teachers. All these adjustments may cause the teachers to question the value of implementing online learning. Ultimately, since teachers would have developed competencies and routines in the traditional mode of providing instruction, special attention needs to be paid to providing the requisite support for them to adapt the new VLE.

#### **2.4.1.3 Teachers’ Attitude to Change**

By definition, innovations are fundamental and require changes in attitudes, traditional roles, and the relinquishing of practices for which we have developed competence (Fullan, 2001). However, the literature suggests that teachers are resistant to change (Mitchell and Geva-May, 2009, p.72). While more and more decision makers in higher education are committing to online learning

implementation, the participation of the teachers tends to lag behind. One of the contributing factors could be the perception of some teachers, as seen in a study by Mitchell and Geva-May, (2009), that online students do not perform better nor learn as much as the other students. Furthermore, the teachers in that study were also concerned about the extra time and effort involved in engaging in online learning.

The literature also suggests that there are a number of factors that impact teachers' attitude to change. Ni and Guzdial (2008) propose that there are two categories of factors that may affect teachers' decision to adopt an innovation: *Personal factors* such as "Teachers' knowledge, attitudes and beliefs" about the curriculum, their students, and themselves and *external factors* such as the quality of professional development activities which can help to bring about changes in the teacher's knowledge, skills, attitude and beliefs. Zimmerman (2006) offers a number of reasons for teachers' resistance to change, including (a) not recognizing the need to change, (b) desiring to continue with practices with which they are familiar, (c) having bad experiences with previous change processes, and (d) feeling threatened because they do not have the knowledge and skills to be effective. Stoltenkamp and Kasuto (2011) recognise the resistance to change in Higher Education Institutions, and suggest other reasons for this resistance. Some of the reasons they cited for this resistance include lack of trust, the possibility of additional work load and the disturbance of the status quo. Gautreau's (2011) research findings on Motivational Factors Affecting the Integration of a Learning Management System indicate that the most prominent factors were "salary, responsibility, achievement, advancement, company policy, the work itself, and recognition" (p.13). Researchers, such as Singh and Hardaker (2014); Sheppard, et. al. (2008) and King, & Boyatt (2014), suggest

other factors, such as the level of support received, involvement of teachers in development of the change strategy. Given the multiplicity of factors that impact teachers' attitude to change, it is important for there to be adequate orientation to the change that is being initiated and the benefits it holds for them.

Adapting to a new learning environment, a new strategy, or methodology would require relinquishing the comfortable, the tried-and-proven and risk the possibility of becoming "incompetent" until the new method, strategy, software etc. is mastered. Some teachers may not want to appear to be "incompetent" (even temporarily) while they adapt to an innovation. This could have special implication for teacher educators whose role it is to model best educational practices. For some persons, the prospect of learning something new is stimulating while for others it is very daunting. Bearing in mind the change enablers suggested in **2.2.3**, if all teachers can be convinced that teaching in the VLE is more advantageous than their current practice, or that it could enhance their present practices, it could reduce the reluctance to engaging in the process. All of this has implications for the role of the leader in the change process. While it is important to understand the characteristics of teachers and their attitude to change, it is equally important to understand the role of the leader as well.

#### **2.4.2 Role of the Leader in the Change Process**

The literature suggests that the role of the leader is a critical in the change process. (Fullan, 2010; Herold and Fedor, 2008; Singh and Hardaker, 2014; Maughan, et. al, 2012) Regrettably, Singh and Hardaker (2014, p.113) contend that, "although

management support is a prerequisite to widespread adoption, such support is too often absent, or is assigned a low priority in the academic scheme of things.”

In response to the discussion on “leadership strategies that really work,” Herold and Fedor (2008, p.ix) state that the “vast majority of changes, be they restructurings, technology implementations, or business process changes, fail outright or fall far short of expectations,” and that organizational changes occur only 20% of the times. Herold and Fedor (2008) further argue that much of the literature on organizational change focuses on steps that should be applied to a single change. They therefore emphasise the critical role of the change leader who is both manager and leader. They affirm that,

“Change leadership is not only about setting new directions. Although it does often require the articulation of a future vision, it is also about properly setting the stage, making convincing arguments, developing a reasonable plan, being realistic about resources, assessing capabilities, and attending to execution details.” (Herold and Fedor, 2008, p.44).

Leaders should not only have a vision, but they must ensure that the vision is communicated to all concerned. Inherent in the role of the leader is the importance of defining the proposed change, and their own abilities and the abilities of those who would be required to lead and carry out the change in a specific context and then deciding on a strategy to carry out the change. While the comments of Herold and Fedor (2008) refer to change leaders generally, the same is true about change related to eLearning adoption (Potter et al. 2014; Bhuasiri et al. 2012). Another important role of the leader is assessing the human and physical resources to ensure that

adequate structures are in place to support for eLearning implement. Of critical importance too is the communication of the vision (Singh and Hardaker, 2014).

While it is important to communicate a realistic vision, research by Maughan, et al. (2012) which focus on what leads to positive change in teaching practice in schools, also propose that the leader needs to create an enabling environment – a culture in which the innovation is encouraged. They argue that the head teacher should advocate distributive leadership to encourage others to become change agents. Additionally, they indicate that the head teacher, more so than the wider management team plays a crucial role in encouraging innovation in the classroom. While these authors spotlight the role of the leader, in a school setting, the same applies to educational settings generally. The foregoing discussion suggests that the leader should be a visionary, analytical, practical/realistic and possess good communication skills.

Fullan (2002) highlights research that shows the great similarity between the role of the educational principal and senior executives in business. He confirms the importance of the leader in “seeing the big picture” as well as being able to organising individuals into teams and transforming the organization through people and teams”. (Fullan, 2002, p.3) He concludes that they need “personal characteristics of energy/enthusiasm and hope, and five core components of leadership: moral purpose, understanding change, relationship building, knowledge creation, and sharing and coherence making.” (Fullan, 2002, p.3) He later demonstrates how two elementary school principals were able to transform their schools by employing six principles, namely: participating as a learner, personalising instructional focus, networking with

district principals, developing others, being action oriented while building relationships and by helping teachers to realise their moral purpose. (Fullan, 2010)

The research shows that the leader's role involves motivating and supporting by communicating the strategic vision and providing resources. The leaders also need to demonstrate a willingness to develop their own knowledge and skills, and create the kind of culture that facilitates the change.

This section focussed on two critical participants in the change process, the learners and the leader. Not only did it address the characteristics of the learners and their attitude to change, but it also presented the critical role of the leader in initiating and sustaining the change.

## **2.5 How Does Such Change Occur**

So far I have looked at the change process, *what* change is being initiated and *who* would be involved in the change. The idea of *how* the change could occur has been broached tangentially as I have referred to the change enablers such as creating awareness for eLearning, provision of incentives, enhancement of technological infrastructure (2.2.2 – 2.2.3.1), and the role of the leader (2.4.1.4 ). Despite the importance of all these factors, all the research that I have read cite training as a critical factor in increasing the adoption of an innovation (Singh and Hardaker, 2014; Bates, 2011; Whelan-Berry and Somerville, 2010; Stevens, 2013; Cabral et al., 2012). This section therefore focusses attention on the aspect of training. Though written at a much earlier period, Fullan (1990) captures the idea succinctly by stating that,



“successful change involves learning how to do something new. As such, the process of implementation is essentially a learning process. Thus, when it is linked to specific innovations, staff development and implementation go hand in hand.” (p.4)

In this research, the terms staff development, professional development, and faculty training are used interchangeably. I have adopted the definition of staff development proposed by Fullan, (1990, p. 3), “to include any activity or process intended to improve skills, attitudes, understandings, or performance in present or future roles (as cited in Little, Sparks, and Loucks-Horsley (in press))” It is however suggested that before any training in eLearning takes place there should be an intellectual acceptance of the usefulness of the tool. When teachers and students did not see the importance of the technology or thought it difficult to use, the tool was underutilised (Wong, 2015).

Although change/improvement may be seen as a continuous process, an examination of the literature suggests that there are a variety of ‘events formats’ that could be used to initiate changes in organisations. These events include panels, lectures, workshops and conferences (Wolf, et al. 2011; Smith, 2010) to ensure the professional development of the staff. The findings of Cabral et al. (2012) emphasise the significance of staff development in the introduction of Moodle into the University of Lisbon. Faculty members who attended 0 – 2 workshops had a higher distribution of courses with no activity while those persons who attended 3 or more demonstrated the greatest intensity of use in the VLE. Cabral et al. (2012) therefore conclude that:

“An investment in faculty development is essential for delivering quality online learning programs. However in the beginning of ‘information technologies movements’, limited consideration was given to authentic faculty training.” (p. 572)

Arguably, if more attention were paid to training, the participants would have developed the skill set to initiate the change. Since it is viewed that teachers at all levels, higher education included, resist change, it is little wonder that some researchers advocate a gradual non-coercive strategy (Stoltenkamp and Kasuto, 2011) which would allow a 'quiet revolution' (Hopkins, et al (1994) and Joyce, et al. (1999) but at the same time ensure adequate training and education for the teachers (Pirani, 2004). While acknowledging the use of various formats, Wolf, et al. (2011) argue for the adoption of an approach which would involve the participants in sufficient opportunity for discussion and collaborative problem solving. This, they suggest, would more likely bring about organisational change.

Since faculty training is a critical factor in eLearning adoption, what are the characteristics of professional development which will foster teacher learning? Using data from a national evaluation of professional development activities funded by Eisenhower to examine "the effect of different characteristics of professional development on teachers," the research of Garet et al. (2001) identified three "structural features" or designs and three "core features" or "processes and experiences that take place during an activity" (Garet et al. 2001, p. 930) that have positive effects on teachers' learning. The next section therefore discusses these characteristics under the following headings: a) core features and b) structural features.

### 2.5.1 Core Features of Professional Development

The three core features are, “(a) a focus on content knowledge; (b) opportunities for active learning; and c) coherence with other learning activities” (Garet et al. 2001, p. 916). There should also be opportunities to engage in meaningful discussion, planning and practice by engaging in activities such as a) observing an expert teacher, b) being observed, c) making a presentation, d) planning how new curriculum materials may be used e) engaging in written work” (Garet et al. 2001, p. 925). Darling-Hammond and Richardson (2009, p. 1) also emphasise the importance of practical hands-on activities which would increase the participant’s knowledge and enjoyment of the exercise, particularly if it is related to their real work.

Since, this research focusses not just on professional development, but on the professional development of teacher educators, important in this discussion is a consideration about their interests with regards to professional development. A study by Dengerink, et al. (2015) that examines *what* and *how* teacher educators want to learn reveal interesting results. Generally, the teacher educators in the university setting want to improve their teaching, particularly in the areas of ‘pedagogy of teacher education and of pedagogical content knowledge.’ Not only did they want to learn by experimenting and carrying out practitioner research, but they also wanted to learn with other teacher educators. While the concerns of the teacher educator are similar to the other teachers, it is also important to note that they desired to experiment and to be taught by other teacher educators.

In discussing Professional Development for E-Learning: Adoption, Implementation and Improvement in Australia, Sheppard et al. (2008), like Guskey (1999), propose that professional development should be intentional. It must begin with clear statements about the purpose and goal; however, this vision must not be imposed upon the participants, but must be one in which they have had an opportunity to contribute (Hopkins et al. 1994). While clarifying the vision helps, it does not eliminate the psychological challenge of learning something new, so there is the need for ongoing support (King, & Boyatt, 2014; Singh and Hardaker, 2014; Fullan, 2001). It is in this initial stage that the participants can ensure that the goals are worthwhile and determine what strategy will be used to assess the process. Participants can also suggest their level of engagement and possible contradictions and possible ways of dealing with them. Support can then be designed in alignment with the levels of need and /or readiness of the faculty.

In summary, therefore, the core features of the professional development seem to be related to the active involvement of the participants in activities that are related to real work.

### **2.5.2 Structural Features of Professional Development**

Garet et al. (2005) like Darling-Hammond and Richardson (2009) indicate that the following three structural features would affect teacher learning; namely, a) the type, b) the duration, and c) the opportunity for collective participation.

Garet et al. (2001) identify two types of professional development: traditional and reform. The traditional professional development takes the form of workshops,

institute courses, conferences all of which are structured approaches and they take place outside the teachers' classroom. These therefore occur after school, on the week end or during the summer. While Darling-Hammond and Richardson (2009) refer to this type of professional development as the "drive-by" model, this type of professional development is also criticised because it does not allow sufficient time for the participants to gain the knowledge and practice to ensure that meaningful change takes place (Garet et al. 2001; Broad and Evans, 2006). On the other hand, Knight et al. (2006 p.333) argue that these events have worth in creating awareness for new ideas, policies or practices. (It should be noted that their findings from a study of 2401 part-time teachers, and 248 full-time staff, in the UK Open University propose that the teachers in higher education valued the non-formal learning experience since it allowed them to learn through consulting with other colleagues). While these short term events are useful in creating awareness of the innovation, they do not result in change in beliefs and practice, which is the purpose of educational change (mentioned in 2.2.2).

With regard to the structure, the other type of activity mentioned by Garet et al. (2001) is the reform type. This includes study groups, mentoring and coaching which take place during school hours when the teacher is in the process of carrying out the regular classroom duties. Penuel et al. (2007) also applaud the value of reform type since their study indicates that it is more effective than the traditional type.

### **2.5.2.1 Duration**

Researchers have indicated that professional development should not be just one special event; rather, it should take a systematic approach which considers the individual and the organisational development. (Guskey, 1999; Garet et al., 2000; Broad and Evans, 2006). Professional development that is sustained over time offers greater opportunities for the participants to engage in discussion and afford them opportunities to try out the strategies and skills that they have learnt. (Broad and Evans, 2006; Penuel et al., 2007; Garet et al., 2001; Darling-Hammond and Richardson, 2009) If there is to be effective training/education of the staff, the research suggests the need for structured time for both initial and ongoing training; however; finding the time to engage in these professional development sessions has been identified as another challenge to their implementation.

### **2.5.2.2 Collaboration**

Professional development which involves collaborative and collegial activity when the participants are engaged in active learning tends to yield the best results. (Avalos, 2011; Darling-Hammond and Richardson, 2009; Guskey, 1999; Hopkins, et al. 1994) Since change is a process, it cannot be a calendar item. There should be an on-going systematic and systemic approach which requires the collaboration of the community of practitioners (Georgina and Hosford, 2009; Guskey, 1999; Dengerink, et al., 2015). It is for this reason that Hopkins, et al. (1994) see the significance of creating and maintaining conditions in which all members of the school community can function comfortably, while committing to staff development and collaborative planning. These researchers also emphasise the importance of encouraging structures that lead

to collaboration and empowerment of the individuals and also monitoring and evaluating the quality to ensure that change occurs. This collaborative activity has the potential for change as teachers talk together about their practice, observe each other and collaborate to prepare teaching materials.

With regards to the implementation of a VLE, it appears that the reform type professional development activity would more likely bring about the *re-culturing* (change in belief and practices) which can be encouraged through collaborating with persons who teach the same course or the same students. With the necessary support and the opportunity to engage in the new environment and to see success even on a limited basis, the rate of adoption could be increased, because there is less risk involved (Nicholls, 1983 and Rogers, 2003).

## **2.6 Conclusion**

In this chapter, I focussed on a) *what* change was desired – facilitating learning of adult trainers of teachers through the use of a new learning environment, b) *who* is involved in the change and c) *how* the change could be initiated. The literature proposes that this kind of change can be initiated – through the use of sustained ongoing professional development activities where the participants are involved in active learning.

Given the fact that change is a process which takes place over time, I endeavoured to engage in the type of professional development that would have a lasting effect on the

participants and the institution at large. Aware that there are enablers and barriers to the implementation of eLearning, the research is therefore geared towards answering the following questions:

What is the process whereby a teacher training institution learns to adopt a Virtual Learning Environment (VLE)?

What were the systemic contradictions/tensions within the activity system as the community adapt to a Virtual Learning Environment?

What were the participants' retrospective perspectives of the process of learning to use Moodle?

In the next chapter, I discuss the Activity theory, the theoretical framework which is useful for investigating local work practices in which an innovation is being introduced.



## **CHAPTER 3 – THEORETICAL FRAMEWORK OF ACTIVITY THEORY**

### **3.0 Overview**

In this chapter, I present the theoretical framework which underpins this research. My research explored the experiences of the tutors in a teacher education institution as they engaged in activities to learn to use a new environment, a VLE, to support students' learning. Researchers have examined the adoption of technology using a variety of lenses, but I have chosen to use Activity Theory framework for the analysis of the data for 3 reasons: a) it is associated with staff development and change in a socio-cultural context, b) Activity Theory is developmental, so it captures the processes by which change occurs, and c) it consists of components that help in the identification of the areas of tension as people engage in an activity (Engeström, 1999). After providing an introduction to Activity Theory, this chapter outlines the a) construct of Engeström's second generation Activity Theory, b) core principles of Activity Theory, and c) application of Activity Theory in the study. It also proposes the elements of Activity Theory which hold greatest relevance to this study.

### **3.1 Introduction**

Activity Theory is a theoretical framework that has been associated with staff development and change in organisations and has been used to investigate the world of professional development. Grossman *et al.* (1999) used Activity Theory to investigate the professional development of pre-service teachers in different educational settings and shows the socio-historical factors that impact their development in these settings. Engeström (1999, p.378) also contends that Activity

Theory is suitable for analysing “innovative learning at work” because of these three reasons: socio-cultural context, focus on knowledge and thinking its developmental

First, activity theory is deeply contextual and oriented at understanding historically specific local practices, their objects, mediating artefacts, and social organization (Cole & Engeström, 1993). Second, activity is based on a dialectical theory of knowledge and thinking, focused on the creative potential in human cognition (Davydov, 1988; Ilyenkov, 1977); Third, activity theory is a developmental theory that seeks to explain and influence qualitative changes in human practices overtime (Engeström, 1999, pp. 377-378).

Since I was investigating a local practice in which an innovation was being introduced and the activity involved learning and change over time, I felt that Activity Theory would be suitable framework for my investigation.

This framework is versatile and inclusive as it focuses not only on learning but also on the supporting activities and social relationships that make learning possible. These observations led me to believe that Activity Theory would be ideal for analysing the experiences of the DTE as they transition to the VLE. I wanted to gain a greater understanding of the change process as the participants engaged in activities to use the innovative tool in a new virtual environment.

Activity theory is used as the framework for presenting and analysing the data with particular focus on the contradictions that underlie the human activities. In this regard, I examine the tensions between teaching in the traditional manner and learning to use Moodle to teach online. Engeström’s use of Activity Theory was developmental as he a) analysed the history and current practice of the organisation, b) worked with participants to visibilise or identify and analyse the rules, roles etc. which facilitate or militate against the change, and finally c) helped the participants to design new structures to facilitate the change.

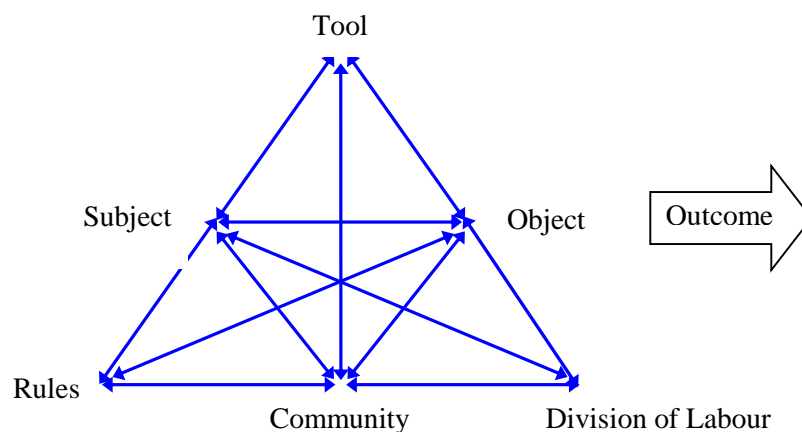
Because its assumptions are consistent with a constructivist learning environment, Jonassen and Murphy (1999) consider Activity Theory a “useful framework” for describing the components that can be used in a constructivist learning environment. In addition, they view the theory as a powerful “socio-cultural and socio-historical lens through which we can analyse most forms of human activity” (p. 62). Consequently, they have used the instructional design process to exemplify Activity Theory. These lenses allow us to focus on specific components of the system as we seek to resolve tensions or understand the level of functionality of the system. Activity Theory is also considered useful for providing the framework and language for the participants’ actions – how they do things together, and for describing developments (Hashim and Jones, 2007; Kuutti, 1995; Scanlon and Issroff, 2005). In the next section, I discuss the components of Activity Theory which make it a useful tool.

### **3.2 Construct of Engeström’s Second Generation Activity Theory**

Rejecting the views of prevailing theories that learning is the process of knowledge transmission and reception which would result in behavioural change, L. S. Vygotsky and his colleagues A. N. Leibt’ev and A. R. Luria focussed on the social nature of the meaning making (learning) process. However, Engeström (1999) expanded that vision to create a fuller picture of the factors that impact learning. In the socio-cultural or cultural-historical tradition, learning is seen as a collaborative social practice which occurs in a specific historical and socio-cultural context. As suggested by Engeström (1999), learning is not just a mental process; rather it is culturally mediated. Not only is it culturally mediated, but it is impacted by the tools or artefacts that are used, the other individuals involved, and the rule or norms which exist in the social system.

Since the emphasis is on the social, Activity Theory's emphasis is not just on the person as an individual; rather, it is the actions of individuals in a specific social context.

In Activity Theory, human behaviour is represented in three different levels. The simplest is that of *operations* – routine behaviours which are no longer performed with conscious intention. Though necessary, they may not even seem critical to the final outcome. An *action* is behaviour that is conscious and intentional while an *activity* incorporates the actions and the operations and is seen as the highest form of human behaviour. Although it may be argued that activity does not explain motive, since human activity is often based on motive, the motive may determine which activities are prioritised. This three-fold structure of operations, action and activity is often referred to as Leont'ev's hierarchical structure of activity (Morf & Weber, 2000). Learning is therefore seen as a conscious intentional activity. Figure 3.1 below demonstrates the model which will guide my discussion.



**Figure 3.1: Engeström's Expanded Activity Theory Model (Engeström, 2001)**

This famous representation of the activity system (triangle), highlights the various components and how they relate to each other as a unified whole in the activity system (Mwanza and Engeström, 2005). The components are the subject, the tool, rules, object, community and division of labour.

In the discussions that follow, I examine each component of the activity system to provide a deeper understanding of the various factors to be considered in this learning system that will be studied.

### **3.2.1 Subject/Object**

According to Engeström, the subject could be an individual or an organisation (Engeström, 2001). The subject is also the learner, (Jonassen and Murphy, 1999) or multiple participants interacting together to achieve specific outcomes (Mwanza and Engeström, 2005). The object, however, is the goal that the subject is trying to achieve. The goal may also be to produce or communicate something (Jonassen and Murphy, 1999). It is also the focal point of all the activities in the activity system and it can be transformed into outcomes. Here lies the challenge and possible tension. Although this framework or model suggests that there is a unified system and a “collective motive”, it is evident that the system consists of individuals with individual interests, goals and motives. Each subject/learner is impacted differently by the mediating tools since not only do the rules in the community impact on the learning/interaction, but so does each individual’s own socio-cultural and historical background. The concept that the whole community learns (also referred to by Engeström as expansive learning) therefore means that each individual is a learner/subject who performs actions with intention for a specific purpose. Since the subject is also the “point of view of analysis”, it is possible then to have multiple

perspectives and “multi-voicedness” (Engeström, 2001) because each participant in the “community” is a subject with a perspective and a voice. The existence of more than one subject in an activity system could create tensions in the collective system since the object of each subject may be in conflict. Ultimately, it could lead to a greater transformation of the outcome as participants share their perspectives/experiences. (Further discussion on tensions and multi-voicedness will be presented later in **3.3.2.**)

### **3.2.2 Tools/Artifacts**

Tools/artifacts are anything that is used in the transformation process; it could be material – pens and pencils, computer or psychological– language, symbols, techniques of memory (Robertson, 2007, Kuutti, 1995, Havness, 2004). They facilitate the interaction between subject and object. However, each comes with its own cultural and historical characteristics and therefore could have an enabling or limiting effect on the outcome. Robertson (2007) and Yamagata-Lynch (2003) suggest that tools could be created or shaped before or during the course of the activity. Furthermore, the nature and availability of the tools could facilitate or hinder the achievement of the object (Yamagata-Lynch, 2003).

### **3.2.3 Community/Rules**

The community can be considered the social system or environment in which the activity is carried out. It could also refer to a group of individuals who share the same object.

The rules/norms – historical, institutional, and cultural – which could be implicit or explicit would help to determine what is acceptable in the community and which mediate the actions and interactions in the activity system. They are the regulations or set of conditions which provide guidance concerning what is acceptable in the setting. They therefore govern how individuals may act in the setting.

### **3.2.4 Division of Labour**

Division of Labour could be “horizontal division of tasks between the members of the community ... and the vertical division of power and status” (Dochy et al. 2012, p. 130). Since it refers to task specialisation, it indicates those responsible for specific tasks that take place in the activity.

This systems model consists of three mutual relationships between subject, object and community, and as Engeström (2003) contends, the “key” to the relationship is mediation. As such “the relationship between subject and object is mediated by "tools", the relationship between subject and community is mediated by "rules" and the relationship between object and community is mediated by the "division of labour" (Kuutti, 1995, p. 29). Accordingly, the type and condition of the tools used and created could have an enabling or limiting effect on the outcome. Based on the cultural norms and institutional practices (rules) in the community (context of learning), the outcome could be impacted. Finally, the extent to which the roles and responsibilities of each participant are fulfilled could also impact the outcome.

### 3.3 Core Principles of Activity Theory

In this section, I will list the 5 core principles of Activity Theory. Engeström (2001) asserts that this conceptual framework is based on 5 core principles:

- *activity system as unit of analysis*
- *multi-voicedness of activity*
- *historicity of activity*
- *contradictions as driving force of change in activity*
- *expansive cycles as possible form of transformation in activity*

#### 3.3.1 First Principle: Activity systems as unit of analysis

An activity system is a *unit of analysis*. "...a collective, artefact-mediated and object-oriented activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis" (Engeström 2001, p. 136). This unit that is being analysed consists of the subject and object being mediated by the tools, the community and object that are mediated by rules, and the community and object mediated by division of labour.

#### 3.3.2 Second Principle: Multi-voicedness of Activity

An activity system consists of a community of individuals with different points of views. Different individuals with different histories and divisions of labour may construct the object in different ways. As a result it is possible to hear their varying perspectives on the activity or the object. The multiple perspectives could also be "a source of trouble and a source of innovation, demanding actions of translation and negotiation." (Engeström, 2001, p. 136)



### **3.3.3 Third Principle: Historicity of Activity**

The third principle relates to “*historicity*”. “Activity systems take shape and get transformed over lengthy periods of time.” (Engeström, 2001, p. 136) It is therefore important to understand what happened in the past appreciate the current status and finally to suggest the potential of the activity system.

### **3.3.4 Fourth Principle: Contradictions as driving force of change in activity**

The fourth principle is contradictions which are seen as a driving force for change in an activity system. Engeström (1999) refers to four levels of contradictions – primary, secondary, tertiary and quaternary. Primary contradiction are the tensions or disturbances that occur *within* a node or elements of the activity system (i.e. subject, object, tool, community, rules, and division of labour) while secondary contradictions occur *between* nodes. Since in our daily lives our actions may have multiple motives or objects, we belong to multiple activity systems. The tertiary contradiction arises when a more advanced system develops within the central activity system while the quaternary contradiction exists between the central activity system and an outside activity system. While Engeström asserts that contradictions are not tensions or problems, rather “historically accumulating structural tensions within and between activity systems” (Engeström 2001, p. 137) this research adopts a broader view of contradictions and is informed by the research conclusions of Murphy and Rodrigues-Manzanares (2008) concerning the various ways in which contradictions are explicated in research. This view incorporates the concept that contradictions are also ‘conflicts’, ‘tensions’ which manifest themselves as disturbances – unintentional

detours which served a disabling function in the achievement of the object, but which have the potential for change (Murphy and Rodrigues-Manzanares, 2008).

### **3.3.5 Fifth Principle: Expansive cycles**

The fifth principle indicates that transformation is possible in activity systems (Engeström 2001). As tensions increase in the activity system and people begin to question the established norms, change is possible. “An expansive transformation is accomplished when the object and motive of the activity are reconceptualized to embrace a radically wider horizon of possibilities than in the previous mode of the activity” (Engeström, 2001).

So far, I have presented the construct and principles of the Activity Theory. In the next section, I will explain how these principles are situated in the context of my research.

## **3.4 Application of Activity Theory in the Study**

In this section I outline how principles of Activity Theory can be applied in this research. The focus of this section is therefore, the application of the principles to the research.

### **3.4.1 Activity System as Unit of Analysis**

As stated earlier, the research setting is a teacher education institution. In this regard, the institution as a unit of analysis could be seen as follows:

*Subjects:* Tutors and HOD

*Object or objective:* learn to use Moodle, a VLE

<i>Tools:</i>	including computers, computer base Software tools, Moodle handbook, online tutorial
<i>Rules:</i>	include the guidelines set forth by the UWI School of Education, the Ministry of Education of Antigua and Barbuda. It also included rules related to Moodle use.
<i>Division of Labour:</i>	Related to the role of the Principal, HOD and subjects specialists and technicians
<i>Community:</i>	Tutors in the DTE, Head of Department, Principal of ASC and Technical Assistants
<i>Outcome:</i>	Tutors learn to use Moodle so that the DTE can offer courses in a blended mode or online.

The subject is the teaching staff of the Department of Teacher Education (DTE) who uses tools to learn to use Moodle (object). However, there are rules (explicit or implicit guidelines or norms regulating their activities) and division of labour (explicit and implicit responsibilities or tasks) for each member of the community - those visibly involved and those who are in the background. This ‘visibilisation’ (Engeström, 1999) of all the component parts of the system is intended to make analysis of the process more effective. However, there is not just one activity system; there are a number of activity systems at work, for activity systems have activity systems within them and so are themselves a part of larger activity systems. In fact, each member of the collective subject has its own activity system. Furthermore, goal-oriented individuals in this activity system are also independent and subordinate units of analysis. (Dochy et al., 2012) In this research, although I am a part of the community of the DTE, I also play a critical role as the facilitator of the workshop. I am therefore the subject of another activity system. Consequently, in this research, the two activity systems, one with me as the subject and one in which the DTE is the subject are in focus.

Grossman et al., 1999 suggest that an important aspect of Activity Theory is *appropriation*. This refers to the ways in which the community adopts new ways of thinking and acting as they interact with the tools in the social system. Appropriation is also dependent on factors such as the nature and availability of the tools, the perceived compatibility of these tools and the extent to which the tools are used to improve competence and confidence in the new environment. As I consider the concept of appropriation, I also reflect on the definition of eLearning proposed by Bullen (2014). As the participants adapt to the VLE, it would be possible to map where on the continuum the community is positioned during the process. However, activity system as a unit of analysis is not the only principle that can be applied to this research. I will now outline how the principle of *historicity* is relevant to this research as it invites me to examine how the cultural historical context impacts the learners.

### **3.4.2 Historicity of Activity**

Even though I made mention to the context in chapter 1, I will now provide further information which will shed greater light on the context in which the research participants operate. Each semester, the activity of delivering about 15 courses to about 180 students who teach in the early childhood, primary, secondary and tertiary institutions is facilitated by approximately twenty tutors, ten of whom are full-time.

To achieve their goal, tutors use a number of tools, a critical one being the Associate Degree handbook which is prepared by the Joint Board of Teacher Education – the certifying body for teachers in the Eastern Caribbean –Anguilla, Antigua and Barbuda, Barbados, British Virgin Islands, Dominica, Grenada, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent and the Grenadines. This handbook outlines (among

other things) the programmes offered, criteria for entry into each programme, course outlines and the examination protocol. The Joint Board of Teacher Education (JBTE) is in partnership with various entities in the Eastern Caribbean –including Ministries of Education, Teacher Education institutions, the School of Education at the University of the West Indies in Barbados, Teachers organisations and other independent members drawn from the community.

To ensure standardisation of the courses in the Eastern Caribbean, the School of Education, through the JBTE, provides a programme coordinator and also subjects specialists who liaise with the Head of Department (HOD), via the Principal of the Antigua State College. The HOD in turn communicates with the tutors who facilitate the learning of the student teachers.

The tutors, whose responsibility it is to prepare student-teachers for classroom practice, have often bemoaned the fact that they have not been given adequate *tools* – resource materials to fulfil their tasks. Apart from the key text which is used by the student teachers, the tutors, in many cases are given only Bristol board, markers, chalk and one LCD projector and one television/DVD for the entire department. Whereas all student teachers are encouraged to purchase the text book for each course, not all of them do so, and the library was not equipped with adequate resources for the students' use. Given the limited resources available, the tutors often provide supplementary materials for their students. All the classes are conducted in face-to-face modality and the JBTE does not require that the tutors use the VLE to support the student teachers. Furthermore, the ASC, and the MOE, the employer of the tutors, do not require that the tutors use the VLE.

The student teachers, who constitute the largest number of individuals in the *community* of the DTE, are expected to attend classes regularly, read resource material presented by the tutors and actively participate in the class activities. Other members of the community include academic staff (tutors who facilitate learning), the ancillary staff (cleaners, security guard, secretary, grounds man and the caretaker of the building).

While each member of the community had his or her responsibility (division of labour), each tutor was expected to use the software to engage in at least one of the possible ways in which Moodle could be used (for example, upload content, take attendance.) Rogers (2003, p.15-16) proposes that “the degree to which the innovation may be experimented with on a limited basis” is an important characteristic in its adoption. I therefore wanted the participants to determine how much they desired to learn and to gain success in as many areas of Moodle use that they desired. This research highlights the extent to which the “*historicity*” of this activity system creates tensions with the new activity system of the research.

### **3.4.3 Multi-voicedness of Activity**

I intended to chronicle and analyse how I coped with the differences in the responses of each member of the community as we attempted to introduce a new system for delivery of instruction. It was my view that during the process it would have been important for the participants to tell their stories (since they were also subjects/learners in the community). In light of this, the principle of *multi-voicedness* was very important since it allowed me to capture the multiple perspectives of the participants which allows for a fuller understanding of the process. As stated in chapter 1, this department was no stranger to change, but it was the first time that the

change involved them changing their pedagogical style. The views of the participants also help to guide decision making. The next section suggests how these tensions served as a driving force for change in the activity system.

#### **3.4.4 Contradictions as Driving Force of Change in Activity**

When learning is studied from an Activity Theory perspective, it is possible to identify the tensions in the learning context (Havnes 2004). While identification and acknowledgement of contradiction do not necessarily lead to change, they could help to highlight the extent to which these contradictions were resolved, and the extent to which they led to progress in the achievement of the object. It could also suggest possible policies that should be implemented to assist with the process.

### **3.5 Usefulness of Activity**

Engeström's Activity Theory is a useful framework in discussing the critical elements in the change process of the institution in which tensions are inevitable. In this study, the first and fourth principles are inextricably linked in understanding the tensions. Indeed, the educational institution is a unit of analysis. This first principle identifies all the component parts of the activity system and therefore provides a greater understanding of the tensions which may arise within and between these component parts/nodes. While the second principle relates to "historicity" it provides an opportunity to place the research in context (as explicated in chapter one and 3.4.2 above), and underscores the fact that past experiences impact present condition of each individual. Given the fact that the department consists of a number of individuals, it is important to view the process through their eyes; consequently, in the

presentation of the change process, the multiple voices of the group will be heard. It is their perspectives and feedback that will help to guide the necessary changes when tensions arise. Since this research focuses on the tensions which exist in transitioning from the traditional face-to-face teaching to one which incorporates a blended eLearning model, the fourth principle of Engeström's Activity theory is highlighted.

Activity Theory is a useful tool for gaining an understanding of the result of introduction of this innovation into the social setting. By focussing on the structure of the activity system, it is possible to access the relationship between the component parts of the system and to capture the complexities involved as teacher educators learn during the course of their daily work. The focus on the historical development of the activity system also indicates how previous activity systems impact the later one (Yamagata-Lynch, 2003). It is hoped that the voices of the participants along with my observations will help to reveal the tensions and also point to any level of transformation which may occur as a result of the intervention. (It should be noted that the principle of expansive transformation will not form part of the discussion in this research.

### **3.6 Conclusion**

In this chapter, I have presented Engeström's Activity Theory as the theoretical framework for this study. Both the construction and the principles of Activity Theory make it a useful tool for this study which focusses on the change process, professional development and the tensions inherent in learning to support student learning in a VLE.



## **CHAPTER 4 – RESEARCH DESIGN AND METHODOLOGY**

### **4.0 Overview**

In this chapter, I outline how I was able to generate knowledge about the experiences of the teacher education institution as it learned to use Moodle a Virtual Learning Environment. I also present the purpose of the research, my philosophical stance and the methods and tools used to address the research question. It also addresses the ethical issues as well as the method used to evaluate the research.

### **4.1 Introduction**

As stated in Chapter 1, all the initiatives on the regional and national level pointed towards the need for teachers to integrate ICT tools into the teaching and learning landscape. Consequently, the ASC had decided that its lecturers should engage in online learning, but the lecturers had no training in facilitating learning via a Virtual Learning Environment (VLE). This research provides knowledge of how the participant gained the skills needed to support student learning in this new environment. The research therefore seeks to answer three main questions:

- What is the process whereby a teacher training institution learns to adopt a Virtual Learning Environment (VLE)?
- What were the systemic contradictions/tensions within the activity system as the community adapt to a Virtual Learning Environment?
- What were the participants' retrospective perspectives of the process of learning to use Moodle?

This eclectic study used multiple methodologies and a qualitative interpretive approach to explore the experiences of the Department of Teacher Education (DTE) as the tutors learn to use Moodle. But the research went deeper to identify the tensions which existed as they confronted transitioning from a face-to-face to an online modality. It is hoped that the documented experiences would create a greater understanding of, a) the issues inherent in this technology change as well as b) the critical factors that hinder and enhance eLearning adoption in a small teacher education institution in a SIDS. After outlining the different ways in which research is approached this chapter outlines my epistemological and ontological positions which underpin the methodology and methods of my research. The chapter also discusses how I collected and analysed the data and addresses issues of ethics. Finally, it provides a trajectory of the research.

## **4. 2 Different Ways of Approaching Research**

In this section, I discuss the main perspectives on how knowledge can be generated, and then I propose my own view on the issue since that impacted the methodology and methods I used in this study. Since researchers have different views on the nature of knowledge and how it can be generated, this influences the different ways in which they approach research, but:

*... how we come to ask particular questions, how we assess the relevance and value of different research methodologies so that we can investigate those questions, how we evaluate the outputs of research, all express and vary according to our underlying epistemological commitments. (Johnson & Duberley, 2000 p. 1)*

Additionally, given the fact that researchers make different ontological assumption (about what constitutes reality) and epistemological assumptions (how knowledge can

be created), they use various methods and methodologies to arrive at the *truth* about the social world (Denzin, & Lincoln, 2011; Scotland, 2012; Crotty, 1998).

The most widely adopted research approaches are the positivistic approach and the interpretive approach. These two approaches are different lenses through which we can understand the world. The positivists view themselves as objective observers who gather data/information, without having any influence on it. They believe that their personal beliefs or predispositions and those of their research participants do not affect the interpretation of the data. Accordingly, they value (among other things) measurability, predictability and objectivity to arrive at objective truth. Since the positivists hold the view that the social sciences are essentially the same as the natural sciences, they are concerned with discovering “universal laws” regulating and determining individual and social behaviour. For the interpretivists, as the name suggests, “... meanings and interpretations are paramount” (Cohen et al, 2007 p.21). Consequently, the personal characteristics and views of the researcher and the research participants are taken into account because they can influence the data gathered in the research. While they do not reject quantitative approaches, the interpretivists do favour qualitative research approaches that seek to gain the various views of the participants. Since I embrace the interpretive approach, I will now discuss the philosophical underpinnings of my research.

### **4.3 Epistemology and Ontology – Pathways to Knowledge Construction**

This section outlines my own epistemological and ontological positions in this research. An understanding of my ontological and epistemological assumptions

provides a greater appreciation for my choice of methodology, methods and data sources. Since all educational research is grounded in people's experiences, I embrace the view that, "...reality is not 'out there' as an amalgam of external phenomena waiting to be uncovered as 'facts', but a construct in which people understand reality in different ways." (Morrison, 2003, p.18) Furthermore, since we have different experiences, we are likely to view the world differently and will therefore have different *knowledge* (Allison and Pomeroy, 2000). This view resonates with the second principle of the Activity Theory (discussed in chapter 3) which emphasises the importance of multi-voicedness. This allows the inclusion of the views of the researcher and research participants in the generation of the knowledge arrived at in this research.

It is my view that we are shaped by our pasts (cultures, beliefs, world view, personal ecologies etc.) but we are not 'confined' by them (Weinberg 2008). Despite the fact that each tutor has been influenced and shaped by the past and therefore would have different perspectives, interests, and biases that may have influenced their willingness to be engaged in the process of change, I contend that we can engage in dialogue with an effort to improve our condition. As such, I believe that, "things can be otherwise and that we might make them so" (Weinberg, 2008, p.35). Consequently, I believe that through my intervention and our collaborative activities, the tutors can learn another way to support student learning.

The reflections of the research participants were important in determining their experiences as they attempted to transition to a new mode in facilitating learning. The research knowledge produced out of this process was therefore derived through the interaction with the participants and their reflections on their experiences (Scotland

2009). Indeed, this research distinguishes itself in that it takes a meta-reflective perspective. Not only did it capture their reflections at the time of the transition, but it also then invited the participants to revisit their reflections at a time after the initial intervention and data collection. Their retrospective reflections not only confirmed the data generated while they were engaged in the research, but it also offered clarification on positions they held.

To provide a better understanding of the pathway I used to provide knowledge on the issue under investigation, I present the table below (Table 4.1) which shows the interrelationship between the various building blocks.

**Table 4.1: Interrelationship of the Research elements in knowledge construction**

<b>ELEMENTS OF RESEARCH DESIGN</b>	<b>DEFINITION</b>	<b>MY RESEARCH PARADIGM</b>
<b>ONTOLOGY</b>	What is there to learn?	What are the experiences of the DTE as we adapt to the VLE?
<b>EPISTEMOLOGY</b>	How could I learn about it?	Constructivism Constructing knowledge from observing the participants and gaining feedback from them
<b>METHODOLOGY</b>	How did I go about gaining that knowledge?	Interpretive approach
<b>METHOD</b>	What specific procedure was employed?	Action research case study
<b>DATA SOURCES</b>	What specific instruments were used?	Interviews, observations, Artefacts from Moodle platform, personal notes and email messages

My pathway to gaining knowledge about the DTE was shaped by the relationship between *ontology* (what I wanted to learn), *epistemology* (how I could learn about it) *methodology* (how I went about gaining that knowledge) and the *method* (the specific procedures that were employed). It was not enough for me to report on what I had seen or experienced, I needed the perspectives of the participants, so I conducted interviews. So far, I have presented my epistemological and ontological position. In the discussions that follow, I will further address the other elements of the research design.

#### **4.4 Methodology**

Scotland (2012) defines methodology as “the strategy or plan of action which lies behind the choice and use of particular methods.” (p.9) I have chosen the interpretive qualitative paradigm because my research is grounded in accessing people’s experiences. Additionally, given the fact that I am a pragmatist, I felt free, as Creswell (2012) proposes, to use multiple methods and multiple sources of data collection to address the research questions. I will now provide greater detail about the strategy that I used to gain knowledge about the experiences of the participants as the DTE attempt to adapt a VLE.

##### **4.4.1 Action Research**

Since I was initiating an intervention/change (action) in an educational institution, and I was simultaneously exploring (researching) our experiences as the institution learned to use Moodle, I decided to draw from the tradition of action research. The discussions that follow outline the nature of action research and how it was used in this study.

Proponents of action research proclaim the participatory nature of my research (McIntyre, 2008; McNiff and Whitehead, 2002; Cohen et al. 2007; Acosta and Goltz, 2014). McIntyre (2008) speaks of “participatory action” as opposed to “action research” and highlights three characteristics of this kind of research:

the active participation of researchers and participants in the co-construction of knowledge; the promotion of self- and critical awareness that leads to individual, collective, and/or social change; and the building of alliances between researchers and participants in the planning, implementation, and dissemination of the research process.( McIntyre, 2008, p.ix)

My institution wanted to embrace the VLE but the faculty did not possess the skill set to do so. A part of my role in this research was to intervene by assisting the research participant to learn to use Moodle. It was through this intervention that we had hoped that the change would have been realised. While all the participants were actively involved in the research as they were all involved in the process of learning and sharing their perspectives on the process, they were not involved in the planning in any significant manner. (It was only in the final stage of the process, in chapter 5, did I invite one of the participants to be a co-facilitator in the workshop.) In keeping with Activity Theory’s principle of multi-voicedness and principles of action research, the participants were involved in the research activity and they shared their perspectives on the experience.

Summarising the various conceptions of action research, Cohen et al. (2007, p.298) quote Kemmis and McTaggart (1988) in this all-encompassing definition:

Action research is a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practice, as well as their understanding of their practices and the situations in which these practices are carried out.... The approach is only action research when it is *collaborative*, though it is important to realise that the action research of the group is

achieved through the *critically examined action* of individual group members (Kemmis and McRaggart 1988:5)

Three critical concepts are embedded in the definitions are critical to my research: 'self-reflection', 'change' and 'collaboration'. Indeed, the end result of this research was to improve – or bring about change (one of the distinguishing characteristics of action research) through the involvement of all the participants. The staff development which I had envisaged for the tutors sought to heighten their awareness of the value of a VLE, and expose them to another modality for offering instruction. Furthermore, since I was reflecting on what happened in the process, the research could also be considered self-reflective. Additionally, all the participants critically examined the usefulness of the training. It is through their feedback that I became aware of *contradictions/tensions* in the process of transitioning to VLE since as Cohen, et al. (2007) suggest, action researchers seek to understand the process of change. Indeed, while they were not co-researchers, they were active participants in the research. It is through our combined reflection that we were able to arrive at knowledge related to the topic under investigation.

Following the constructivist and interpretive paradigm, action researchers affirm (and I do too) that, a) knowledge is socially constructed, b) the views of the participants are critical, c) research into our own lives cannot be 'value-free', d) we can know by doing, e) the real life experience with real people can achieve positive results and that, e) through the systematic and cyclical process of reflection and action observation and reflection, we can bring about change (Brydon-Miller, et, al.2003; McNiff and Whitehead, 2002; McIntyre, 2008). As we engaged in the *action* of the research, I was able to theorise about the process since "action research goes beyond the notion



that theory can inform practice, to a recognition that theory can and should be generated through practice.” (Brydon-Miller, et, al.2003, p. 15)

I therefore conducted an action research case study in which I was one of the key players in initiating the action, as I sought to shape the trajectory of the implementation of an innovation (VLE) into the ASC landscape.

#### **4.4.1.1 The Process of Action Research**

Since the transition to the VLE involved the training of the participants, I found that the action research process was appropriate for instituting the desired change. McNiff and Whitehead (2002) propose that action research is not “a set of concrete steps but a process of learning from experience, a dialectical interplay between practice, reflection and learning” (p.13). I started with an idea (of teaching the tutors to use Moodle) which I developed through a cyclic or spiral process which alternated between reflection, planning, action and observation and redesigning when necessary. I was therefore implementing change through an iterative learning process. (McNiff and Whitehead, 2002; Burnes, 2004; Acosta and Goltz, 2014). In this methodology, I was always checking to see how the events unfolded and assessed myself and others in the process. Arguably, while there were general guidelines of what I hoped would have been accomplished, the design of the study emerged/evolved based on the interaction with the participants. While action research situated the trajectory of the research, I used a variety of techniques to collect and analyse the data. The next section outlines the approaches I used to generate data.

## 4.5 Method

According to Scotland (2012, p.9) “Methods are the specific techniques and procedures used to collect and analyse data.” While an action research case study situated the trajectory of the research, as stated above, the qualitative approach allowed me to draw on a variety of methods to make sense of the process in each cycle. As Denzin and Lincoln (2004) propose,

Qualitative research involves the studied use and collection of a variety of empirical materials—case study, personal experience, introspection, life story, interview, artefacts, and cultural texts and productions, along with observational, historical, interactional, and visual texts—that describe routine and problematic moments and meanings in individuals’ lives (Denzin & Lincoln, 2004, pp. 3-4).

My research also conforms to Wellington’s (200) key features of qualitative research as I was *exploring* our experiences in the *natural work setting*. The *human beings*, namely the tutors are the main research *instruments*, and my research design *emerged as I went along*. Furthermore, through the contractual agreement (which will be discussed later **4.9.3.2**) the tutors confirmed their willingness to engage in the process.

Like Activity Theory and action research, the qualitative approach is also associated with innovation, learning, professional development, change and an understanding of the socio-historical context. (Morrison, 2003; Cohen, 2007; Engeström , 1999), all of which my research incorporated. Because it is a study of an institution, the case study approach “...allows the reader to understand ideas more clearly than simply by presenting them with abstract theories or principles.” (Cohen et al, 2007 p. 253) Given the fact that my research took place in the natural setting of the workplace and it occurred over a sustained period of time (2009 – 2012) and required the input of the

participants, the qualitative approach seemed the best approach. In the next section, I provide some information on the composition of the research participants.

## **4.6 Participants**

All the research participants were members of the teacher education department of the institution. Since the strategic plan of the college was to eventually offer courses online, the college was determined to expose its staff to training on how to use the VLE. Given the fact that everyone could not have been trained at the same time, the training offered by the college started with the department of teacher education. Possible reasons for starting the training with this department could have been because, a) I as Head of that department was identified as one of the champions who had been to Canada to learn lessons about adapting to VLE, b) my research interest at the time was eLearning, c) it was hoped that if the tutors learned to use Moodle the college could train more teachers than it would in the face-to-face only modality and would therefore compensate for the loss of many teachers who had taken the voluntary separation package (as outlined in chapter 1). I therefore encouraged all staff members to take advantage of the opportunity, so that we could be at the vanguard of the innovation at the college. Further information on how the participant became a part of the research process will be discussed later in **4.9.3.2**.

At the time of the study, the DTE consisted of 37 faculty members, 10 of whom were full time and 25 part time, and 185 students; however, only 13 participants (tutors) were involved in the research. Since most part time faculty members teach on average only one of the three semesters (trimesters – though we referred to them as semesters), the focus of the research was on the full time faculty members to assure

the continuity of the process. Although part time faculty members were invited, only three of them participated. Of the 13 participants, 10 of them had been trained in the DTE of the ASC while the others were trained elsewhere. The research started with 9 participants; however, one participant obtained a new position outside of the DTE at the end of the first semester, another at the second stage of the process and 4 new participants were added when the DTE gained new faculty members ( after the third of four workshops had been conducted). The 13 research participants ranged between the ages 31 and 50+. Table 4.2 provides a breakdown that gives some details about the participants.

**Table 4.2: Composition of the research participants**

Participants	AGE	Part time (PT)	Duration of Involvement (2009-2012)	No. of workshops attended
		Full time (FT)		
Mary	31-35	FT	2011-2012	2
Ava*	36-40	PT	2011-2012	0
Ceci	31-35	PT	2011-2012	1
Khloe	41-45	FT	2009-2012	4
Lillian	51+	FT	2009-2012	3
Lisa	41-45	FT	2009-2012	2
Gail	36-40	FT	2009-2012	2
Carol	36-40	FT	2011-2012	2
Myrtle	46-50	FT	2009-2012	3
Grace	51+	FT	2009-2012	3
Jem	31-35	FT	2011-2012	1
Cherry	46-50	FT	2009-2012	3
Jacey	36-40	FT	2009-2010	2

\*Ava received one-on-one training from me

Eventually, the participants who were most engaged in using Moodle were the most recent additions to the department, two fulltime (Jem and Mary) and two part time (Ava and Ceci) all of whom were between the ages of 31 and 40.

#### **4.7 Data Collection**

This section outlines my rationale for the procedure I used to collect the data in this research. As an interpretive researcher, I was a part of the research under investigation. My task was to “view the participants as research subjects and to explore the ‘meanings’ of events and phenomena from the subjects’ perspectives” (Morrison, 2003, 18). This view supports Engeström’s (1999) principle of hearing the multiple perspectives of the participants. I reasoned that if we were all participants in the process, it was only right that the perspectives of all participants be used to generate knowledge on the subject under investigation. As a participant observer, I was a part of the social life of the activity system; however, as implementer, I did more than record the process, I was actively involved in it.

Following the qualitative interpretive paradigm, I used the following data collection techniques to collect data for this research: interviews, observation of artefacts from the Moodle platform and my personal notes. Cohen (2007, p.182) concludes that interviews are useful for “identifying feelings and motives; commenting on the standards of actions (what could be done about situations); exploring present or previous behaviour; eliciting reasons and explanations”. Two types of interviews were used: semi-structured and unstructured interviews. In the semi-structured interview, I had predetermined questions, but I changed the order based on my perception of what

seemed most appropriate. The unstructured interview was used many times since this allowed for less formal interaction. Additionally, being an active participant in the research, I wanted the conversation to develop naturally so that the participants could speak freely about their experiences. It was during the interviews with some of the participants that I was able to provide just-in-time support when the participants identified a challenge they were experiencing with Moodle use. This was particularly the case in the interviews which occurred in 2011 (Appendix 8). After transcribing the data, only data related to the research questions were part of the analysis. This is in keeping with data reduction and selection principle proposed by Cohen (2007)

#### **4.8 Data Analysis**

Activity Theory framework was used in the presentation and analysis of the data, but Activity theory was not the only source used for the analysis of the data. Since there is no one way to analyse data (Wellington, 2000), I believe like Miles and Huberman (1994) that “...any method that works, that will produce clear, verifiable, credible meanings from a set of qualitative data,” is “grist for our mill.” Accordingly, along with components and principles of Engeström’s cultural historical activity theory, I also used the literature review which focussed on eLearning adoption and professional development.

Given the iterative or cyclic nature of action research, the data was analysed throughout the process. Through this methodology, I was able to gain a greater understanding of the situation as I engaged in several interventions and evaluations to bring about change. Given the ‘emergent’ rather than ‘a priori’ research design, I

developed tools and used a variety of methods to bring about the desired change. The interactions and ‘artefacts’ on Moodle were also examined on a weekly basis to determine the extent to which the participants were implementing what they had learned. In addition, interviews were conducted with all available participants and transcribed after ‘training’ sessions to assess the effectiveness of the training sessions and the process of adopting the VLE. Key features or themes were identified with a view to understand both the processes and the tensions during the training sessions. Furthermore, selective tools of Activity Theory were used to analyse the data. By identifying the component parts of the activity system, I was able to determine the areas of tension and also determine the areas that needed change in the activity setting.

Since the process imitated the action research cycles, my contemporary reflections as well as my second order reflections (or meta-reflections) were presented. Also documented are the reflections of the participants as we related how we collectively learned through this professional development process. It was through our reflections that I was able to generate knowledge about the process and the tensions of using the VLE. In the next section, I address issues concerning the quality of the research that is produced.

#### **4.9 Determining the quality of the research**

As stated earlier, this research is interpretive in its approach, so how do I determine its quality? In determining the quality of the research, I discuss issues related to validity, relevance and ethics in this section.

#### 4.9.1 Validity

Though referring to qualitative research in the discipline of health care, Mays and Pope (2000) argue that, ‘Quality in qualitative research can be assessed with the same broad concepts of validity and relevance used for quantitative research, but these need to be operationalised differently to take into account the distinctive goals of qualitative research’ (p.2). Wellington (2000) and Yin (2009), Mays and Pope (2000) suggest that the validity of qualitative research can be assessed through *triangulation* – using ‘multiple’ sources for data collection; consequently, this research used multiple interviews, my own reflection, workshop evaluations and observation of artefacts produced on Moodle.

Bryman (2004, p.30), like Bush (2002), proposes another criterion, trustworthiness, to be used in judging qualitative research. It consists of four components which parallel quantitative research criteria:

*Credibility*, which parallels internal validity – i.e. how believable are the findings?

*Transferability*, which parallels external validity – i.e. do the findings apply to other contexts?

*Dependability*, which parallels reliability – i.e. are the findings likely to apply at other times?

*Confirmability*, which parallels objectivity - i.e. has the investigator allowed his or her values to intrude to a high degree?

To establish credibility, I used a variety of methods and data sources to obtain greater understanding of my social context from different perspectives. This triangulation, as evident in the multiple data collection methods, affirms that the ‘reality’ of a situation



cannot be ascertained from a single point of view, so it is for this reason as well, that the perspectives of all the participants were included.

Because I am researching a unique context – a department of an educational institution, it is possible that the findings may not hold or be transferrable to another context or even the same context at another time; however, I offer sufficient detail in the presentation of the data to provide others with sufficient information to determine the extent to which the findings are transferrable to other contexts (Bryman 2004). The details about the activities also allow the reader to understand the activity system under investigation, so that they can draw conclusions about their significance.

In summary, to increase the validity of the data collected, I presented multiple methods of data collection, engaged in a form of ‘member checking’ or respondent validation by crosschecking my observation against the accounts given by the respondents (chapter 6). I also presented sufficient information to allow the reader to evaluate my interpretation of the data. By using the variety of strategies outlined above, I attempted to ensure the credibility and authority of the findings of the research.

#### **4.9.2 Relevance**

With regards to assessing the relevance, Pring (2004) Wellington (2000) and Yin (2009) argue that just as one does not generalise from a single experiment, so too one would not generalise from one case. Similarly, Brydon-Miller et al. (2003) are

conscious that one of the criticisms of action research is “the difficulty we find in intervening in large-scale social change efforts” (p.25). Since the research has greater applicability for the local context, they affirm that,

*...action research is much more able to produce valid results than ordinary or conventional social science. This is because expert research knowledge and local knowledge are combined and because the interpretation of the results and the design of actions based on those results involve those best positioned to understand the processes: the local stakeholders* (Brydon-Miller et al., 2003 p.25).

Accordingly, the findings of this research would be of great benefit to the local context and policy members. Although we may not be able to generalise because of the uniqueness of the case, there may be some lessons to be learned that could be applied generally. Furthermore, it may be more important to look at a case and learn from it rather than generalise from it (Wellington, 2000). It is hoped that my experiences as a middle manager engaged in practitioner-based research would provide insights from which other middle managers can apply to their own context if they are engaged in a similar endeavour.

#### **4.9.3 Ethical issues**

The main issues that will be discussed in this section include a) gaining access, and b) providing the necessary information and structure to gain consent of the participants. While there are a number of professional organisations such *the British Sociological Association, (BSA), the Social Research Association, (SRA), and The British Educational Research Association (BERA)* which provide guidelines for ethical conduct during a research, I was guided by the guidelines set out in BERA which The School of Education at the University of Nottingham has adopted.

#### **4.9.3.1 Gaining access**

As stated earlier, the strategic plan of the ASC, the institution at which I work, included offering courses online. Access to the site and the faculty was therefore easy since my research would help to fulfil the strategic plan of the institution. Early in the process of the research when the ASC website was not working efficiently, with the permission of my principal, I sought and gained permission from the head of another institution at which I worked part time to host our courses on their website.

#### **4.9.3.2 Voluntary informed consent**

Prior to the commencement of the research, in an effort to ensure that “all the participants understand and agreed to their participation without any duress” (BERA, 2004, p.6), I consulted with each participant individually and presented them with the participant information sheet (See Appendix 4a for the Participant information sheet and Appendix 4b for the Participant consent form) which explained what the research was about, why it was being conducted and how the information would be used. In the spirit of transparency, I outlined the issues involved in participating in the research and inquired whether they would be willing to be a part of the process. I followed the same procedure with the participants who joined later in the process.

In addition to being told that their involvement in the research was optional, they were also told that they could choose the number of Moodle functions they wished to learn. I reasoned that since Rogers (2003) indicated that the ability to use the innovation on a limited basis would increase the likelihood of its adoption, I allowed the participants to indicate the level of involvement they desired. Since “Dual roles may also

introduce explicit tensions,” (BERA, 2004, p.6) the participants were also informed that as Head of Department, I would respect the extent of their participation; however, as the person conducting the training and research, I would encourage them to learn together and from one another. Finally, they were free to discontinue with the research if they chose to do so.

The prospective participants were also assured that the information gathered would not be used in any way that could be detrimental to them, and that they would be given anonymity in any report of the research, so their personal information would be kept confidential. Particularly because the faculty is so small, special care was made to ensure that no names were mentioned. (As stated earlier, in 1.3. 3, except for English and Mathematics, there was generally only one tutor for each subject discipline.) Those persons who chose to be involved in the research signed a form indicating their consent.

#### **4.9.3.4 Incentives**

No physical/tangible incentive was offered even though the participants were being asked to engage in an exercise that would make demands on their time. The only *enticement* that was offered was the view that their involvement could help them professionally (as they were learning to use a tool that could enhance the teaching and learning exercise) and personally (they could become more marketable since with the new found skill, they could possibly get online teaching jobs).

In summary, recognising that this research is a qualitative enquiry, I wanted to ensure its quality. In this section, I therefore paid special attention to issues related to

triangulation, and ethical issues regarding obtaining access to the research field. In the next section, I present a trajectory of the eLearning adoption process.

#### **4.10 Trajectory of eLearning adoption**

*It is sometimes suggested that in studies which are largely qualitative and interpretative, research design is either unnecessary or less important: researchers do not set out with any pre-specified questions, but wait to see what emerges from the research setting, and then interpret what they have experienced (Poulson & Wallace, 2004, p.52).*

While the qualitative inquiry may suggest that there is either no plan or that the plan emerges as time progresses, as in all inquiries, this research did have a plan/design which followed a pattern of identifying the issue to be investigated, identifying the questions that I would like answered about the issue, justifying why I used specific methods to gather and analyse the data. This section outlines the *blueprint* for understanding the process and the participants as we constructed ‘knowledge’ which could be useful to the participants and others who wish to attempt a similar venture.

As stated in chapter 1, from a regional and local level there were plans for greater use of web based technological tools. While the government of Antigua and Barbuda was providing Internet access and training for its people, the Antigua State College was preparing for the adoption of the VLE.

The process of the DTE transitioning to the VLE started with the activities of the Antigua State College. First, it sent members of staff to tour 5 Canadian universities to gain experience on how to develop and deliver online learning. Following it engaged an overseas facilitator to conduct a workshop. Finally, I continued the

process by the facilitation of 3 workshops and the provision of just-in-time support to the participants. The training of the tutors occurred over a three-year period from August 2009 – to October 2012. There were 4 major training sessions and the data were generated from these workshops, from interviews and discussions held with the participants, as well as from observation of their involvement on the Moodle platform. Additional data was collected in 2015 to determine the participants’ retrospective perspectives of the process of learning to use Moodle. In the next sections, I outline the actions of the ASC staff and management in initiating the change process.

#### 4.10.1 Actions of ASC Staff and Management

As Table 4.3 indicates, the ASC engaged in 4 main activities as it prepared its staff to adapt to eLearning.

***Table 4.3: Trajectory Of ASC Plans To Implement Elearning***

<b>Dates</b>	<b>Events</b>
April 25 - May 3, 2009	Five faculty members sent on a Study tour to Canada
June 23, 2009	Calendar of events for 2009 – 2010 (including Moodle workshop dates) emailed to the Management team
August 23, 2009	Formal Invitation to attend Moodle workshop sent to 14 faculty members (7 of which hailed from DTE)
August 25 –27, 2009	Moodle Workshop facilitated by overseas consultant

Firstly, in partnership with Caribbean Knowledge and Learning Network (CKLN), ASC sent five of us on a study tour of five institutions in Canada, from April 25 to May 3, 2009, to learn lessons about how to facilitate eLearning. (CKLN is an inter-

governmental, not-for-profit Agency of the Caribbean community CARICOM designed to improve the competitiveness of the Caribbean by upgrading the knowledge and skills of its human resource.) It was envisioned that this could be accomplished through the collaboration of its educators and connectivity of CARICOM member states through the use of broad band fibre optic network called C@ribNET.) Following the fact-finding mission, the team presented a report of their findings to the principal. (Appendix 3A presents the Report on Canada tour)

The group that travelled to Canada comprised of representatives from a) Management, b) Information Technology Unit and c) 3 Departments of the ASC: Engineering, Advanced Level and Teacher Education. In a proposal sent to the CKLN to justify the Canada visit, (Appendix 3B ASC/CKLN Proposal) the ASC outlined that, ‘there is a great demand to increase access and to provide more flexible modes of delivery.’ (Excerpt from ASC’s proposal to CKLN to gain funds for the study tour.)

It was felt then that:

The limitations imposed by face-to-face delivery can be reduced while the teaching staff to meet the demand can be optimized in an e-learning environment.

The shift to an online and or blended mode of delivery is critical to meeting the need to provide residents of the sister island, Barbuda, equal access tertiary education and training. (Excerpt from proposal to CKLN)

Secondly, in June 23, 2009, when the calendar of events for the upcoming year was formulated, the ASC demonstrated its commitment to engage in eLearning by including in the institution’s calendar of events the dates for a workshop to facilitate eLearning. Additionally, the 20 emailed messages that I received from June to August, 2009, from the network administrator, CKLN representatives and the workshop facilitator spoke of the plans that were being put in place to conduct the

workshop. The discussions included possible dates, funding, content and objectives of the workshop. Not only did CKLN collaborate with ASC in providing funding for the study tour, but it also assisted in providing a consultant to create awareness for eLearning and to train both academic and technical staff of ASC to use Moodle.

Thirdly, when it was decided that training in Moodle would be conducted, a week before the first semester, Tuesday 25 – Thursday 27 August, 2009, as part of the professional development for the August 2009 – 2010 academic year, email messages indicated that ASC faculty was invited to attend the workshop. (Since this was the first ‘formal’ activity of the ASC to train the staff in the use of Moodle, I decided to use the workshop as a starting point for the data collection process for my research.)

Fourthly, the ASC conducted the workshop. This workshop activity will be discussed in **5.2**. Since the workshop was designed to train both faculty and technical staff, all attended the training sessions at the times stipulated. The morning sessions were devoted to the training of academic staff while the afternoon sessions were devoted to the training of the technical staff. All staff members were expected to attend the first morning session to get a general overview of benefits of Moodle. Implicitly, ASC management was expected to provide a) consistent Internet access to make the workshop viable, b) accommodation for the workshop facilitator, and c) the technicians who were at the same time learning the ‘back end’ of Moodle. (See Appendix 5 for details on the objectives and my reflection on the impact of the workshop.)



#### **4.10.2 My Intervention to Continue the Process**

Knowing that the participants had been initiated through the training received from the first workshop, I intended to provide further training and support to the participants while I generated data on the process.

To ensure that the relevant data was collected, I developed the general plan for engaging with the research participants and for collecting the data. This plan included

1. *Sharing with staff the growth of e-learning and the allowing them to suggest the mindset of young people. (E-learning is no longer restricted to adults)*
2. *Suggesting the possibilities that Moodle affords in completing a variety of tasks*
3. *Setting goals*
  - i. Allowing participants to indicate the extent to which they would want to engage in each activity
  - ii. Allowing participants to determine which activity they would want to tackle first
4. *Conducting workshops*
5. *Supporting the participants*
  - i. Checking the Moodle platform weekly to determine the participants' level of engagement – for example, whether they had input resources, or engaged in discussions – and determine how regularly they engaged in the process.
  - ii. Interviewing participants concerning their level of engagement – the challenges and opportunities as well as level of support needed
  - iii. Conducting follow-up workshops or training sessions with individual participants or with the entire group as needed
6. *Recording my actions and observations as we initiate the change.*

In summary, the process started with the activities of the ASC and continued with subsequent training sessions and support which I offered to the participants.

## **4.12 Conclusion**

In this chapter, I outlined the epistemological and philosophical underpinnings of this research. I have indicated that qualitative inquiry was conducted to determine the process by which the tutors used Moodle and the attending tensions involved in the process. The selection of the qualitative approach is in keeping with the theoretical framework that I have adopted for my research. Important to both qualitative inquiry and Activity Theory is the focus on multiple perspectives of the subject, understanding of the socio historical context as well as professional development and change. Also discussed are the methodological and ethical considerations for this research. Finally, I presented the trajectory for adopting the VLE which will be further detailed in the next chapter, along with the findings and analysis of the data.

## CHAPTER 5 – THE PROCESS AND TENSIONS

### 5.0 Overview

In this chapter, I present and analyse the data addressing two research questions: *What is the process by which the DTE learns to use Moodle? What were the systemic contradictions/tensions within the activity system as the DTE adapted to eLearning?*

As stated in chapter 2, the literature cites training as a critical factor in increasing the adoption of an innovation (Singh and Hardaker, 2014; Bates, 2011; Whelan-Berry and Somerville, 2010; Stevens, 2013; Cabral et al., 2012). During the course of this research, there were 4 formal training/ professional development sessions otherwise called *workshops* which took place during specific time periods identified in this chapter as Stages 1, 2, 3, and 4.

As stated in chapter 3, Activity Theory is used as a framework for presenting and analysing the data with particular focus on the contradictions that underlie the human activities. Although the presentation may seem to be in narrative form, the data is in the *story*. It is through the narration that the tensions are made visible and subsequent readers can make judgements about the significance of the events.

In this research, two major activity systems are at play: one in which I, implementer, am the subject using tools (varying approaches and artefacts) to aid the participants to offer courses online (object) and the another in which the DTE used tools to learn to use Moodle. For each of these systems, there were rules (explicit or implicit guidelines or norms regulating their activities) and division of labour (explicit and implicit responsibilities or tasks for each member of the community) - those visibly

involved and those who are in the background. This ‘visibilisation’ (Engestrom, 1999) of all the component parts of the system makes analysis of the process more effective.

To answer the research questions, in this chapter, I discuss the process and the tensions under the following headings:

5.1 Introduction: Summary of Research Activity

5.2 Stage 1 – Orientation to Moodle Use

5.3 Stage 2 – My First Training Initiative

5.4 Stage 3 – Progress with Moodle Use

5.4 Stage 4 – Using the Upgraded Moodle

While all four workshops were important in the adoption process, it was the last event that was considered the most productive for the participants.

## **5.1 Introduction: Summary of Research Activity**

To answer the first research question, *What is the process by which the DTE learns to use Moodle?* in this section, I present a summary or map of the major events of the research, the participants who attended and the main research activity including the data that were generated from each stage.

The training of the tutors occurred over a three-year period from August 2009 – to October 2012. Although the research period may appear to be extended, the entire process was rather episodic because of the challenges on both personal and institutional levels. During the process, I was forced to suspend the research on two occasions because of personal issues, specifically, the care of my ailing parents (both of whom eventually passed away – my mother in November 2010 and my father in

June 2012). On an institutional level, there were issues related to the unreliability of the Internet connectivity and the incorrect functioning of the server.

Table 5.1 presents the time line for each of the major *events/workshops* and the number of participants who were involved.

***Table 5.1: Main Training Sessions and Number of Participants***

<b>DATES</b>	<b>Name of Workshop</b>	<b>VENUE</b>	<b>Number of attendees</b>
<b>1</b> August 25 –27, 2009	Initial training in Moodle use	ASC	8
<b>2</b> Feb. – Mar. 2011	Workshop at NTTC	NTTC	8
<b>3</b> May 31 – June 2, 2011	Workshop at ASC main campus	ASC	6
<b>4</b> June 4 – 7, 2012	Workshop at ABIIT Using the Upgraded Moodle	ABIIT	7

Altogether, there were 13 research participants. The first workshop was conducted in August 2009 with 8 research participants present, one of whom left a year later after gaining a new position outside of the institution. When new staff members joined the institution in August 2011, they were invited to be a part of the research process; consequently, over the research period, 5 new participants were added. Eventually, it was 4 of the newer members of the community that made the most use of Moodle. Table 5.2 shows which workshop each participant attended.

**Table 5.2 Participants' Attendance at the Events**

<b>Participants</b>	<b>Event 1</b>	<b>Event 2</b>	<b>Event 3</b>	<b>Event 4</b>
Grace	✓	✓	-	✓
Carol		✓	✓	
Lisa	✓	✓		
Kloe	✓	✓	✓	✓
Cherry	✓	✓		✓
Lillian	✓	✓		
Jacey	✓	✓		
Myrtle	✓	✓		✓
Gail			✓	✓
Ava				
Ceci			✓	
Mary			✓	✓
Jem				✓

Although the number of participants who attended the sessions appeared to be constant – 7 on average – the participants who attended each event were not the same at each time. Only 1 participant attended all 4 sessions: 3 attended 3 sessions, 4 attended 2 sessions and 1 attended 1 session. Ava did not attend any of the workshops, but she did have one-on-one sessions with me, first to gain the initial training in Moodle use, then, on other occasions, to receive just-in-time support.

The next table, 5.3, provides a summary of the 4 major stages, the research activity, the data that was collected and the external events which impacted the process.

**Table 5.3: Research Activity (August 2009 – May 2012)**

STAGE / DATE	PROJECT ACTIVITY (MY ACTIONS)	DATA COLLECTED	EXTERNAL EVENTS
1 AUG – 2009  – Mar. 2010	Observation of workshop participants 25 – 27 August, 2009 Creation of Moodle handout to determine participants’ interest Professional development session for staff to encourage collaboration Creation of online tutorial for research participants– PD 101: Professional development – an online tutorial to remind participants of what they had learned. Creation of online tutorial – <i>Emergent Teachers</i> (for students)  Discussions/ training support	Handouts and notes from workshop by overseas consultant providing, a) an alternative approach to the teaching of Moodle, b) topics covered which served as a springboard from which to follow-up participants  Feedback from 7 participants, a) from handout indicating the Moodle functions they wished to learn, b) from staff professional development, c) informal conversations. Artefacts from Moodle platform  9 Email messages between network administrator, CKLN rep. and overseas consultant concerning workshop and follow-up. Anecdotal notes 3 Participants’ activity on Moodle Observations from Moodle involvement	The passing of tropical storm Erika after which the Moodle server failed to power up for the first 3 ½ weeks of the semester (Aug. 31 – Sep. 18)  Caring for ailing parents and death of my mother
2 Feb –  Mar. 2011	Three days formal training sessions over four-week period with 7 participants  Creation of a hand out, “ <i>I’m living in Cyber Space! Will you join me?</i> ” for Moodle use	One email from the Director of Education to provide laptops to the tutors in DTE  Announcement on the media that the Government of Antigua would provide all teachers in the primary and secondary schools with free laptops and high speed Internet  Interview and transcription with participants Personal notes from observations during workshop	Provision of laptop & high speed Internet to teachers in all schools & 12 laptops to staff of DTE
3 May –  Nov. 2011	Creation of a) booklet for Moodle use b) Revised online tutorial on Moodle  3-day workshop at ASC main campus - Observations Interviews/ Discussions  Challenged participants to place at least one course on Moodle Interviews/ Observations	Workshop evaluation form from 5 research participants Statements from participants (follow up from workshop evaluation)  Transcripts from Interviews with 4 participants who used Moodle / Transcripts from Discussions with 7 participants who had not used Moodle / Artefacts from participants’ Moodle course and personal notes	
4 May –  Jun 2012	Creation of new Moodle instructions for upgraded Moodle  Development of an upgraded Online tutorial – Professional development (PD) Workshop (ABIIT) Interviews	Anecdotal notes from observations during workshop  Transcripts of interviews/ discussions Artefacts from participants’ Moodle course transcript from focus group discussion	My father’s hospitalization and subsequent death

The first stage saw the introduction of Moodle into the ASC environment from an institutional standpoint. The other stages saw me as champion and facilitator use

various workshops and support systems to minimise the tensions inherent in this change process. The duration of each stage varied. The first stage of the process, which was the longest one, and the one in which we experienced the most tensions, was 7 months long. The presentation of the information on this stage is also longer than the other stages because I needed to document the variety of tensions which existed in that stage of the process. On the other hand Stage 2, 3, and 4 lasted 1 month, 6 months, and 1 month respectively. (N.B. Stage 3 took place just before the summer vacation)

The data is presented in 4 sections. At the beginning of each section is a summary of my actions (as captioned in *Project Activity*). I also include the data collected during that stage as well as identify external events (actions or occurrences that were not initiated by the researcher but which impacted the research process). In the next section, I discuss the activities which occurred in the first stage with a discussion of the tensions that existed in that stage of the process.

## **5.2 Orientation to Moodle Use**

As stated in chapter 4, the process of learning to use a VLE started with the initiative of the ASC. Following the fact-finding mission to Canada, the ASC invited an overseas consultant to conduct a workshop which was held August 25 – 27, 2009. On the morning of the first day of the workshop the entire faculty of the ASC was given an orientation to Moodle. This was in an attempt to share the vision and to create awareness and interest in the initiative upon which the college was embarking. Indeed this is one of the enabling activities proposed by researchers (Fullan, 2007; Whelan-Berry and Somerville, 2010; Stoltenkamp and Kasuto, 2011). However,



because of space constraints, only 15 participants were targeted for the training at the workshop. It was decided that since the faculty at the DTE and a few other persons from other departments had been exposed to a workshop in which they were developing material for open and distance learning, they should be given priority. Apart from the first morning in which all staff members were given an orientation, the other two mornings were devoted to training of the teaching staff while the afternoon sessions were designed to train the technical staff how to support the Moodle users. .

The stated objectives of the workshop were to:

- Explain what a learning management system is
- Identify Moodle as a learning management system
- Identify at least 3 ways in which you can use Moodle in your teaching and learning
- List the major activities involved in administering your course in Moodle
- Understand at an introductory level course blocks, how students are enrolled in a course, user profiles, using groups
- Identify websites to get help and more information on using Moodle

Further information on the impact of the workshop can be gleaned from Appendix 5.

Since I had had previous training in Moodle use (as stated in chapter 1), my aim in attending the workshop was to receive first-hand information of the orientation given to the staff. I intended to use this information to guide the type of support I should provide to the research participants during the *first* semester. (September – December, 2009) Table 5.4 highlights my actions during this stage, the data collected, and the external events which impacted the research process. These will be discussed later in the section.

**Table 5.4: Summary of Research Activity and Data collected in Stage 1**

<b>STAGE 1 August 25 – March 2010</b>	
<b>Project Activity</b> (my actions)	Observation of workshop participants Tuesday 25 – Thursday 27 August, 2009 Creation of ‘Moodle handout’ (Table 5.5) to determine participants’ interest Creation of online tutorial for research participants– PD 101: <i>Professional development</i> – an online tutorial to remind participants of what they had learned (and provide practice)
<b>Data collected</b>	Handouts and notes from workshop by overseas consultant providing, a) an alternative approach to the teaching of Moodle, b) topics covered which served as a springboard from which to follow-up participants Feedback from participants from a) handout indicating what Moodle functions they would wish to learn, b) personal notes from informal conversations 9 Email messages between network administrator, CKLN representative and overseas consultant concerning workshop and follow-up Personal notes
<b>External events</b>	Workshop facilitated by an overseas facilitator August 25 –27, 2009 The passing of tropical storm Erika after which the Moodle server failed to power up for the first 3 ½ weeks of the semester.

### **5.2.1 Devising tools to support the participants**

While the entire ASC was moving towards eLearning as part of a college-wide initiative, my research focus was the DTE of which I was the head. Following the workshop, in keeping with the guidelines of Activity Theory, I created tools as needed during the activity (Robertson, 2007 and Yamagata-Lynch, 2003). During this stage, I created two tools: a handout and an online tutorial. The handout was designed to assess the interest and needs of the participants and the online tutorial was designed to support the participants as they learned to use Moodle.

#### **5.2.1.1 Tool 1: Handout to Assess the Interest of the Participants**

The first tool I created was an instrument/handout to determine how the participants would like to use Moodle. I believed that teachers would be less resistant to change if they could see the benefit of the change to them and to their students, (Garet et al., 2001; Sugar et al., 2004; Rogers, 2003; Mitchell and Geva-May 2009), but the benefits can only be appreciated if the teachers begin to use the new change tool (Moodle). I therefore created a handout with a list of seven (7) Moodle

activities/functions to which the participants were introduced during the workshop; namely: a) Edit your profile, b) Administer your class, c) Add content/resource, d) Add an activity such as a forum, assignment or quiz, e) Set up a grade book, f) Configure the attendance register, g) Use the attendance register. In the participant information sheet, I had indicated that the participants could decide how many of the Moodle functions they wanted to learn. I also asked them to indicate their preference on the handout that I had provided. In my mind was the view by Rogers (2003) that one of the characteristics of an innovation that would cause its diffusion is its ability to be tried in a limited way. My hope was that if the participants could see success in a limited manner, they may be inclined to try other aspects of Moodle.

Performing any one of these activities may seem insignificant on its own; however, the cumulative effect of each activity would aid in the development of skills needed to offer courses online or in a blended modality. Since the workshop did create awareness of the benefits of Moodle, I had hoped that engaging in this activity would have helped the participants to recall what they had done in the workshop. In addition, I hoped that it would have challenged them to commit themselves to learning how to become knowledgeable about many aspects of the Moodle functions and ultimately engage in conscious intentional activity (3.1). (Table 5.5 presents the responses of 7 of the 8 participants who responded.

#### **5.2.1.1.1 Responses of Participants to the Moodle Functions Handout**

The data represented in Table 5.5 suggested that all the participants were interested in cementing at least 1 area of their learning about Moodle. That justified my developing the online tutorial to assist them online when I am not present with them

in a face-to-face session. The tutorial covered all the functions that the tutors requested. While there was only one response for a desire to edit profile, there were at least 5 responses for each of the other 6 functions. See below for details.

**Table 5.5: Responses to Moodle Functions Handout**

Participants	Edit your profile	Administer your class (2 parts)	Add content/Resource (3 parts)	Add an activity (4 parts)	Set up a Grade book	Configure the attendance register	Use the attendance register
<b>Khloe</b>	✓	✓	✓	✓	✓	✓	✓
<b>Cherry</b>		✓	✓				
<b>Jacey</b>		✓	✓	✓	✓	✓	✓
<b>Myrtle</b>		✓	✓	✓	✓	✓	✓
<b>Grace</b>		✓	✓	✓	✓	✓	✓
<b>London</b>		✓					
<b>Lisa</b>		✓	✓	✓	✓	✓	✓
<b>Total</b>	<b>1</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>

Following is an explanation of the Moodle functions identified in Table 5.5

## **MOODLE FUNCTIONS**

### *1. Edit my profile*

### *2. Administer my class*

- a. Change Settings
- b. Add students to my class

### *3. Add content/resource - Upload course content*

- a. Upload word files
- b. Upload PowerPoint slides
- c. Provide links to online content

### *4. Add an activity*

- a. Forums for online topic discussions
- b. Assignments  
Offline activity – allowing students to submit assignment by specific time  
Managing /grading assignments submitted

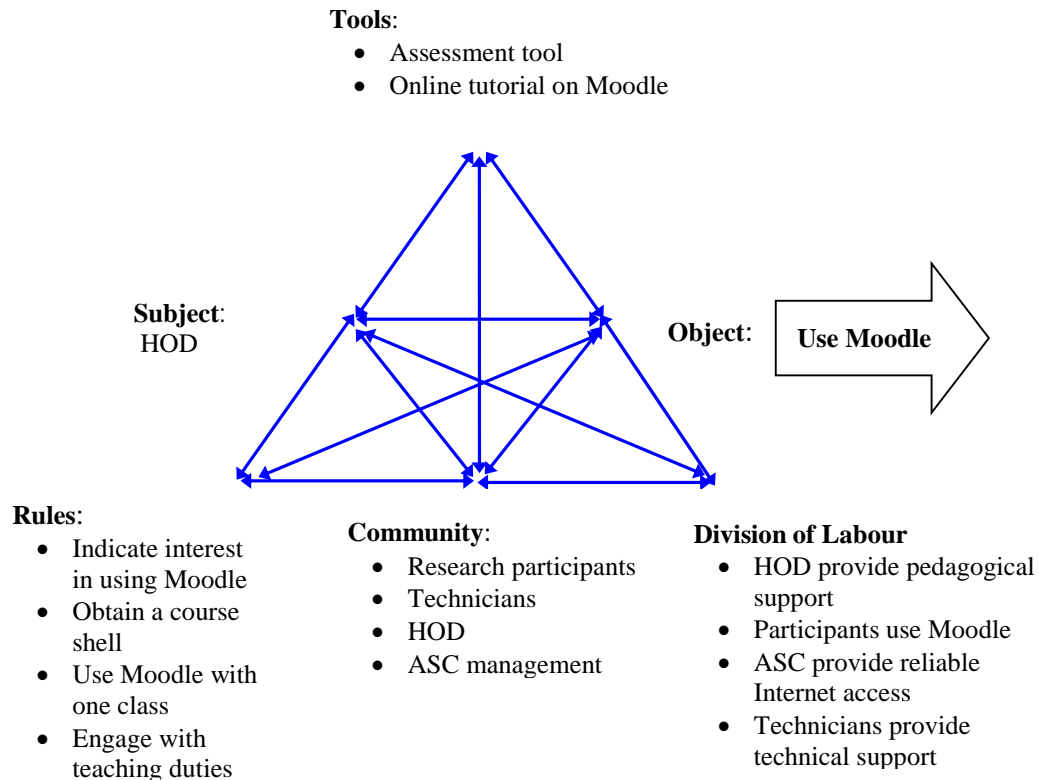
- c. Quizzes – Creating different question types (multiple choice, true/false, essay, etc.) for the quiz
5. *Set up a Grade book*
- a. Configuring the grade book parameters (weightings, letter grades, etc.)
  - b. Using the Moodle grade book
6. *Configure the attendance register with appropriate weighting*
7. *Use the attendance register*

### **5.2.1.2 Tool 2: Creating a tutorial in Moodle**

The second tool I created was an online tutorial. The rationale for creating a tutorial in Moodle was to, a) provide instructions on how to perform various functions when I was not face to face with the participants, b) cater to the another learning preferences of the participants, and c) allow them to experience the online environment from the students' perspective. Participants were expected to log on, access the course and complete the activities set out there. The events which took place during this stage explain the extent to which the participants were able to complete the activity.

Using the feedback from the handout, (Table 5.5) I created an online tutorial entitled, *PD 101: Professional Development for Teachers*. This tutorial was designed to provide online support to the research participants. The topic outline was used, since this revealed the topic that was being highlighted, rather than the weekly outline which showed the week in which an activity/topic was being addressed. The tutorial provided step-by-step information on how to perform all the Moodle functions listed above and afforded the participants guidelines on how to use Moodle without my direct assistance. (Appendix 6 Topic outline of information on Moodle.)

Figure 5.1 below presents the activity system at work during this first stage of the process. I, as Head of Department (HOD) and implementer, was the subject, using 2 main tools, to initiate the community of the DTE to eLearning. With the participants' involvement, the technical support, consistent Internet access, and my pedagogical support, I expected the participants to begin to use Moodle with their classes.



**Figure 5.1 Stage 1 Activity system**

Having indicated the level of involvement desired, each participant was expected to request a course shell, so that they could enter into the new VLE. They were also expected to use Moodle with one of their classes. I had hoped that the tools above mediating between me and one group in the community (research participants) would have engaged the object – enable the participants to begin using Moodle with their classes (even in a limited way) – but in retrospect very early in the semester, there were the beginnings of developing tensions in the activity system.

### 5.2.2 Developing tensions: Tool Failure

While Engestrom (2001) defined contradictions as ‘historically accumulating ... tensions.’ for the purpose of this study, contradictions takes a broader view to include what Murphy and Rodrigues-Manzanares (2008) concluded from their research as *conflicts, tensions* which manifest themselves as disturbances – unintentional detours which served a disabling function in the achievement of the object, but which have the potential for change. In our context, these disturbances arose from inside and outside the activity system and manifested themselves as personal, climactic and institutional conflicts/obstructions. The summary of the events as they unfolded after the workshop are presented in Table 5.6 Also included in the summary are the requests made and the actions taken.

Table 5.6 indicates that the first ‘obstruction’ was revealed in week one of the semester (just after the Moodle workshop) when the desire of the participants to get involved in Moodle was met with their inability to access Moodle because of the intervention of tropical storm Erika which hit Antigua September 2 – 3, 2009. As stated in chapter 1, like other SIDS, Antigua and Barbuda, is known for its susceptibility to natural disasters. (For three weeks after the workshop there was no Internet access.) The Requests and Actions column of the table indicate the tensions and the efforts made on my part and the part of the institution to resolve the tensions.

Participants’ ability to use Moodle was impacted by a primary contradiction occasioned by a faulty tool, the Internet, which in fact should have been an enabling tool. At that time, we did not consider the tool itself faulty; we thought that one of the effects of the storm was the disruption of the Internet connectivity.

**Table 5.6: Summary of the events of Semester 1 – August 31 to November 20, 2009**

<b>PERIOD</b>	<b>TENSIONS/DISRUPTIONS</b>	<b>REQUESTS</b>	<b>ACTIONS</b>
<b>Week 1</b> Aug. 31- Sep. 4	Tropical storm Erika necessitates storage of computer equipment.		Computers, servers, etc. dismantled.
<b>Week 2</b> Sep. 7-11	Server failed to power up after passage of Erika.	Network Administrator contacted CKLN for assistance with the server.	
<b>Week 3</b> Sep. 14-18		Network Administrator advised researcher that participants should request a shell from the portal page.	
<b>Week 4</b> Sep. 21-25		Jacey inquired how to access a course shell.	
<b>Week 5</b> Sep. 28- Oct. 2			Researcher sent participants instructions on how to request a course shell so that they could build their own course. Network Administrator advised on available support.
<b>Week 6</b> Oct. 5 – 9		Jacey and Cherry requested course shells.	
<b>Week 7</b> Oct. 12 - 16	-	-	-
<b>Week 8</b> Oct. 19 – 23	Technicians were experiencing difficulties. There was no access to the Moodle portal.		
<b>Week 9</b> Oct. 26 – 30	Semester Break		
<b>Week 10</b> Nov. 2 - 6			Researcher encouraged participants to request a course shell and showed participant how to access it.
<b>Week 11</b> Nov. 9 – 13	Participants indicated that it was too late to start.		
<b>Week 12</b> Nov. 16 – 20			Requested permission from ABIIT President to use their Moodle platform.



While there was no Internet access on the campus during the first week of the semester, by the third week, the Network administrator copied me in an email indicating that “*The machine for the Moodle server has failed to power up after it was shut down for the passing of Erika*” (Email September 8, 2009). Tropical storm Erika had forced the technicians to ‘secure’ all the hardware. Paradoxically, it was this *care* of the equipment that seem to have contributed to its seeming ‘demise’. Having consulted the Dell technicians, by the third week of the semester, the Network administrator emailed all the workshop participants indicating that persons who were ready to begin creating their courses should request a shell from the Portal page.

### **5.2.3. Secondary contradictions in the Activity System**

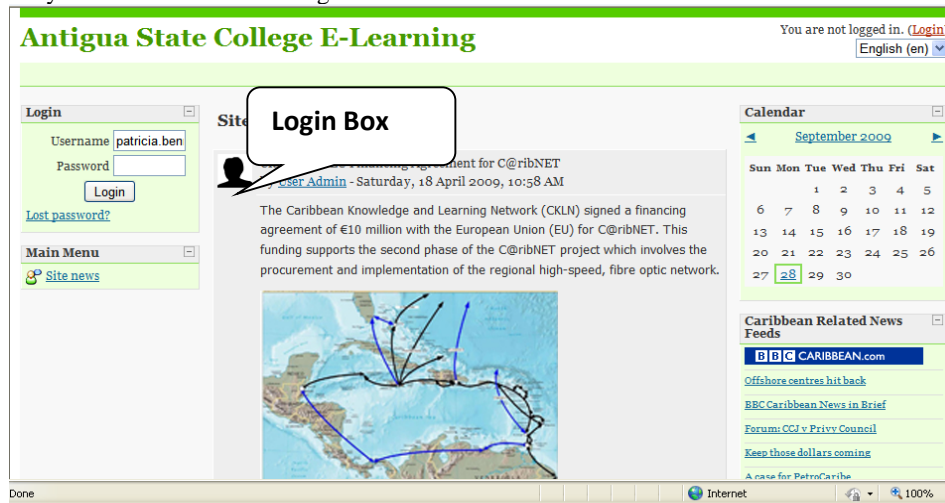
As stated in chapter 3, the key to activity system’s model is relationships. The relationships between all the nodes in the activity system affect the outcome. The discussion that follows shows how the tensions were created in the relationships. By week 5 of the semester (September 28 – October 2, 2009), the network administrator emailed indicating the structures that were being put in place to ensure that the technical aspect was in place including,

*... Ms. Page has been assigned the role of course creator ... IT Staff have been doing the LAN login for each student as we get the course shell requests ... students have been assigned an email account at asc.edu.ag ... [she had] been assigning email accounts at asc.edu.ag for faculty who requested course shells and Ms. Page has indicated that she is willing to walk/talk you through the set up etc. once your course shell has been created. (Network administrator, 2009)*

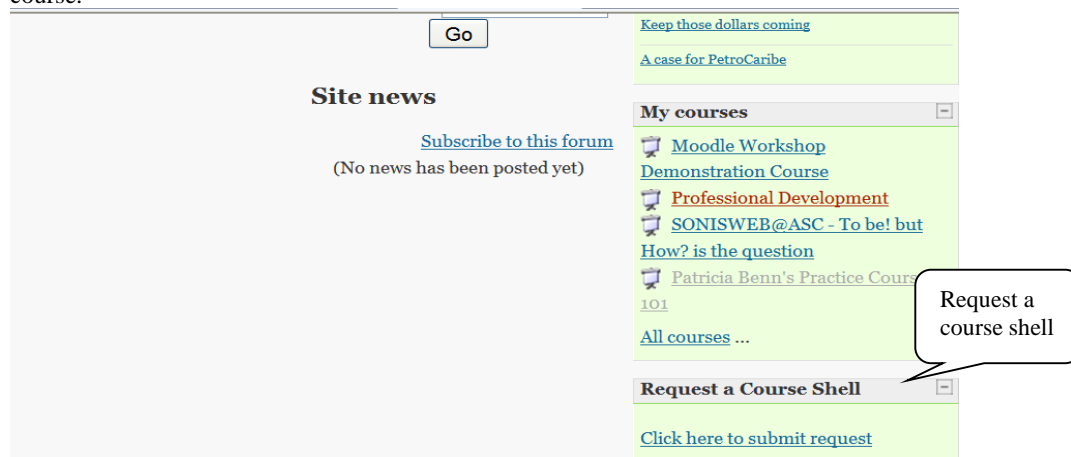
When I realised that none of the research participants had requested a shell which would allow them to use the VLE, I assumed that they did not know how to perform the task. In week 5, I sent the following email (Figure 5.3) reminding the research participants of the procedure.

Hi Everyone,

Thank you for agreeing to be a part of my research that will enable us to learn how use the kind of technology that is so common place to today's students. To start the process, you will need to go to the Antigua State College E-learning website <http://elearning.asc.edu.ag:8080/> and you will see the Moodle login screen:



Insert the username and password that Miss xxx gave you when we were at the workshop. Once you have successfully logged in, you will be presented with the Main Menu, at the bottom right hand corner of which is a prompt to submit a request for a Course Shell. Follow the prompts so that Miss xxx would be able to give you a course shell with the title of your course.



I have already requested a shell and have entitled my course Professional Development (PD101). You have been included in my course so that I would be able to guide you along the process. Feel free to ask for help when you need it ...

See you online soon!  
Email Sep 28, 2009

**Figure 5.3: Communication to the Participants Concerning Requesting a Shell**

During that same week (5) Jacey indicated that some of the evening students who were resitting courses had clashes with classes that they were required to do. This information from Jacey validated teaching the participants to use Moodle since it

would allow the provision of alternative way to prepare those students who had clashes and for others who could not return to the institution to be prepared for re-sit examinations. Nonetheless, by week 10 of the semester, (week 4 in October, 2009), I received an e-mail captioned “Problem with access to Moodle Server - October 2009” which indicated that the technicians were experiencing difficulties with the Moodle server. While I appreciated being kept informed, my personal notes expressed my disappointment:

*I guess these are the teething pains of setting up online learning, but they do not give me much information to write in my dissertation!* (October 30, 2009)

As I mentioned earlier, in the Overview (5.0) there were two activity systems. I presented the one activity system in which I, as subject, created the tools to facilitate learning to use the VLE. Simultaneously, the other activity system in which the DTE was the subject was also in focus. The DTE, as subject, could not achieve the object because the tool was faulty. Additionally, the ASC, whose responsibility it was to provide reliable Internet (division of labour) did not perform that function. As a result, the object was not achieved. These results are consistent with the view proposed by Yamagata-Lynch (2003) that the nature and availability of the tools can impact the outcome. Up to this point in the process, the secondary contradiction existed between the rule of obtaining a course and the absence of the tool – the Internet connectivity. Rules are critical for the efficient functioning of an activity system; however, rules without the tools to accomplish the task only frustrate the outcome.

#### 5.2.4 My Intervention

The inability of the ASC to provide consistent Internet connectivity restricted the actions of the participants. Furthermore, an external factor to both activity systems – the storm – inhibited their engagement after the storm. As change agent and manager, I needed to resolve the contradiction, but I was also conscious that ASC was not in a financial position at that time to provide the tool. Regrettably, it had not received additional funds to embark on this initiative. Later, in 5.2.5, I will discuss how I addressed this issue to ensure that the research participants could use a portal that had reliable server and Internet access.

Additionally, my own *belief* could have been seen as a disturbance within the node of the ‘subject’. I felt restrained by the fact that the participants’ contractual arrangement did not demand that they engage in this eLearning initiative. Even though training to use Moodle was a college initiative, their engagement while desirable was not made mandatory. Nonetheless, by week 10, I called a staff meeting because I realised that up to that point, only Jacey had posted anything on Moodle. Jacey had placed one question (related to the subject being taught) for the students (to which only two students had responded). I needed to hear from the participants. I challenged them to “at least request a shell.” Kloe indicated that it would have been better to have started the process at the beginning of the semester when they were not challenged with so many other responsibilities, and the others agreed. Nonetheless, I proceeded to highlight those aspects of Moodle that I thought would have been beneficial to them.

I was aware that the tutors often complained that their students were not observing the due dates for submission of assignments. Since I knew that Moodle had a feature that allowed students to submit assignments within a specific time frame and block them from submitting outside that time frame, I shared that with them. I advised the participants to use that feature to ensure student teachers' compliance with the institutions requirement to submit assignments on time. If the students realised that Moodle would record when assignments were submitted, and would block them from submitting outside of the due date, they might be more likely to submit on time. Furthermore, I also shared with them that they could correct the assignments electronically and return them to their students. At that point, Lillian, one of the participants that I had taught to use the tools in Microsoft Word ("Track Changes" and "Insert Comment") to correct assignments electronically indicated, "That's an easy process," and offered to demonstrate how this could be done. After the meeting, two participants, Jacey and Lillian, made appointments to meet with me for help. Since her students were scheduled to come to class only one day per week, Lillian indicated that using Moodle would allow more interaction with the students outside of the scheduled class time. When she came the following Friday for her training, however, we could neither access the website nor the network administrator.

As stated by Engeström (2003) the key to obtaining the object of the activity system is the relationships between the component parts. To learn to use Moodle, the server must be functioning effectively. The ASC management as member of the community, needed to fulfil its role of providing the tool to make engagement with Moodle possible. In light of the tensions that were identified so far, the next section focuses on the structures that were put in place to resolve the contradiction.

### 5.2.5 Making alternative plans – Resolving the Tension

While allowing the change to be unobtrusive (Elton, 1999), strong encouragement may be necessary to create an awareness that there is need to change. Consequently, that weekend, I wrote:

Decision – I will contact tutors individually to, a) show them how to request a shell, b) show Kloe how to correct students' work online.  
November 13, 2009

As Head of Department (HOD), I was determined to be more direct in my approach and challenge each participant to engage more fully in the initiative of the ASC with regard to Moodle use. Despite my decision, I recognised that we had come to the end of the teaching session for that semester and exams were due to begin in two weeks.

During that stage, the DTE was planning for the major change in the way we offered teaching practice. Realising the challenges that I was experiencing with the Internet at the ASC and preparing for the new teaching practice, Lillian, who was becoming my 'critical friend' – not by design, but based on the role she played – suggested that I seek permission from another institution to use their eLearning portal to host our courses. (According to McNiff and Whitehead, 2002, one who offers advice and criticism is a "critical friend.") Having discussed with the Principal of the ASC the challenges that I had been experiencing with the ASC website, she granted permission for me to take that route. By mid-November 2009 (week 11 of the 14-week semester), I asked the president of the Antigua and Barbuda International Institute of Technology (ABIIT) – an institution at which I worked part time – if that institution would be willing to host our courses on their platform since the ASC's website was not allowing the participants to learn to use Moodle. He granted permission immediately, but nothing was done to engage the participants because we were close

to the end of the semester and the teaching sessions for that semester had come to an end. Furthermore, the technicians at that institution would have needed time to set up our courses for hosting. I anticipated that by the next semester structures would have been put in place to resolve the contradictions.

Up to this point in the process, the disturbance brought about by the storm negatively impacted the ability of the participants to engage with Moodle. According to Foot and Groleau, (2011)

The primary contradiction is not only continually present, it is also foundational to the other levels of contradiction. While this fundamental tension conceptualized as a primary contradiction keeps the activity system in constant tension, it surfaces in everyday contexts in various forms and in the other levels of contradiction.

In this regard, the unreliable Internet access could be seen as an impediment which created tensions in the activity system since it impeded the progress of the project and kept the activity system in constant tension.

During the preceding events and subsequent ones, this primary contradiction/disturbance (unreliable Internet access) was indeed a recurring issue in the progress of the initiative. Additionally, discussions with the participants exposed the need to teach another skill which is important to online instruction, namely online feedback. (Using Microsoft tools of Track Changes and New Comment to provide feedback on assignments sent electronically.) In the next section, I introduce another factor which impacted the process of learning to use Moodle. The University of the West Indies, whose programmes the DTE offered was another activity system which introduced a another contradiction as it made demands on the DTE to change its mode

of offering support to students on teaching practice. Understanding the paradigm shift is important to understanding the progress made. The consequences of this contradiction will be outlined in the next section.

### **5.2.6 Teaching Practice Paradigm Shift**

By the following semester the UWI had implemented the change in which Teaching Practice was conducted. Instead of the usual 4-weeks engagement in the schools, for the very first time, the student teachers were engaged in the schools for a 10-week period. This shift affected the research process since it demanded more time of the research participants who were then learning to deal with the largest contingent of student teachers on teaching practice over the longest period of time. With a full time staff of 10, and over 100 student teachers to be supervised, it was necessary to solicit help from Ministry of Education officials and retired principals. Despite their involvement, some tutors in the DTE had as many as 20 student teachers to supervise, as well as teach a course to the first year students. (Only those student teachers who were in the second year of the full time programme and the third year of the part time programme were eligible to be involved in teaching practice.) I, as well as some research participants, thought that using Moodle with those student teachers who were not on teaching practice would have eased the burden of meeting them face to face.

In an effort to deal with the increased responsibilities in teaching practice, the participants spent less time on the college campus. Nonetheless, during that period, I created another tool, an online tutorial for the student teachers. The next section explains how that tool was initiated.



### 5.2.7. Online tutorial for the students

Having acquired a new portal on which to host the courses, I approached the new semester with great enthusiasm and hope, qualities which Fullan (2001) advises are critical for culture change leaders to demonstrate. While I was eager for all the tutors to engage in this change process, I was aware that I could not coerce them into doing so, but I did think that I could entice them to be involved. Furthermore, one of the lessons from our tour of the institutions in Canada was that we should start the change process with those who were interested.

As stated in chapter 1, the research focus was the teacher educators since they play a critical role in the education system and there is so little research available on them. Although I had decided to focus attention on them, I was aware that the student teachers had to be prepared for the process. To generate the interest of both the research participants and *their* students and to sensitise the students to this mode of learning, I decided to model the process to the participants by creating another course online – a not-for-credit course for the student teachers called, *Emergent Teachers*. This course was created for the first year student teachers since the second year student teachers were engaged with teaching practice. The course was designed to fulfil two functions: a) orient the student teachers to what to expect in an online course, and b) encourage student teachers to address soft skills which may not have been emphasised in the courses that they were pursuing. I had also hoped that my ability to create a course online and engage the student teachers would make the research participants more assured that this new way of facilitating learning was possible. I was hoping too, that by pursuing the course, they would have been able to appreciate what their students would experience online.

Although students' response was not the focus of the research, I wanted to be assured that they understood how to navigate the Moodle platform and I wanted to get a first-hand account about how they felt about using a VLE. The first two assignments focussed their attention on reading the newspaper and responding to issues involving children. Although the unreliable Internet access was a critical factor, it was evident that they were very concerned about the grade value of the course. Too often students asked, "*Is this going to be graded?*" As would be expected, once they realised that it was not-for-credit, they were not as eager to participate.

#### **5.2.8 Discussion with research participants**

Since the participants had seemed very busy with teaching practice, I did not call a formal meeting to discuss their involvement with Moodle; rather, by the end of January, soon after the semester began, I examined the portal to see their involvement online and spoke to some research participants individually. By the first week in February, three participants Jacey, Lillian and Lisa demonstrated interest in getting online: Jacey wanted to allow the students to work online for a week to test the effectiveness of the VLE and Lisa wanted to put her resources on line since she felt that it would allow her more time to spend with the students on teaching practice. When Lillian realised that I was orienting the student teachers to Moodle use and that Jacey wanted to use Moodle for an entire week, she requested a training session in how to upload resources on Moodle. During that two hours session, she was very excited about uploading some of her resources to the VLE. In my weekly examination of the Moodle platform, I noted that three participants had received a course shell, but only Jacey had posted minimal course content for the students. (A course shell is a specific section on Moodle which houses each teacher's course content.) Ultimately,

participants had differing views which can be summed up in of Kloe's comments, *"It was difficult to be on teaching practice and to administer our courses."*

Other research participants revealed that they did not participate because by the end of the day after having gone out to the schools, they were exhausted and therefore had not placed any work on Moodle. Their constant refrain during that time was, as expressed by one participant, *"it's just to find the time to sit down and do it."* Given the preceding events, the next session focusses on the developing tensions during this stage of the process.

#### **5.2.10 Developing Tension: Between activity systems**

At any given time, there is more than one activity system at work. This section highlights how personal activity systems also impacted the ability to adapt to the new learning environment. My critical friend, Lillian, is also an informal leader and what Rogers (2002) would refer to as an 'opinion leader,' that influential member of the social system to whom the others look for advice. Given her conviction that adapting to eLearning is 'inevitable' and desirable, I was hoping that she would have championed the cause among the other participants. While she was openly supportive of the venture during staff meetings and informal meetings, unfortunately, challenges with issues in her own personal ecology as well as a heavy workload made it difficult for her to devote adequate time to even make all her resources available to her students in the new learning environment. Often she would apologise,

*You know I want to put something on 'the Moodles' (as she often called it) ... but you know my situation."* Lillian, 2011

Added to the technological crisis at my workplace (no Internet access) and the new modality for teaching practice session, there was my own personal responsibility of caring for my father whose unsteady and deteriorating medical condition required critical care and later hospitalisation. Being the primary care giver of my parents, I needed to attend to his needs, but this resulted in significant reduction of my progress with the research. My personal notes at that time reflected my feelings.

*I am trying my best to get the work done, but it is rather challenging. The technological crisis at my workplace (no Internet access), current teaching practice session and my father's medical condition have caused me to make very little progress. (Personal notes February 28, 2010)*

Up to that point, I had done a number of things to propel the process: a) assisted participants to obtain a course shell, b) shown them how to use Microsoft Word tools to provide feedback on students' assignments, c) sourced another portal to house their courses, d) requested that the Ministry of Education provide laptops for the participants, and e) created online courses for both students and research participants. Although one of the lessons from the Canada mission was that we should start the process with the willing participants, by that time only three had indicated interest by requesting a course shell. This was a daunting state of affairs.

By July 17, 2010, my mother suffered a massive stroke and a major part of her brain was damaged. Initially, she was in a semi-coma and needed 24 hour supervision. All plans to resume my studies were squashed because my mother was very close to me and I was her primary care giver. She, a former principal of a school, was my mentor. She was always very concerned about my studies/work and marvelled at the use of the Internet to access information. Eventually, she died November 2010. I did not have

the desire to continue with the research. Eventually, I decided to officially suspend my studies until January 2011.

During the period when the research was suspended, there was an injection of two main institutional support systems. In February 2011, the DTE complained about the unsatisfactory working conditions. The discourse between the MOE and the DTE concerning the inadequate working conditions was a productive activity, as it saw the MOE's attempt to alleviate the tension in the activity system.

On February 8, 2011, I was copied into an email from the Director of Education addressed to the Principal and Vice Principal of ASC and two other MOE officials which informed that:

The Ministry of Education is aware that the department of Teacher Education is at a serious disadvantage because the lecturers who are preparing teachers for the classroom are not in possession of laptops. We would like to make a small presentation to you, your Vice Principal and Mrs. Benn, Head of Teacher Education.

The email further indicated that the presentation would be made Thursday, February 10, 2011, in the Director's office, at the Ministry of Education. The email suggested that there would have been presentations made to the three individuals named, but in actuality there were 14 laptops presented, one to the principal and vice principal and 12 to me, the Head of Teacher Education. The presentation prompted an entry in my notes which stated that:

*Thursday February 10, 2011, was a **RED LETTER DAY IN THE DEPARTMENT OF TEACHER EDUCATION.** The Director of Education in the Ministry Of Education invited the principal and the vice principal of the ASC and I to a small ceremony at which each of us was given a laptop. **Additional surprise – I was presented with 12 laptops to be used by the staff. HALLELUYAH!** (Personal notes February 10, 2011)*

Before the presentation, there were only two computers in the staff room and the Internet was unreliable. With this intervention, every tutor received a laptop which could be used at home and at work

In May of that same year the Prime Minister of Antigua and Barbuda announced that all teachers (at private and public institutions) would receive at their homes, four months free high-speed Internet and then a significantly reduced rate for three years. Indeed, the issuance of laptops and Internet access by the government of Antigua and Barbuda (GoAB) provided some incentive for the participants to engage in the VLE.

### **5.2.11 Summary**

The first stage of the process saw the participants eager to use the VLE, but very little progress was made because of the faulty tool and the seeming inability of the institution to provide a more stable virtual environment. This stage constituted a number of tensions and the attempts to resolve the tensions.

The *tensions* were brought on by a) the advent of tropical storm Erica which caused the server to malfunction, b) difficulties experienced by the technicians in addressing the non-functioning server, c) participants inability to access the VLE and c) the paradigm shift in teaching practice which demanded significantly more time of the participants. This situation was further exasperated by the death of my dear mother.

At the same time, there were *actions taken* in an attempt to resolve the tensions. From an institutional and governmental standpoint, actions were taken. The technicians contacted Dell to gain assistance with the server and they (the technicians) also contacted the participants when the issue was resolved. Finally, the Ministry of

Education and the GoAB provided laptops and Internet to the participants (respectively)

During this first stage of the process, I attempted to orient both teachers and students to Moodle use. Both groups of individuals were affected by the same issues: unreliable Internet access connectivity and no incentive or mandate from leadership to engage in the process. Ultimately only 3 participants requested a course shell, and none of them used it to any significant degree. The timing of the introduction was also unfortunate. I observed the conflict between engaging with an innovation at the same time that we were engaging in a paradigm shift in teaching practice which was making more demands on our time. It is inevitable that the activity which was mandatory received our attention; namely, teaching practice. I became sharply aware of the challenge of being implementer and researcher and HOD. As implementer and researcher I was eager to see the adoption to the VLE, but, as HOD, not only did I want the adoption, but I also wanted the participants to be effective in their teaching practice exercise. With the new plan to use another portal to host Moodle I anticipated greater success with in the next stage.

### **5.3 My First Training Initiative- Feb. – Mar. 2011**

This section highlights the workshop that was conducted, the decisions I made about its content, and the participants' feedback. It also identifies the new tensions I faced as implementer, as well as those experienced by the research participants.

Given the fact that the tutors were visiting schools to observe the student teachers, instead of conducting the training in 3 consecutive days, the 3 sessions were conducted over a 4-week period. Data was collected from this second training session, personal notes and transcriptions from interviews. Table 5.7 (below) highlights the project activity, the data that was collected as well as external events which impacted the research process.

*Table 5.7: Summary of Research Activity and Data collected in Stage 2*

	<b>Feb. – Mar. 2011 STAGE 2</b>
<b>Project Activity</b>	Three days formal “training sessions” with 7 participants over a four-week period  Creation of a handout, “I’m living in Cyber Space! Will you join me?” for Moodle use
<b>Data collected</b>	Transcription from interviews  Personal notes
<b>External events</b>	Provision of laptop & high speed Internet to teachers in all schools & 12 laptops to staff of DTE

### 5.3.1 Workshop Events

While I embraced the ‘advice’ of Lueddeke (1999) and Elton (1999) of: a) managing change initiative in an “unobtrusive manner,” and b) initiating small changes, I felt that although staff development must not be just an isolated “event” (Guskey, 1999; Darling-Hammond and Richardson, 2009), I needed an *event* (a formal session) as a catalyst to propel the initiative. Geoff (2004) contends that “... effective change management is essentially about the art of managing paradox ...it is about figuring out where, in each unique situation, to set the balance between:

- using top-down and bottom-up strategies
  - listening and leading
  - concentrating on the core and the support components of change
  - emphasising stability or change
  - focusing on improving current practice and setting out in quite new directions.”
- (Geoff, 2004, p.11)



I have had to balance listening to the needs and challenges of the faculty in relation to poor working conditions, including inadequate technological support, and insufficient time while encouraging them to adopt the use of web- based tools. I determined that I would propel the process by *creating* time for the participants to engage with Moodle.

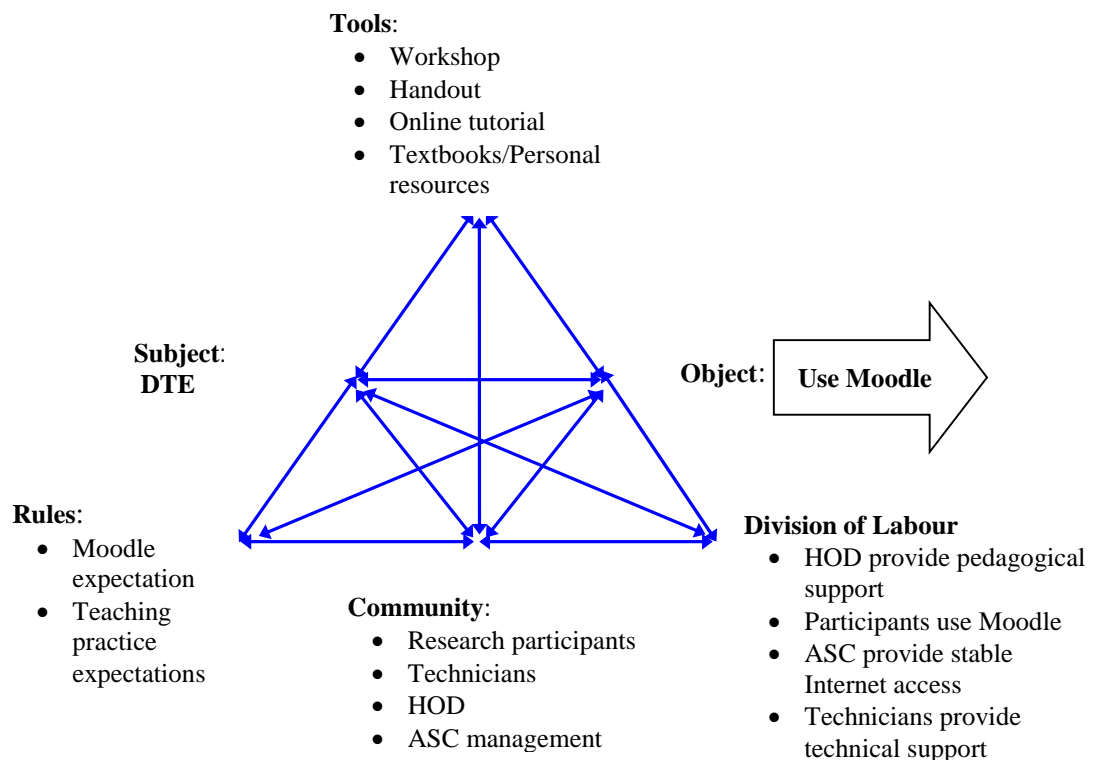
In March 2011, I conducted three days of formal “training sessions” with seven (7) tutors, five of whom were research participants, over a period of 4 weeks. The focus was as follows:

- How we use the virtual environment regularly for (a) communication (cell phones) b) commerce and research (Internet).
- Challenges of offering courses online (and how to overcome them)
- Opportunities/benefits of offering courses online
- Starting a discussion online
- How to place students in groups

I provided participants with a handout entitled “I am living in Cyber Space! Will you join Me?” (See Appendix 7) which provided information on how to a) access the Professional Development course that I had created on the ABIIT’s website of, b) upload a file, c) edit their profile, and d) make the class available to their students. With the use of a PowerPoint presentation, I focussed the attention of the participants on the issues being discussed, while I used the white board to record the responses of the participants.

To immerse the participants quickly into Moodle use, the focus was on skill development – how to upload information on Moodle. Participants wanted to get to the business of ‘putting’ information on Moodle, and I wanted to make them feel that they were engaged with the VLE; however, by the second session, I felt that I should provide a framework so that the participants would appreciate why they were

engaging in each exercise. The activity system presented below in Figure 5.4 shows the entire DTE working towards the object of Moodle Training. The community consisted of the research participants, and the technicians. The division of labour existed between the HOD and technicians who were providing the pedagogical support and technical support respectively, and the ASC principal that would provide funding for the Internet access.



**Figure 5.4 Stage 2 Activity System**

The participants were expected to attend the workshop and use the tools offered to make Moodle use possible while at the same time attend to their daily responsibilities as teacher educators. The mediating tools at that stage were a) a formal workshop, b) handout, c) online tutorial and the personal resources which they used to teach their students.

My weekly examination of the Moodle portal revealed that two participants, Lisa and Jacey had uploaded discussions and assignments. I commended Lisa for the excellent discussion in which the students were engaged; however I recognised that having put the discussion topic in the forum, there was no further engagement with the students, I also reflected that Jacey too had placed a question in the forum, but there was no follow-up comment/response to the students. In stage 1, Lillian, who had asked for assistance, was eager to upload her resources and make them available for the students. Even though the steps may not have seemed big at that time, progress was being made. With regards to Bullen's (2014) concept of viewing eLearning as a continuum, these participants had moved further along since they had begun to engage the students online.

Recognising how these three participants had been using Moodle, I advised that facilitators needed to play a more supportive role as advocated by Salmon (2003) and Laurillard (2002). That reinforced the need for the session on the theoretical aspect of online learning. While they understood how to set up/prepare the 'classroom' with content and activities, they did not seem to know how to support the learners online.

Given the reiterative nature of action research, having planned the activities, I reflected on their effectiveness and made adjustment where necessary. To ensure that the participants had a greater understanding of the 'territory' of online learning, in the next sessions, I focussed on topics such as the Sloan survey of online learning, advantages and disadvantages of online learning, and models of online learning. Additionally, my adaptation of the work of Gilly Salmon (2004)

and Laurillard (2003) produced the following stages which the participants were to embrace to achieve the intended success. (See below)

### **STAGE ONE: Explore Technology**

The acronym **SIWIPAM** was designed to serve as a reminder of what should be done.

- Set up the class room
- Invite the students to enter
- Welcome the class
- Introduce yourself
- Provide practice with easy assignment
- Assist the students
- Motivate the class

#### *How to facilitate interaction*

- A small amount of information, an invitation or a challenge
- An invitation to make an online contribution
- An interactive element, such as responding to other contributions
- All the instructions are contained in a single online message, including details of the purpose, the tasks and how to respond.

### **STAGE TWO: Socialize**

- EGLE:** Helps you to soar and socialise
- Establish working groups
- Get to know each other
- Lay down ground rules
- Establish guideline for length and frequency of post

### **STAGE THREE: Exchange information**

- Be friendly
- State purpose of the discussion
- Offer incentive for participating
- Encourage them to give ideas
- Provide some thing for them to do and a reason to interact with others
- Encourage them to respond

### **STAGE FOUR: Knowledge Construction**

- Design e-tivities that have variety of interpretations and perspectives
- Build knowledge – Practice knowledge management skills
- Concepts
- Positions
- Summaries

### **STAGE FIVE: Development**

- Emphasize accountability and responsibility
- Focus on self-reflection and evaluation of learning
- Footprints

As I worked with the participants, I recognised that while they knew how to use the VLE as an electronic cupboard, and were eager to add resources, upload

assignment, and add activities, they did not know how to engage the students online. A conversation with Lisa at that time helped me to understand her thinking with regards to Moodle use.

**Me:** Would you use this modality to offer courses again.

**Lisa:** Yes I would. If I have to do Course X again, it's going to be an online course.

**Me:** What would you think would be the advantage of doing so?

**Lisa:** It would allow me to make available a lot of information. Most of what I am doing is researching and bring to the students. That can be done online.

**Me:** That assumes that online is just for uploading resources ... but if a person is in another country, that's not enough.

**Lisa:** Well the resource is there. They can access it. They can discuss and get clarifications etc. But I honestly feel the Course X needs to be online.

**Me:** I see that your view of online is just for giving information. Any comments?

**Lisa:** Nope.

One great advantage of the VLE for Lisa was that it would allow her to share her resources. All of the participants saw this as a great advantage of the VLE. This view probably stemmed from the fact that (as stated in 3.4.2) in the face of limited library resources the tutors in the DTE had been in the habit of creating and providing supplementary materials for the student teachers. Lisa, like all the other participants, saw the VLE as a fitting portal to store the information for the students' use. It is possible that since she knew that she would have had face-to-face sessions with the students that she was more interested in providing the information than engaging them online. She also commented that that cohort of students also researched and shared their resources as well. However, if they were to fulfil the desire of the ASC to offer courses online, they needed to know how to humanise the course. The purpose of the session was therefore to ensure

that the participants learned online pedagogical skills to support students' learning.

### **5.3.2 Participants' response during the workshop**

There was much interest generated by this workshop. All participants were able to add resources and activities to their 'virtual' classes. Two participants, Lillian and Kloe, who had prior knowledge from previous sessions with me, were able to assist the others in performing specific functions, such as, adding a word document or changing the settings. (See **5.2.1.1** for various Moodle functions). At different times in the session, participants asked me to repeat the idea or to slow down so that they could write down the ideas on how to engage students. (They wanted to use the ideas with their students.) Strategies that were of particular interest to them were, a) Assigning roles to students in accordance with Edward De Bono's Six Thinking Hats, b) Providing Speeches of great thinkers from your discipline and asking students to summarize in 12 words. While I was happy that the participants appreciated the new strategies to engage their students, I realised from their conversation that they had planned to use these strategies in their face-to-face classes. An evaluation of this workshop will be presented in the next session.

### **5.3.3 Evaluation/Reflection on the Workshop**

This section highlights feedback obtained from notes that I had taken during the workshop. The discourse during the workshop sessions revealed varying responses from the participants. Following discussions on how to help the students to socialize, and how to assist students in exchanging information online,

participants made comments such as, “*This can be very time consuming.*” Kloe said, “*I feel motivated to do this.*” Carol confessed that she did not think she would be diligent in commenting on the work posted by students. As a matter of fact she would *not* want to offer a course fully online. Carol further indicated that this method of teaching would demand that tutors are always at the computer and that she did not have the time to do so. Lillian, however, remarked that the young people *want* us to use the virtual environment. Khloe commented twice in the training session that we should do this training during the summer. In a discussion subsequent to the workshop, Cherry, felt that attending the workshop meant she had to “*miss classes ... give students things to read,*” and she was not happy with that. Furthermore, she felt that they (the research participants) were

*...being fed a lot of information ... it was too much information...the bits were too much. The pace was fast and the information was too much. You have your books. You have the hand out, but when you got home you didn't read them, so there is no connection with one class and the other. You had other things to do and then if you are going to make a choice, am I going to do my work or am I going to do this? I'm going to do my work right? (Cherry, 2011)*

Cherry's comments also points to issue of too much to assimilate and the fact that learning to use Moodle competed with their actual “work” (her substantive responsibilities of teaching the student teachers).

On the other hand, the reactions of the other participants suggested that they would engage in Moodle use because they felt that the students wanted them to engage in the VLE, they were aware that their involvement would have been time consuming and that it would have been in conflict with their substantive responsibilities. Ultimately, while they considered the workshop useful and informative, they also indicated that during the period of the workshop, they were

busy with teaching practice, so they did not get the opportunity to practice using Moodle. Furthermore, by the time teaching practice was completed in May, the research participants were then engaged in the May/June final examination.

My examination of the Moodle platform, subsequent to the workshop, revealed that apart from their input during the workshop, the participants had not continued to upload information for their courses. In as much as I appreciated the challenge that the participants faced, it was then that,

*I wish[ed] that there were some institutional policy that insisted that everyone had to offer at least part of one course online. I wish too that my staff were not so busy with teaching practice. Maybe they would be more inclined to spend the time with the technology. Too often I struggle between 'understanding' their busyness and my desire to see them attempt another mode of delivery.*

#### **Personal notes May 2011**

Elton (1999) referred to the need for 'pressure and support' to establish the change – pressure from the ones who hold the 'power' (usually top management) and support from the change agent or lower management. I was prepared to support the participants, but I also needed the pressure of upper management which would provide the 'power'.

I reflected on the fact that I had anticipated that the data collection period would have taken 12 weeks and realised how misguided I was. Despite the breaks occasioned by institutional and personal factors, it was impractical to expect change in such a short time. Indeed, "Change is not an event but is a complex and subjective learning/unlearning process for all concerned." (Scott, 2003, p.73) Furthermore, it is a *process* that takes place over *time*.



### **5.3.4 Summary**

As I analysed the activities and the reactions of the participants, a number of tensions emerge. On my part, there was the tension of identifying with or sympathising with the plight of the participants and at the same time putting pressure on them to engage in the process. Like in stage 1, I was aware that as part of middle management, I could not mandate their involvement, I could only encourage it. In this regard the mandate should come from a higher authority – top management. On the part of the participants, the tension therefore existed in sustaining enthusiasm for the using Moodle versus attending their daily teaching responsibilities. Although the study was conducted with students, research conducted by Lee (2006) suggests mandatory use requirement to ensure eLearning adoption since, then, the participants are more likely to overcome the obstacles. The next section discusses my involvement in training not only DTE staff but general ASC staff as well.

### **5.4 Progress with Moodle Use**

Conducting the workshop at this time was opportunistic rather than a pre-planned event. The ASC had contracted an external consultant to train some of the ASC faculty members (other than those in the DTE) to use Moodle. Since the consultant could not come at the time specified, May 31 – June 2, 2011, I volunteered to offer the training. Because of the interest that had been generated in the DTE, I requested that some of the DTE staff members be allowed to participate. In this section, participants provide feedback on the mediating tool, the workshop as well as the object, using the VLE.

Having given a general invitation to the staff in the DTE to attend the workshop, 6 of the 12 attendees at the workshop came from the DTE, 5 of whom were research participants. Table 5.8 indicates the project activity and the means by which the data was collected.

*Table 5.8: Summary of Research Activity and Data collected in Phase 4*

	<b>May – June 2011 EVENT 3</b>
Project Activity	Creation of a booklet for Moodle use Revised online tutorial on Moodle Three-day workshop at ASC main campus Observations Interviews/Discussions
Data collected	Workshop evaluation form from 5 research participants Statements from participants (follow up interview from workshop evaluation) Personal notes
External events	None

The research activity and data collection will be discussed in the subsequent paragraphs.

#### **5.4.1 Planning for the Workshop**

Having conducted a workshop with the research participants only three (3) months prior to this workshop, I decided to upgrade the materials that I had used then to ensure that the experience was enriching for all participants. The three resources upgraded were: a) Online Tutorial on Moodle, b) Instructional Booklet: Online Facilitation: Meeting the New Students in the New Classroom and c) the PowerPoint presentation (See PowerPoint slides in Appendix 7 B. The workshop was designed to answer the following questions:

- Why should I offer courses on line?
- What is Moodle?
- How can Moodle be used to facilitate learning?

- What are the advantages and disadvantages of using a VLE?
- How do I log on?
- What tools can I use?
- How can I use them?
- What is my role in this new environment?

#### 5.4.2 Composition of the Workshop Participants

Table 5.9 indicates the departments with which each workshop participant was affiliated and their level of exposure to Moodle. Of the 12 workshop participants, 4 of them worked full time in the DTE and one worked part time. The 6<sup>th</sup> participant associated with the DTE had heard about Moodle and wanted to be involved. Of the 5 participants from the DTE, 2 of them had never been to a Moodle workshop. Since this workshop was designed to satisfy an ASC imperative, there were lecturers from other departments; namely, IT department, the School of Nursing, the Engineering Department and the Library. Interestingly, none of these persons had ever been exposed to Moodle. Altogether, only 3 workshop participants had prior exposure to Moodle. See details below in Table 5.9.

**Table 5.9: Workshop Participants: Exposure to Moodle**

<b>Departments represented</b>	<b>Number of participants</b>	<b>Number of participants with prior exposure to Moodle</b>
Teacher Education	5	3
Nursing	1	0
Engineering	1	0
Library	2	0
IT	2	0
Business	1	0

#### 5.4.3 Providing Practical Real Life Experience through Training

To ensure that the participants obtained the student experience, I had asked them to submit an assignment to me via the online Moodle tutorial so that they would

appreciate what the students would experience when they have to submit assignments to their tutors. While they were gaining experience from a student's perspective, that experience did not allow them to gain experience from a facilitator's perspective. I therefore urged each participant to enrol every other participant into his/her course and to create an assignment for the participants to submit. It was while they were doing this that I saw a 'teachable moment.' Since I felt that it was important for them to be able to correct the work electronically and to send it via the same medium, I used the opportunity to show them how to make corrections and attach comments on submitted assignments. Many of the participants had never used the 'Track changes' and 'New Comment' icons in Word, so they eagerly commented on each other's assignment. All along they commented on how useful that exercise would be for them as they would be able to correct the students' assignments online and send it to them electronically. The practical just-in-time use at the workshop showed the participants the benefit of using this feature with their students.

As stated earlier, the research used a flexible design. As such, adjustments had to be made to the workshop based on the needs of the participants. For example, at the end of the second day, some participants indicated that they would like to learn how to create a quiz on Moodle. Although I had not planned to cover this topic, I prepared a short quiz which covered topics covered in the workshop and ensured that participants had multiple opportunities to take the quiz. Having completed the quiz, we discussed the various options for setting up a quiz and the benefits of using each method. In the next section, I present the participants feedback on the workshop.

### 5.4.4 Participants' Feedback from the Workshop

The workshop was one of the mediating tools which helped to facilitate the process of learning to use Moodle. This section provides the participants' feedback on the workshop which was obtained from an evaluation form and from informal interviews.

Table 5.10 presents the evaluation instrument and the actual statements of the participants.

**Table 5.10: Research Participants' Feedback from the Workshop**

Tutors	I particularly remember	But I didn't care for	And I especially liked	Plus marks	Minus marks	The only thing missing	Next time why don't you
<b>Khloe</b>	How to upload a single file	The theories & theoretical viewpoints regarding e-learning	Making corrections to the students work	Creating & interacting in a forum	Unreliability of the Internet service	A manual	Have a manual with step-by-step instructions
<b>Gail</b>	Gilly Salmon's stages	The frequent shut downs of the system	The manner in which the facilitator conducted the workshop. She was confident and pleasant	Interactive nature of the workshop Information learnt	Computer system Breaks at least water could be provided		Have several short quizzes rather than one *
<b>Carol</b>	SIWIPAM Not the meaning but the letters		The practical design of the presentation ...i.e. allowing us to experience E-learning from the perspective of a student and as a facilitator	Information share was not only provided in PP presentation but in the form of the booklet and posted online for review later		Reliable Internet access and electricity	
<b>Mary</b>	MOODLE, SIWIPAM, PEP, How to log in: My name & password. Always turn editing on This course: PD Professional Development by Mrs. Benn	The Internet access acting up so often. However the facilitator does not have power over this.	The communication aspect of Salmon's model. Access and motivation, orienting and socialization, independent practice, sharing information with others so that you can develop. All the stages require time	The use of technology is ever so increasing therefore this was an excellent course for facilitation to have to ...?	Due to the time frame 3 days we were unable to actually set up our own course properly	Us actually demonstrating our knowledge and skills to someone else in the session	Let individual students at least two guide the class in how to do a particular aspect. Eg. Monroe and Carol you now become the facilitator and run us through how to add files, take attendance
<b>Ceci</b>	Setting up my class on the Moodle platform and learning all the different features	The unreliability of the Internet access	The information on how to set up your course in the Moodle platform	All of the information provided outside of the Moodle platform	Internet access	Not enough time to practice fully setting up class	Provide more time to complete set up of a course

The participants were expected to respond to seven different categories; namely, a) I particularly remember, b) But I didn't care for, c) And I especially liked, d) Plus marks, e) Minus marks, f) The only thing missing, g) Next time why don't you. (The author of this evaluation form is unknown.) While b) and e) may seem like the same options, in b) participants were expected to focus on the area which they did not find useful for them. In e), the focus was the aspects that negatively impacted their acquisition of the needed skills. The next section focusses on the themes emanating from the feedback from this workshop and a subsequent interview.

#### 5.4.5 Recurring Themes from the Workshop and Interview

Each participant was given a sheet on which to evaluate the workshop. Having placed all their responses in one common document as seen in Table 5.10, I was able to identify the recurring themes from the workshop. These themes related to *Unreliability of the Internet*, *Time*, and the *Efficiency of the Presenter*. Table 5.11 presents the actual statements of the participants which represent recurring themes.

**Table 5.11: Recurring Themes**

<b>Themes</b>	<b>Number of respondents</b>	<b>Statements of Participants</b>
*Unreliability of the Internet	5	Unreliability of the Internet; Reliable Internet access and electricity; The Internet access acting up so often; The unreliability of the Internet access; The frequent shut downs of the system.
Time	4	All the stages require time; Due to the time frame 3 days we were unable to actually set up our own course properly; Not enough time to practice fully setting up class; Provide more time to complete set up of a course
Presenter	4	The practical design of the presentation ...i.e. allowing us to experience E-learning from the perspective of a student and as a facilitator; Information shared was not only provided in PP presentation but in the form of the booklet and posted online for review later; Interactive nature of the workshop; The manner in which the facilitator conducted the workshop. She was confident and pleasant; All of the information provided outside of the Moodle platform

\*Slow and intermittent connection with the Internet

The factor that seem to have had the most negative impact on the participants as seen in their responses to “But I didn’t care for” and “Minus marks” is the unreliability of the Internet, while the factor that had the most positive effect was the facilitator of the workshop (to be discussed later in this section).

The most recurring theme was the unreliability of the Internet. All the participants were disappointed with the *unreliable Internet access*, since it often halted the progress of the workshop. It must be recalled that when the data collection started in 2009, the Internet access was an issue and it was for that reason that I had asked another institution to host our courses. This workshop was held at ASC and the issue Internet was still a problem. Without reliable Internet, the progress of any web-based experience would be stymied.

An examination of the evaluation given by the participants reveals that there were references to *time*. Both Mary and Ceci, who later made significant use of Moodle, made two comments each about time. Not only did they think that it would take time to create the class, but they also felt that they needed more time at the workshop to a) practice what they had learned and b) to set up their courses. While Mary suggested that the workshop should have been held for 4-5 days, Ceci contended that it should have been held for “*one week – as long as it takes,*” so that they could upload resources on Moodle and become more proficient in its use. Two different notions of *time* impacted the participants. In a previous training session, participants had commented on the amount of time they would need to support the students – being available to them even longer hours than in the face-to-face teaching; however, in this case, the emphasis was on the time needed to set up the course.

With regards to the *workshop facilitator*, the participants were satisfied with the practical design, and the various modes in which the material was presented – booklet, online tutorial, and PowerPoint. They also felt at ease with me, the facilitator, who they indicated was confident and accommodating. Although they were satisfied with the interactive nature of the workshop, Khloe, who had attended the previous workshop and who had been exposed to this information didn't appreciate *“the theories & theoretical viewpoints regarding e-learning.”* In a later interview Khloe explained that the “theoretical” aspect would have been useful for someone who needed to be convinced of the value of adapting to eLearning. By implication, since she was already convinced, she *“just wanted hands on.”*

#### **5.4.6 Affordance/ Perceived Usefulness of eLearning**

Even though the participants were challenged by the unreliability of the Internet, they were able to explore Moodle enough to see the “perceived usefulness” (Lee, 2006; Šumak et al., 2011; Ahmed, 2010) In follow-up interviews, I asked 3 of the research participants who were available for the interview specific questions to get further clarification of responses they had placed on the evaluation form. For example, Kloe was asked the following questions: a) What made “Making corrections to the students work” so meaningful to you that you especially liked it? b) What was so significant about uploading a file that you would remember it? c) And why didn't you like the theories and theoretical viewpoints regarding e-learning? d) I notice that you would have liked the manual and step-by-step instructions. Why is that so important to you? Responses from follow-up interviews received from 3 of the 6 research participants who attended the workshop (Mary, Kloe and Ceci) revealed their actual statements (see Table 5.12) concerning their perception of the affordances of using Moodle to



facilitate learning. The advantages which Moodle offers were seen in the areas of planning, marking, efficiency in use of time and resource and in instructional variety. Having been exposed to Moodle, the respondents concluded that using Moodle would encourage them to be more organised and provide a wide variety of resources to their students and assist them in being more efficient in marking, and in catering to a wide variety of student needs.

**Table 5.12: Affordance/Relative advantage of eLearning**

<b>Affordance/Relative advantage</b>	<b>Statements of Participants</b>
Planning	‘Allows a wide variety of resources to be made available to the students’
Marking	‘Making corrections to the students’ work [online using ‘Track change and ‘New Comment’ ] (Would cut down on time taken to return students’ work - give meaningful feedback - didn’t think you could correct work like that and was therefore “tickled by that”)’
Efficiency	Time: “Cut down on time taken to return students work ...”
	Resource: reduce the need to use paper and the costly photocopying. ”
	Space: “Online facilitation could cater for a wider audience because there are many persons who want to be qualified but who cannot leave their jobs to come to class.”
Instructional variety	“It is different platform from the regular chalk-and-talk and face-to-face modality. It is exciting to do something different.”

When asked why she particularly liked “Setting up my class on the Moodle platform and learning all the different features,” Ceci eagerly commented on instructional variety it afforded. (See Appendix 8 for 2011 transcription of interview with Ceci)

She also felt that eLearning could widen access to ASC programmes because in her view, there are many persons who would want to access the courses offered by the ASC, but they were unable to leave their jobs and attend face-to-face classes. Kloe, on the other hand, saw how,

*Making corrections to the students' work [online using 'Track change and 'New Comment'] could make her more efficient as it "would cut down on time taken to return students work ... give meaningful feedback... (She) didn't think you could correct work like that (so she) was tickled by that ... never knew that one could do that. (Kloe, 2011)*

The above data suggest that the participants appreciated the benefits of using Moodle from an institutional, professional, and a personal standpoint. From an institutional level, it would reduce the amount of space needed to accommodate persons to be trained, while from a professional level it would force tutors to plan and organise instruction and to make a variety of resources available to the students through an alternative environment. On a more personal level, it would reduce the amount of a) cost in providing resources to students (since this resources could now be provided electronically on one platform, and b) time needed to re-submit assignment to students.

#### **5.4.7 Reflection on the Workshop 3**

The event saw the second formal workshop that I had conducted, but this time with members from other departments of the ASC. Aware that their participation was voluntary, at the beginning of the workshop I had asked the participants to indicate their reasons for attending the workshop. A variety of reasons were proffered, but the main reasons seemed personal – to be current in their use of technology and to realise the promise of a flexible teaching schedule. It was very significant that none of the participants mentioned the benefits to the students. It was equally significant that Mary and Ceci, who eventually made significant use of Moodle, were the only participants who lamented about insufficient time. By the end of that semester, all the research participants had received training in using Moodle. Since they had had training from one or two workshops and from one-on-one instruction with me, I had

hoped that they would have been in a position to apply what they had learnt in this new environment. By the next semester, I was able to evaluate their involvement in Moodle.

#### 5.4.8 General involvement in Moodle

In the following semester, I examined the Moodle environment to determine the level of the research participants' involvement. Table 5.13 below shows the extent to which the participants were engaged in Moodle. For each of the participants, the table shows the name of the tutor and the number of students enrolled in the class. (Some participants had more than one class. For example Ava taught two classes with different content, while Mary had two classes to which she taught the same content.)

**Table 5.13: Inventory Of Kinds Of Involvement In Moodle**

Research Participants	Students	# of Forum	# of Assignments	# of Resources Uploaded	Use Of Grade Book	Use Of Classes register	Quiz	# of Week/ Topic Summary
Ava	5	12	Included in weekly summaries	4	0	0		
	3	8	Included in weekly summaries	12 (including 1 link to website)	0	0		6
Mary	36	2	5 (including uploads by students & tutor feedback)	41 (including 7 ppt.)	Yes	6 weeks		5
Ceci	44	3	Included in weekly summaries	21 (including 12 videos, 3 ppt.)	Yes	3 weeks	3	10
Kloe	28	1	Included in summary	5 (Including 1 link to web video)				2
Lillian	0	0	0	0	0	0	0	1
Cherry	0	0	0	3	0	0	0	0
Lisa *	0	0	0	0	0	0	0	0
Gail	0	0	0	0	0	0	0	0
Carol								
Myrtle	0	0	0	0	0	0	0	0
Grace	0	0	0	0	0	0	0	0
Jem	22	2	1	18	No	No	0	5

\*Did not use Moodle this semester; however, she was very engaged in placing assignments for the students and in using the forum during the previous semester.

It also indicates how many forums they formed and the number of assignments that were given to each class. Additionally, the table shows the extent to which the participants uploaded resources, used the register and grade book or provided week or topic summaries. Five of the participants, Lisa, Gail, Carol, Marg, and Grace did not use Moodle that semester, but Lillian and Cherry used one Functions of Moodle (provided a summary of the week's focus and uploaded resources, respectively) and Kloe, used 3 Functions: (providing summaries, creating a forum and uploading resources. On the other hand Ava, Mary and Ceci made significant use of Moodle. While Mary and Ceci combined their two classes, because they were teaching both classes the same content, Ava had two separate classes, which were not being taught the same content. These three participants provided numerous resources for their students, including links to websites, PowerPoint presentations, and videos. Jem, who was not present at the third workshop, had received individual training from me. Although the three of them provided summaries of each week's topic and forums in which students could engage in discussions, they used the environment differently.

For those who made more significant use of Moodle, the nature of their involvement was different. Mary created a repository of resources rather than use Moodle as a teaching/ learning tool. Ceci provided student friendly teaching aid and resources and her site was easy to navigate. Ava provided frequent opportunities for students to write reflectively and apply knowledge.

In an effort to determine the *contradictions/tensions within the activity system as the DTE adapt to eLearning*, during an interview with all the participants who had minimum engagement with Moodle, I asked them, “What are some of the factors/issues that caused you not to post information on Moodle.” Table 5.15 reveals an array of reasons for their minimal, and, in some cases, lack of involvement.

#### 5.4.9 Reasons for lack of engagement with Moodle

Whereas in earlier stages, the major tension was found in aspects of the tools, in this section the tension was embodied in the subject. Their characteristics as teacher educators and their limited computer and typing skills mediated against them achieving the object. After examining all their comments, I categorised them under the themes that had emerged. Some of the reasons proffered by participants that served as contradictions to their engagement also suggest factors that should be put in place to assure the adoption of eLearning. (These will be addressed in chapter 7.) The theme of each participant’s challenge is placed in the table to provide a general profile of each individual’s reasons.

**Table 5.14: Reason for lack of engagement with Moodle**

Names	Time	Themes			
		Discipline	Technology	Typing skills	Pride of craft
Lillian	✓	✓	✓	✓	✓
Cherry				✓	
Lisa	✓	✓			✓
Gail			✓	✓	✓
Carol					✓
Kloe	✓			✓	
Grace			✓		

There were 3 participants (Lillian, Gail, and Grace) who identified *technology* as a factor. Reasons ranged from “computer had a virus,” issues with “the server/Internet,” and “problem with the Internet.

The tension of *time* manifested itself in three different areas: the a) time the course shell was made available, b) time to prepare the course for online delivery, and c) the time the initiative was introduced into the institution.

Lisa and Kloe referred to the time that the course shell was made available. They argued that if the course shell and all the other technical issues which the technicians had to address were not in place at the beginning of the semester, it was very difficult for them to start later in the semester. By that time, they proffered, they would have already established their routines for the semester.

Except for Grace, all the participants referred to the time taken to design their courses for online delivery. They indicated that they would have had to handwrite their work before typing. Furthermore, by the time they would have prepared their work in the traditional pen and paper format, there was no time to type it and upload it on Moodle. However, as Lisa argued, “*Once you have everything up. Once you have your resources, there is nothing much after that. It’s smooth running after that. But to get everything up, that was my problem.*” Additionally, both she and Lillian saw the need for *discipline* to “sit down” and get the work done.” It should be noted that during the times that the workshop were being conducted, the limited typing and computer skills were not discernible. At those times everyone was typing and everyone was moving slowly because they were in the process of understanding the functions of the software; consequently, nothing was done to address this tension.

Another aspect to the tension of *time* was suggested by the time the innovation was introduced – when the DTE was introducing another time consuming paradigm shift in Teaching Practice; namely, a four week period to a ten week period for teaching practice. Furthermore, as Carol and Gail indicated later, it was “not mandatory.” Since it conflicted with their *substantive duties*, (work) as Cherry stated, once given a choice, she would use her traditional teaching methodology. Arguably, using Moodle was not mandatory. It was just seen as extra work to some participants.

An additional factor that was mentioned relates to *pride in the craft*, “*I didn’t feel that I could do anything that I could be proud of.*” (Gail) Indeed, while she had developed a certain amount of expertise in the traditional way of teaching, she had not developed comparable competencies in the eLearning environment, so she was not ready to be involved. Cherry spoke to the need to model confidence and said, “*We teach them that when you go in front of a class, you must be confident. Right away, they must be able to say this person knows what she is doing.* Furthermore, she argued, “*If you go in there and fumble, they know this person is not ready!*” As a result, she did not want to look incompetent while she was learning. Both Carol and Gail also spoke of the need to “feel comfortable,” using the new environment, but also referred to lack of *practice*. No wonder they could not remember “all the different icons” on the Moodle platform. The responses of the participants suggest that on a personal and professional level there were factors which mediated against Moodle use.

Carol was the only participant to mention the need for ‘buy-in’ at this point. However, the following excerpt from an interview conducted with her may suggest how some of

the participants felt, and may explain the extent of their engagement with the process.

The salient points from the interview will be highlighted at the end of the excerpt.

**Me:** Are you convinced that this is the mode of instruction is the way we should go?

**Carol:** Convinced? (pause) Not sure about convinced. Actually what I'm trying to ...I guess if it were a situation where I understand that this is where the college is moving to, this is where we are all going, then by hook or crook, you just get on board. I guess I understood it to be optional. If you can or want to, you can. If you don't want to you don't and so whenever you get around to it, you do.

**Me:** Ok

**Carol:** At the same time I guess a part of me was, over the summer, not even understanding nor knowing where we going and if we going where we going. And I wasn't willing to put the time to put things in place and then if we get moved there is nothing in place.

**Me:** You know even if you were moved, you could still access the website.

**Carol:** Well I guess some of those logistics in terms of understanding that, and I don't even know. I think in terms of Moodle's capacity. Is it something that can be used to manage, like the schools information system and for teachers' instructional purposes?

...

She proceeded to request clarification on the administrative function of Moodle and its relationship with SonisWeb (a web-based student information and academic administrative system used by the ASC). Among other things, I explained that in SonisWeb, there is a link to the Moodle platform. In the discussion, I outlined the strategic plan of the ASC and the steps that the ASC had taken to realise the vision of offering courses on line.

...

**Me:** What I'm understanding you to say is that if the college had made it mandatory that you would have gotten on board. You probably ...

**Carol:** (Interrupting)Or at least share the vision as a college vision. I don't think it needs to be mandatory, but to me, I've heard a lot about SonisWeb, but I've heard you talk about Moodle. I just figured that they were two different things to be doing two similar types of things. I didn't understand that one can be integrated into the other. I thought that one is your baby and one is the college baby.

The conversation with Carol highlights how she felt about a number of issues:

- She was uncertain as to whether this mode of supporting learning was the route the college should be taking
- She felt that involvement in learning to use Moodle was optional



- The importance of learning to use Moodle to fulfil the strategic goal of the college was not adequately communicated
- She felt that Moodle was “my baby”
- Discussion was being held about relocating the DTE and she did not know if they would be able to access the VLE

The literature review points to the importance of sharing the vision, and the need for constant communication. It is not enough for middle management (a head of department), to communicate this vision. In the absence of a clear policy or a mandate or clear vision, the staff would not be encouraged to participate. While the first part of the discussion indicated her uncertainty about using Moodle, by the time she had heard about the vision of the college, and had gained clarity about the relationship between SonisWeb and Moodle, she indicated her intention to devote the time to upload some of her resources online and she proceeded to outline how using Moodle could facilitate training for the student teachers in Barbuda (sister island) and how it could provide instruction to past students who had to re-sit courses but who could not leave their schools to attend classes. It would appear that understanding the vision made her more willing to be involved in the process.

#### **5.4.10 Summary**

During this stage of the process, more participants were involved in Moodle use. Some saw the benefits in using this environment, but they used it in different degrees. Participants also shared a number of reasons for not using Moodle. As in the previous stage, the tensions of time and technology were highlighted. While not many participants referred to the unreliable Internet access, they did address the non-functioning of their own computers. Yet other tensions were also emerging. Of great

significance is the pride with which some held their role as teacher educators and the desire to be professional. This points to the literature which indicates the role of the teacher educator in modelling professional practices (Murray, 2010; Celik, 2011). The findings from this stage also point to the need for policy regarding Moodle use. Finally, these observations suggested that the change process, though slow, was taking effect. In fact, participants were thinking about the process and making decisions about their engagement.

## 5.5 Using the Upgraded Moodle

This final workshop, held June 4 – 7, 2012, proved to be the most impacting and most well received. This session also saw me as facilitator attempting to guide the participants to use the upgraded Moodle and to resolve some of the contradictions that had been identified in the previous stages. The discussion in this section focusses on a) my attempt to resolve the tensions, b) the workshop events and c) an evaluation of the process. Table 5.15 provides a summary of the research activity and data collection during this stage. The data was generated from my personal notes taken during the workshop, transcripts from interviews, discussions following the workshop, and artefacts from participants' Moodle courses.

**Table 5.15: Summary of Research Activity and Data collected during Stage 4**

	May – June 2012 STAGE 4
Project Activity	Creation of new Moodle instructions for upgraded Moodle Development of an upgraded Online tutorial – <i>Professional development (PD)</i> Workshop (ABIIT) Interviews
Data collected	Anecdotal records taken during workshop, Transcripts of interviews/discussions and Artefacts s from participants' Moodle Course
External events	My father's hospitalisation and subsequent death

An upgraded Moodle necessitated a new booklet/manual as well as a new online tutorial to be aligned to the manual. (In previous sessions, some tutors had used the tutorial and had informed me that it was very informative and helpful.)

Having created the new booklet and the tutorial, I decided to conduct a workshop to re-orient the participants to the upgraded Moodle. Researchers (Garet et al., 2001; Broad and Evans, 2006; Holland, 2005) have agreed that professional development in which participants are learning new skills and knowledge should be sustained over time. I felt that this was an opportune time to conduct another workshop.

### **5.5.1 Attempts to resolve contradictions**

Reflection on the feedback from participants in another workshop (Event 3, May 31 – June 2, 2011) and from the literature review suggested that a number of factors should be taken into consideration when planning and executing this workshop if the contradictions are to be resolved: a) workshop date and duration, b) interaction and collaboration and c) amount of content covered. The discussion that follows reveals how I addressed these factors.

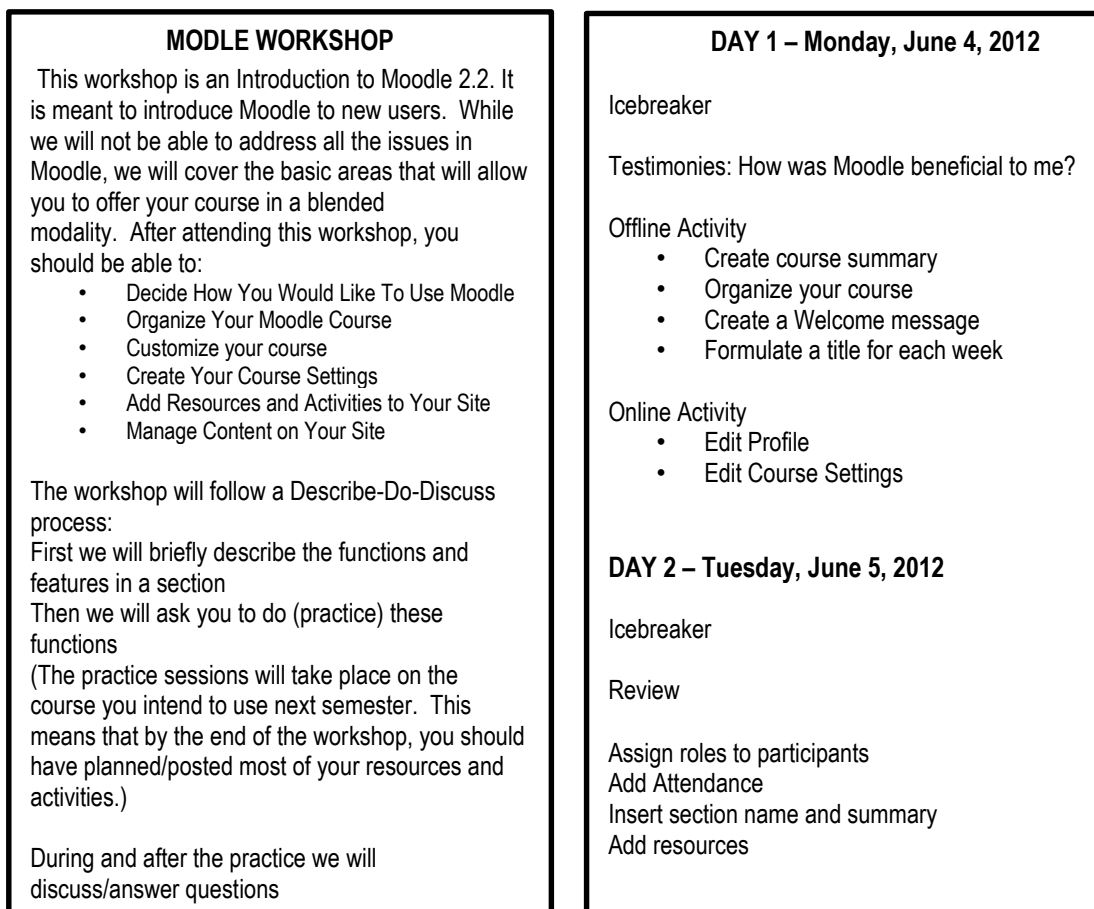
*Date and Duration.* The underlying contradiction of time was addressed in the date and the duration of the workshop. Following feedback from the participants and my own observation from the previous events, I decided to conduct the workshop just after the teaching practice when the teaching sessions had been completed. All the participants were free to attend since they did not have any classes to attend. I scheduled a five-day training session, from 9:00 a.m. – 1:00 p.m. instead of the three half days which were used previously.

*Interaction and Collaboration.* Since the object of the DTE and that of the research project did not coincide, participants had chosen that which was mandatory. I therefore tried to create synergy between the two by linking the activity more closely to the participants' 'real work' and providing opportunities for active learning as the participants engage in discussion and practice of the new learning, (Holland, 2005 and Garet et al. 2001). I had therefore requested that all the participants bring with them electronic copies of all the information that they would normally use or would like to use in their courses including, course outline, weekly breakdown of the course, PowerPoint presentations, handouts that they had prepared, and links to websites. Additionally, they were asked to bring an electronic picture of themselves and a laptop. To encourage the collaboration, I further requested that in cases where more than one participant was teaching the same course, that they work together and pool their resources.

Not only did I suggest collaboration among the participants, but also between the facilitators. In a previous workshop evaluation, Mary had suggested that some participants should be allowed to "guide the class in how to do a particular aspect. E.g. ... how to add files, take attendance, etc." (5.4.4) ... I therefore invited two of the participants, Ceci and Mary, who had made substantial use of Moodle to be co-facilitators with me; only Mary was able to be involved in the exercise, however. After spending much time revising the handbook, with information on how to navigate the new platform, I proceeded to discuss with Mary the strategy that I proposed to use to engage the participants. By allowing Mary to collaborate with me, I had hoped that participants would see one of their colleagues taking the lead in the workshop, and would therefore be more inclined to be involved in the process.

(Rogers, 2002) This strategy turned out to be very effective. Furthermore, for continuity/sustainability, I felt that it was critical that another person should champion the cause in the event of my absence.

Participants were informed that the workshop would follow a Describe-Do-Discuss process: the facilitator would, (i) describe the functions and features of an aspect of Moodle, (ii) allow participants to practice the functions. (The practice sessions would take place on the course they intend to use next semester. Hopefully, by the end of the workshop, participants would have planned/posted most of their resources and activities), and (iii) discuss the process and answer questions. The following Figure 5.5 is a sample of the workshop activities.



**Figure 5.5: Sample of workshop activities**

### 5.5.2 Workshop Events

Since one of the research intentions was to describe the process by which we learned to use Moodle, this section describes how the final workshop was conducted. On **Day 1** of the workshop, I began with an *Icebreaker*. With wand in hand, I asked them to imagine that they had a magic wand that allowed them to change three work related activities. What would they change? The responses ranged from students to salaries and working conditions.

Next on the agenda were the *testimonies* from participants who had made significant use of Moodle. While the second ‘testimony’ was being shared, I received a call from the hospital indicating that my presence, as well as that of my siblings, was needed urgently to discuss my father’s medical condition. Immediately, I apologised to the group for having to leave them at that time. (They had known that after my uncle’s illness and hospitalization, my father had fallen ill. They were also aware that my father had been hospitalized three days prior to the commencement of the workshop and that I was responsible for the care of both my father and uncle.) I then asked Mary to take over the facilitation since I did not know how long I would have been at the hospital.

Since Mary and I had discussed how we would conduct the workshop, she was able to continue the session in my absence. By 3:18 that afternoon Mary had emailed the participants step-by-step instructions on how to “Edit Settings.” By 6:59 p.m. instructions on how to edit weekly outline was also in our emails along with ‘homework’ for the following day. (This detail attests to her commitment to the task.)

**Day 2** was therefore focused on how to a) provide summaries for each week's lesson b) enrol the students and c) create an attendance register. Since the students for the next semester were not on the network, just as in a previous workshop, I provided instructions on how to enrol students, then asked each participant to enrol each of us as 'students' in each participant's course. (This activity ensured their ability to create an attendance register and practice taking an attendance as well as learn how to put the students in groups when we reached to that section of the workshop.)

Creating summaries was very time consuming but necessary since it provided the students with an overview of each week's focus. Mary described the process for doing so (with the use of the instructions that had been sent to the participant the night before) while I demonstrated on Moodle using the multimedia projector. During the demonstration, Mary and I walked around the room assisting those who required our attention. Since they were sitting close to each other (and in some cases in their subject group) some participants solicited help from another participant whom they felt understood the process. Others beckoned Mary or me to provide assistance.

*The focus of **Day 3** was Collaborative Knowledge Sharing and Empowerment.*

Although I had indicated that the workshop would follow a Describe-Do-Discuss process, by the end of the second day, I recognized that even though we had encouraged collaboration and interaction, the sessions seem too 'teacher centred.' Indeed, we were *all* learning the new software; there was no need for there to be only two 'teachers'. I therefore decided on a different strategy to facilitate the knowledge sharing. *Firstly*, using the information that we had shared concerning how to edit the

profile, I created a 'basic activity' on Moodle complete with multiple choice questions and an opportunity for the 'students' to upload a file. Participants were able to observe what an 'activity' looked like and how they could create multiple choice questions. The group commented that they liked the activity and indicated that they would like to use it with their students. *Secondly*, I uploaded video clips on a) how to create groups, b) how to create a lesson and c) how to embed a video clip. *Thirdly*, having placed the participants into three groups, I asked each group to observe the video and write instructions to be given to the other participants, so that they too would know how to perform these functions. Since some participants did not bring their headphones, (even though they were asked to do so) speakers were provided so that the members of that group could hear the instructions and complete the task. *Fourthly*, each group had to 'teach' the 'class' how to perform the specific function to which they had been assigned. My assumption was that since Mary and I were able to read the manual and practice the commands, they too, as teachers, should, with additional resources such as video clips be able to engage in the activities. The interaction was highest during this session as participants discussed what they had heard on the video and as they tried to present what they had heard in steps which others were able to follow. During that session, they confidently made their presentations using the multimedia projector and a handout.

On **Day 4**, following a demonstration on how I was able to upload an embedded video and a link to the video, participants were given guidance on how to create a lesson and add a resource at the same time. Participants were also given an opportunity to practice creating a lesson which we as *their* students could assess. At the end of the day the participants requested that we conclude the session that Thursday. They



indicated that they had learnt a lot and that they had great appreciation for the relaxed atmosphere in which the workshop was conducted.

There were 9 attendees at the workshop, including one from another department. By this time, all of the research participants had been exposed to Moodle either through a workshop or through my individual tutoring. At the end of the workshop, I did not provide a written evaluation; however, I did ask them to provide oral feedback. Generally, they were very happy with the relaxed and interactive nature of the workshop and the time when the workshop. At that time, my preoccupation was for the care of my father, whose condition was becoming more critical. I was therefore not disappointed that the workshop was concluded one day early. Following his death (9 days after the workshop) and his funeral (three weeks later) I could not focus on the research. After the summer vacation when I was able to resume work on the research I reflected on what I felt was my seeming inadequate preparation for the research process.

*All of the guidelines concerning dissertation writing focussed on issues such as choosing the topic, writing the research questions, completing a literature review, presenting the findings, analysing the data and making recommendations. Creating a timetable was considered an important aspect of the process and so was the need to keep writing and to be in communication with my supervisors. None of the advice focussed on my personal ecology – issues in my personal life that could impact my ability to proceed with the process. After my mother's passing (only eighteen months prior to my dad's), for a few months afterwards I was not even able to type as quickly as I used to. Guidelines and preparation for doctoral writing need to highlight that in the real world of research 'life happens.' Your children may get sick, your parents may die, and your spouse may lose the job. You may have an addition to your family: a new born, adolescent or adult. The dynamics of life can change our focus and may even alter our passion. But I am determined to proceed even for my mother's sake.*

**Personal note, September 22, 2012**

Nonetheless, the overwhelming response of the participants was that this was the most impacting of the 4 workshops, and they offered various reasons for coming to this

conclusion. In the following semester, I conducted an interview with the participants concerning the process. The next section outlines their feedback.

### **5.5.3 Compatibility of Moodle**

In September, desiring to refocus their attention on what they had learned during the workshop and in some cases in previous training sessions and to allow them to share their personal disposition towards Moodle use, I engaged the participants in guided *conversations* rather than structured questions. To prompt a conversation/discussion on the topic, I asked them five main questions: a) How have you used Moodle? b) How compatible is it to your teaching? (your courses, your students and your methodology), and c) What level of support do you think you need?

This section provides a summary of the feedback of the participants.

#### **5.5.3.1 Use of Moodle**

In an interview, the participants who had used Moodle indicated that they had used it in a variety of ways. They used it to: a) Upload files – word documents and PowerPoint presentations, b) Provide links to website and to videos, c) Allow students to engage in discussions with each other, d) Provide instruction, e) Assess students understanding (a testing tool, f) Take attendance, g) Store the resources that were used in the course, and h) Record students' grades. Participants were therefore able to engage in all of the Moodle functions identified at the beginning of the research process. The fact that they were able to complete all these functions is a testimony to the fact that at least some of them had achieved the workshop objectives.

### **5.5.3.2 Compatibility with teaching**

This question of compatibility focussed the participants' attention on the object of the training sessions. Yamagata-Lynch (2003) argues that "tensions arise when the conditions of components cause the subject to face contradictory situations that hamper the attainment of the object" (p.103). While the findings so far affirm that view, I also contend that tensions can also arise when the object is not perceived to be consistent with their values and past experiences in offering their courses (Rogers, 2003). Research by Stewart et al. (2010) also indicate that one of the barriers to adoption of eLearning was that some participants did not see eLearning compatible with the courses they teach.

All of the participants believed that using the VLE was compatible with their students' propensity to interact with the World Wide Web. On the other hand, they were not all convinced that it was compatible with either the courses they taught or their teaching methodology. (To maintain anonymity with this small group, I have chosen not to reveal the courses which the participants were teaching.) Nonetheless, here are the reservations that were expressed:

- Two participants highlighted what they perceived were important consideration of being novice users of Moodle in an institution designed to train teachers. They felt that student teachers needed to be taught how to develop good social skills – working together, tolerance, etc. – (which they, the tutors, should model to their students.) These skills, they felt, must be developed in physical group interactions, not online.

- Student teachers need to engage in guided discussions. One respondent “[wanted] everyone to have an input,” so that they can teach their students to do the same. This, she felt, is best modelled in physical groups.
- Another participant liked the “human face to face” because, according to her, with the physical presence of the students, it is easier to gauge their understanding through body language.
- Courses that are “information oriented” and “idea oriented” are more suited to Moodle rather than courses that are more practical and skills based.
- For discussion-based courses “limited use should be considered” because “the nonverbal aspect of communication is an important part of the interaction,” shared another.

The findings above suggest why some of the participants did not fully engage in the initiative, even though they felt that the students would appreciate it. Their own perception of the usefulness of the object in preparing student teachers to teach may have frustrated the outcome. The nature of the course and the objectives that they were trying to achieve in the course would also impact their use of Moodle. The feedback of the participants is particularly important since these participants were preparing student teachers to teach in both primary and secondary levels in the school system. Arguably, some of them may have felt that teaching social skills to primary level students, the face-to-face modality was more appropriate.

### **5.5.3.3 Level of support needed**

Another very important factor that may have impacted their perspective on the process of adapting to the VLE was the level of support received. From an

institutional perspective, there was neither mandate nor policy for engagement. Additionally, they indicated that the unreliability of the internet was a significant barrier to their involvement. Although two respondents did not think that they needed a high level of support because they had the handbook and could read it for themselves and perform specific functions, all the other participants appreciated the support that they received during the workshops, particularly the final one when there were two facilitators. While the general response from the majority was the need for ‘continued training for teachers’ (two added for students as well), one participant was more specific and suggested that the training should be once per month and another, “every week an hour then gradually withdraw that support.”

## **5.6 Conclusion**

In this chapter, I used the data collected to answer the first and second research questions. I will now address the first question “*What is the process by which the DTE learn to use Moodle?*” The process of learning to use Moodle took place over a three year period. It involved 4 main training events, individual training and just-in-time support of the participants. The main tools used were the professional development workshops, with accompanying online tutorials and Moodle handbook.

The second research question was also addressed, “What were the systemic contradictions/tensions within the activity system as the DTE adapted to eLearning?” There were a number of systemic contradictions including personal and technical difficulties of the research participants as well as technical difficulties of the institution.

The process of Moodle adoption seem to have been negatively affected more from the lack of institutional planning and involvement rather than problems intrinsic in the adoption of Moodle. The themes highlighted related to, among other issues, time, desire to be professional, and the conflict with their substantive roles. On my own behalf were the tensions involved in being researcher, middle manager and implementer. By the final workshop, I was able to resolve some of the tensions with the hope that participants would make greater use of Moodle.

In the next chapter, participants provide answers to the third research question, “What were the participants’ retrospective perspectives on the process of learning to use Moodle?” Their retrospective reflection on the process also suggests other reasons for their involvement (or lack of involvement) in the process.

## CHAPTER 6 – LOOKING BACK

### 6.0 Overview

As stated previously, the data were generated over a three-year period from August 2009 – to October 2012. There were 4 major workshops/training sessions and the data were generated from these events, from interviews and discussions held with the participants, as well as from observation of their involvement on the Moodle platform. The data presented in this chapter was generated from interviews conducted in 2015 when 10 of the original 13 participants looked back at the process of learning to use Moodle. This chapter seeks to answer the research question, “*What were the participants’ retrospective perspectives on the process of learning to use Moodle.*” Following the introduction, in this chapter, I discuss the findings under the following headings: a) the process of adapting to Moodle use, b) responses towards engaging in the process, c) summary of factors, d) my perspective of the process, and e) application of Activity Theory. In this chapter, I use two approaches to analyse the data; a) reference to information from my literature review which focus on factors which enhance and inhibit the adoption of eLearning, and b) a discussion of relevant components of Activity Theory.

### 6.1 Introduction

By the time the interview was conducted in September 2015, I had gained the position of Vice Principal of the ASC. (I obtained that position in April 2013.) Mary, though not the head of the DTE had become the champion of Moodle use. She continued to support the tutors in their attempt to use Moodle and in their efforts to integrate technological tools in their teaching.

The 2015 interviews served as a form of ‘member check’ (Koelsch, 2013 and Cohen, 2007) in which the participants were being asked to revisit the events of the research process and provide their reaction to the event. This activity therefore served to add further information and to put information on record (Koelsch, 2013). (A sample of the transcripts of the interviews can be seen in Appendix 8.)

In the interview with the participants, I asked 6 main questions: 1) Are you currently using Moodle? 2) How did you come to be a Moodle user?) 3) As you reflect on that phase in the life of the department, what do you recall of the whole process of learning to use Moodle? 4) Do you think it was a good idea to introduce the VLE to the Department of Teacher Education? 5) How did you feel about engaging in the process of learning to use Moodle? 6) In my write up of the events, I have identified six phases, 4 of which involved major training events. Which of these workshops did you attend? To jolt their memories, I presented a visual map inclusive of the time period and key events, as well as artefacts (handout, booklet, etc.) from the different stages of the process.

If the ASC is to fulfil its strategic plan of widening access to its programmes through use of a VLE, then I felt that it was important to determine the accuracy of my presentation of the events in the activity system to better understand which of the components in the activity system served as enablers and which were barriers to the adoption process. It is from this information that guidelines can be developed for policy formation. In some cases, the enablers were what the participants perceived as the usefulness of the VLE and benefits of using it. On the other hand, tensions



included competing objects in the activity system, as well as inadequate institutional support.

## **6.2 The Process of Adapting to Moodle Use**

This section presents the responses of the participants to gain insights into their retrospective perspectives on the prospect of adapting to the VLE and whether they felt that it was a good idea to introduce this initiative into the teacher education institution. Following are their responses from two questions: *“Do you think it was a good idea to introduce the VLE to the Department of Teacher Education?”* *“How did you feel about engaging in the process of learning to use Moodle?”* The first question focussed attention on the prospect of transitioning to the VLE, while the second question addressed the issue of them being engaged in the process. First, I present the views of the participants, and then discuss their responses.

Since the first question refers to the prospect of transitioning to the VLE, it actually focuses on the value of the object of the activity system. All the participants felt that the initiative to introduce a VLE to the teacher education institution was a positive one. The reasons offered for their perspectives included the view that Moodle was an “effective tool for learning,” “I think it's the way to go in terms of we're now using technology in the classroom and everyone must use it, but we still need to know how to use it appropriately.” (Mary); “everything that is available to help with the teaching-learning process could be accessed using Moodle” (Jem); “is the wave of the future ...we have to vary the way we teach our students” (Lillian) Furthermore, their ability to use Moodle would help them to “keep up with the trends around the world” (Gail). Both Carol and Lisa saw the value of using the tool in light of the fact that

online tools had to be used to support the student teachers when one of the tutors migrated. In the absence of a replacement, the tutor supported the students' learning by using online medium. On the other hand, two participants who made significant use of Moodle offered a caution against how the VLE should be used because, a) placing resources on Moodle should not replace teaching (Mary), and b) there should be an evaluation of whether this tool is suitable for a specified group of students (Ava).

With regards to whether it was a good idea to introduce this tool, therefore, the participants lauded the initiative because of the versatility of Moodle, the opportunities its use offered for online learning and the interest it holds for students. The reasons offered related more to the benefit for the students and the institution rather than to themselves. The participants seemed to have been concerned with the teacher education using current educational tools to provide instruction to the student teachers. They also appreciated the benefit of a virtual environment when face-to-face contact was not possible. It appears that there was no *intellectual reluctance* (Mitchell and Geva-May, 2009) with regards to the legitimacy of using the VLE. Using the Technology Acceptance Model (TAM) (Davis et al., 1992) theory, the perceived use value was high. Accordingly, it would be expected that the participants were by the time all making optimal use of Moodle since there is a strong relationship between perceived usefulness and intention to use. Further inquiry of the participants revealed that this was not the case. (Lee, 2006, and Davis et al., 1992)

When asked, “Are you currently using Moodle?” and “How are you using it?” of the 10 participants interviewed, only three of them (Ava, Jem and Mary) confirmed that they were using it or had used it to any significant degree in a previous semester. In the interview, the participants who had used Moodle confirmed that there were 7 ways in which they had used the VLE. They had used it to, a) upload files – word documents and PowerPoint presentations, b) provide links to website and to videos, c) allow students to engage in discussions with each other, d) provide instruction, e) assess students understanding (a testing tool), f) take attendance, and g) store the resources that were used in the course. In conclusion, while they all saw the value of Moodle use, not all of them used the tool optimally. So why were they not using it and what were the factors which brought the participants to their position on Moodle use?

### **6.3. Response to Engaging in the Process**

The second question was, “*How did you feel about engaging in the process of learning to use Moodle?*” Since this educational change involved a *change in practice*, (Fullan, 2007, and Holland, 2005), I felt it was important to hear their disposition regarding their engagement in the process. The responses of the participants ranged from great excitement to cautious engagement. I will begin the discussion by referring first to the participants who made greater use of the VLE. (Although Ceci had made significant use of Moodle, she was not available for the interview.)

### 6.3.1 Reaction of Moodle Users

Jem and Ava, who had had experience using a VLE as students, both spoke very excitedly about their ability to use Moodle and the benefits of so doing. When asked how she felt about the process of learning to use Moodle, Jem used the word “wonderful” twice and “exciting” three times to explain how she felt about teaching online. (See transcript of Jem’s interview in Appendix 8)

She was happy to engage in the process and valued the support that she had received. Additionally, she spoke of the benefits Moodle offered her of monitoring her students, particularly those who did not say much during the face to face sessions. She further stated that, Moodle had everything she needed, including blogs, discussion forum and instant messaging, to support student learning. Though admitting that it was time consuming, she felt that she needed to invest the time so that she could be a more effective teacher. Finally, she confessed that *“I do like a challenge”* (Jem, 2015). From the interview with her, it was evident that she felt that the process of using the VLE was challenging in two ways: a) It made additional demands on her time in the initial preparation of her course, b) The Internet was unreliable. However, she was both intrinsically and extrinsically motivated. Her love for a challenge and her desire to improve the student experience caused her to overcome the challenges.

Mary, who became one of the champions in Moodle use, felt that since the teacher education institution was advocating that the student teachers should integrate technology into their classroom lessons, that the institution should be using the technology. On the other hand, she confessed that “learning something new is frustrating” but she was not deterred, because she saw the benefits Moodle offered the students. For her, one of the causes of the frustration lay in the unreliability of the

Internet and the fact that “*even though you have a computer and you are accustomed to your Microsoft office applications, Moodle as a learning management system had different aspects that you needed to learn while using it.*” (Mary, 2015) Nonetheless, with the use of the booklet, she was able to navigate the VLE and support other staff members. In 2011, Mary had indicated that the process was both frustrating and motivating. Then, the frustration stemmed from the fact that some “some persons are unable to access, whether it’s because of a password or just not having access to the Internet or a computer,” and getting the students to appreciate that using the VLE is a valid approach to teaching. It was motivating, however, when the students did access the Moodle platform and started interacting online and commenting in the class about what their peers had done. Mary’s frustration therefore related to the student teachers’ acceptance of and access to the VLE and her own acquisition of the skills to be an effective Moodle user.

Ava who like Jem had studied online said that she was “very at ease in the environment” and made extensive use of it. Although she also felt that it was easy for her to use Moodle, interacting with the students online was even more demanding than face to face teaching.

*Very easy one for me.....natural one. I felt at ease with that environment. Also because as a learner I did have experience while doing my masters online and a few courses while training online. ... you need to also provide feedback individually most of the time. So I can tell you it can be very challenging for a teacher. It takes a lot of time; it probably takes more time than teaching face to face you teach a whole group so in one hour you do all of them (Ava, 2015).*

On the other hand, she felt that using the VLE allowed the student teachers to develop their writing skills and to “...go really deep in all the debates in the forums in the intellectual exchange that happened” (Ava, 2015). In 2011, she had made a distinction

between two cohorts of student teachers: one made extensive use of Moodle and the other one did not engage much in its use. My own examination of the platform confirmed the performance of the two groups. It is no wonder that in 2015 she advocated for assessing the readiness of the students for online learning.

While all three participants experienced the frustration and challenges of operating in the new environment, they were not deterred. Their love for a challenge and the perceived benefit for the student teachers propelled them. These findings lend support to the findings of researchers like Bolliger and Wasilik (2009); Mitchell and Geva-May (2009) that intrinsic motivation seemed to have been a critical factor in their progress. The prospect of doing something gratifying, and overcoming a challenge, and their interest in technology seem to have nullified the tensions brought about by the unreliable internet access. Regrettably, the other participants did not share a similar fate.

While Jem, Ava, Lillian, Lisa, Grace and Mary professed to use Moodle as a repository for resource material which students could access at any time, it was Lisa who commented on the different ways in which two cohorts of her students used Moodle. In a previous interview in 2011 (See Appendix 8) and then in 2015, she confirmed that it was the students who had propelled the use of this new environment.

Her first cohort which she referred to as:

*...a very technical, a very high IQ kind of people, they were able to do a lot of the work on their own. And Moodle facilitated that. They were able to go outside of the course and bring in things that even I didn't know about. Moodle facilitated that for me and them. (Lisa, 2015)*

This group uploaded many resources which they were happy to share with each other on the Moodle platform. Her second cohort, which consisted of a smaller group of students, used the forum more extensively to interact with each other in forum discussions. Even the ones who were quiet in class were involved in discussions on Moodle. Proposing that Moodle is an environment in which even the shy students could thrive, she concluded that the platform allowed those who simply wanted to share their resources to do so and allowed the talkers to fulfil their passion as well.

Lisa, like Ava, valued the active engagement of the students; however, her failure to upload information for her students and her subsequent personal issues inhibited her progress as a tutor. One of the factors which Bolliger and Wasilik (2009) proposed that caused faculty satisfaction and motivation in online learning was the view that students were actively involved in their own learning. Apart from their belief that Moodle was a useful tool, it was this active engagement of the students that propelled the desire of both Lisa and Ava to engage in the process.

While the Moodle users offered different reasons for the challenge of using Moodle, their love for a challenge and the benefit which they felt would have accrued for the students made them persevere.

### **6.3.2 Reaction of Minimal Moodle Users**

The reactions of the following 4 participants, Kloe, Carol and Gail, summarises the reaction of the participants who did not make as much use of Moodle as the previous group.

In the early stage of the process (2011), Kloe concluded that, “*the technology is there. It has to be utilised.*” Later, in 2015, when asked to reflect on the entire process of learning to use Moodle, she declared that, “The training sessions were very good;” however, she anticipated that there would have been challenges with the technology. Although her attendance at all the workshops suggested her desire to make use of current technology, she pointed to her limited computer skills, lack of practice and her need for support. Furthermore, she did not think that it was totally compatible with the courses that she taught. This may suggest a tension between the desire to use current technology and the perception that the use of the technology was not compatible with her course. She wanted “immediate” technical support to deal with her inquiries, or she would not continue with the initiative. In the interview, she referred many times to “harassment” which manifested itself in time to set up, additional work, and unreliability of the Internet access. She proposed that if the course were set up for her, she would more likely engage in the process. Eventually, the tensions occasioned by limited typing and computer skills, set up time unreliable Internet access frustrated the attainment of the object.

Also of significance is the context of the research as was stated in 1.3.2. it was during the research period that the programmes were being reviewed and added. Carol referred to the fact she was teaching new courses and she was “... *still trying to put things together. So I'm trying to figure out what I'm doing now so I don't want to think about what I'm doing now plus figure out how to do it differently*” (Carol, 2015). It was for this reason that Lillian spoke of the challenge of “twinning my work and spending so much time with the online course.”



Participants had to choose which method they would use to support their students' learning; use the traditional approach or use an approach suggested by the research activity. Lee's (2006) research on students who had a choice between using the VLE or other media led him to believe that to ensure adoption of the VLE, mandatory usage is necessary. It is not enough for the participants to see the value in the innovation. The innovation should be compatible to the courses they teach and seem to have an advantage over the current tool. (Rogers, 2003) Since using a VLE was not mandatory for preparing the student teachers to teach, there was no incentive to use it.

The excerpt below from an interview with Gail summarised her feelings about the process and may point to reasons for the minimal engagement of some of the participants during the process. (The entire transcript of the interview can be seen in Appendix 8).

Me: Now what would you say are the basic tensions that existed in the whole process in all the things you were doing from what you did from 2011?

Gail: What I would say is familiarity mostly with the icons. That was something. That was one. As people got familiar, so that was one basic tension. And also another tension "Is it worth the while? Am I going to be able to really use it because of the connectivity? I can't do everything at home. There are times when I have to do things at work. Do students have the connectivity required and so forth? Those I would say stood out.

Me: I remember one time I interviewed you and you said that one of the issues related to using Moodle was that the information would be made public.

Gail: Right

Me: So you wanted to be careful about what you put in the public arena. Is that still an issue for you?

Gail: I think less so now than then, probably because I was new to Teacher Education and fairly new to Teacher Education and you were very conscious that there would be other these are courses that were University of the West Indies courses and since they would be in the public domain, the subject coordinator can check to see so you

want to make sure that the information is not only accurate but sufficient and you know those kinda things.

Me: You know it's good to hear that kind of clarification. Initially because you were new, you wanted to know that what you put in the arena was ...

Gail: You feel that you would be judged by the way people this is your projected self in a way

Me: Right. Yes but do you feel more comfortable now?

Gail: Yes. I think I have greater confidence.

Me: So moving forward, that would not really be an issue.

Gail: No, no.

Gail's comments reiterate some of the themes which were highlighted in chapter 5 and add clarity to the reason for her level of involvement in the process. The themes highlighted include her limited computer skill, unreliability of Internet access, and pride in her craft. As a result, her attitude towards participating fluctuated. It moved through periods of reluctance and enthusiasm. Gail also argued that considering that transitioning to eLearning was not mandatory, that the provision of incentives may have encouraged her and other participants to engage more fully in the process. Gail's comment of the need for incentive is supported by research literature which suggests that the offering of incentives improve technology adoption (Hegarty et al. 2005 and Bhuasiri, et al., 2012).

Despite the fact that she had not made optimal use of Moodle, she affirmed that she had moved along the continuum. She is no longer cautious about putting her work in the "public domain" and she is using technological tools with her students. Finally, she concluded that the change has begun in the mind,

*Some persons are going to get on board immediately but there are others even though you might not be seeing any tangible evidence sometimes*

*there might be a mental process taking place. So change is actually happening and the fruits are going to be seen later so just keep at it (Gail 2015)*

Fullan (2001) affirms that educational change involves change in belief. If the belief system is now more positive to technology use then, the participants have moved along the continuum.

### **6.3.3 Summary**

As I examined the transcriptions from the interviews, I realised that the tensions expressed in the participants' retrospective feedback could be related to factors in themselves, their students and the institution (Bolliger and Wasilik 2009). (A sample of their actual words is expressed in Appendix 9 A, 9 B, and 9 C under the headings, student-related factors, instructor-related factors and institution-related factors respectively)

With regards to the students, the tensions related to the view that Moodle provided a portal through which they can supply student with information, and model a way in which the student teachers can engage their students. Additionally, it can provide their students an opportunity to give deeper written reflections while using an environment which they (the students) appreciated. However, this is contrasted with the unreliability of the tool that would make this possible.

While generally, the participants were comfortable with their old ways of teaching, some of them loved a challenge and found Moodle easy to use. These interviews confirmed participants concerns about the time involved in preparing course material for this new environment and the need for discipline to get it done. An additional

factor raised in this interview was the fear that the technology would not work and the fact that some teachers were not only adjusting to the paradigm shift in teaching practice, but they were also adjusting to teaching new courses.

The institutional-related factors presented confirmed previous concerns about unreliable Internet connectivity and added the view that incentives could have encouraged the participants' involvement.

#### **6.4 Reconstructing the narrative of the research**

As stated earlier in 6.1 participants were asked to reflect on various stages of the process and to provide feedback. All the participants did not attend all the workshops. Only 4 participants attended the first two workshops held in 2009 and then in 2011, and only 2 of the 4, Kloe and Lillian were available for the interview. Furthermore, Kloe was the only participant who attended all the workshops.

Initially, I had presented the research events in 6 stages; however, it was through the construction of the interview questions and the discussion with the participants that I became starkly aware of the fact that the actual research activities took place through 4 stages as opposed to 6. All the participants (except for Ceci, who had been reading about Moodle, though not using it) indicated that it was the sessions in the research activity that exposed them to Moodle and they confirmed which workshops they attended and shared their feelings on the process and tensions. Consulting with the participants therefore provided greater accuracy in the presentation of the research information. In the next section, I present a summary of the factors which influenced the engagement of the participants.

## **6.5 Motivation influencing engagement**

The question, “*What made you decide to be a Moodle user?*” suggested a motive for engaging in the process. Apart from indicating that I, the researcher/workshop facilitator, had caused them to be Moodle users, the participants gave other answers. Their responses to this question suggested reasons for which they might have been initially motivated and reason that caused them to use or desire to use Moodle. The summary of student related factors are listed in the next section.

### **6.5.1 Summary of Student- Related factors**

This section provides a summary of the student-related factors. The responses suggested that using Moodle did the following:

- allowed access to information when the teacher was not able to be with the students physically as well as the students having access to the information anytime and anywhere
- provided a model for student teachers that they too can engage in online activities
- provided access to information prepared by the teacher
- allowed for greater reflection and depth of responses than in face to face interaction
- provided another avenue through which students can learn

In addition to indicating that the students appreciated the virtual environment, the participants expressed concern about the students’ ability to connect with the internet.

(The actual statements extracted from the participants are found in Appendix 9 A.)

### **6.5.2 Instructor-related factors**

Apart from the student-related factors, the participants suggested factors related to themselves. These included the following;

- love of a challenge
- enjoyment of the environment
- facility in learning to use Moodle
- ability to track students' progress

(The actual statements extracted from the participants are found in Appendix 9 B.) A careful examination of the participants' responses reveals that none of the participants seem to have been motivated by the desire to fulfil the strategic goal of the institution. Again, noting Carol's comment, it could be that they were not aware of the vision. Alternately, since the participants were informed that they could use Moodle as they desired, most of them seem to have chosen to use it as an electronic cupboard to store their resources.

## **6.6 My perspective of the process**

As one of the participants in the process, I too reflected on the process. I recognised that my own perspective and the roles that I played may have impacted my actions.

### **6.6.1 Multiple identities**

Initially, I thought that I had two identities, facilitator and researcher; however, I was also middle manager. These multiple identities and roles always had to be managed. As manager I could organise the workshop and invite participants to attend, but as researcher I did not feel that I could insist that they attend. Furthermore, on the

Participant Consent Form, the participants agreed that they understood that they could withdraw from the research project at any stage and that this would not affect their status.

As manager, I felt that I had to be hopeful and encourage participants, even when all the structures were not aligned for the success of the project. Despite their socio-historical backgrounds, I felt that with training, they could adapt to the VLE. Without the ‘hope’ and expectancy that something positive would happen, (akin to Fullan’s (2002) moral courage) participating in the process would have been daunting because there was often some issue that could thwart or halt the process.

Having been the Head of the department since 2003, I knew most of my faculty members (except for the new ones) on a personal level. I knew some of the challenges with which they faced in their personal lives, so on some occasions, I did not feel that I could challenge them to be further involved. Once my critical friend alerted that I was too ‘close’ to (too aware of) their circumstances. While this “awareness” could create empathy, it also signalled caution, and sometimes inertia, so it was important to find a happy balance.

As researcher, I did not want to be too insistent if participants did not want to engage, but as facilitator, I had to challenge them to be involved. Using Mary as a co-facilitator was critical to the process. She was not only an ‘innovator’ and one who understood how to use Moodle very early, but she also appreciated the possibilities of Moodle and openly made herself available to assist the participants. Furthermore, in the final workshop, using the other participants as ‘facilitators’ to teach other

participants was important in maintaining interest and in encouraging participation among the participants.

In as much as I was a manager (middle), I did not have the ‘power’ to insist that participants engage in the process, but as facilitator, I could provide the *education/knowledge* so that they could use *reason* to determine their desired level of involvement. (Elton, 1999) In my reflection on this issue I wrote,

*I’m understanding why some changes do not occur in small institutions in developing countries*

- *Will to make things happen*
- *Management by middle manager without the ‘head’s’ insistence (power)*
- *Insufficient funds*
- *Need to balance multiple roles*

Personal note, August 2012

I had the ‘will’ to champion the change, but I did not have the power to insist that the participant engage in a process which was not part of the terms and conditions of their employment. Furthermore, the process involved more time and effort. It was not mandatory and the participants were not offered any incentive – nothing in the form of release time, recognition nor financial remuneration (Hegarty et al. 2005 and Bhuasiri, et al., 2012). It was therefore important for me to understand my boundaries and keep the participants comfortable enough to eventually engage in the process.

### **6.6.2 Processes**

I was engaged in two processes: a) teaching the participants and b) assessing my learning from the engagement with them so that I could propel the project. In this case, it was not just teaching a skill, but teaching an attitude towards the skill. I had hoped that they would have been so ‘charged’ about this new learning and



environment that they would have been able to challenge their students to be involved. Sometimes the desire for them to adapt to this new modality became so insistent that I forgot that I was a researcher; however, the roles are inextricable, for as Mc Niff indicates, “The research is in the action, whether the action goes as we hope or not. The learning is in the practice.” (Mc Niff and Whitehead, p.71, 2002) For example, in the earlier stages of the process, while I interviewed them about the progress that they were making, I also took the opportunity to show them how to perform certain functions or how to improve the course on Moodle

### **6.6.3 Layered project**

Along the way, I learned that this was a two layered project. It involved my training of the research participants/tutors and these participants’ ability to orient their students to the new learning environment. The onus was therefore on me to present convincing arguments for their engagement and for them to challenge their students to do the same. The responses from the participants suggest that most of them did not feel confident in their knowledge of the process nor in their ability to orient their students to be involved in the process. Ultimately, like Broad & Evans (2006), I realised the great challenge in making time for professional development while dealing with the demands of our regular daily responsibilities.

## **6.7 Application of Activity Theory**

Although there are other models used to examine adoption of technology, such as the Technology Acceptance Model and an examination of the critical success factors, Activity Theory also directs our attention more specifically to all the components in the system, such as the tools and division of labour. Additionally, it also directs our

attention to another factor – the socio-cultural history of the setting. Not only do tools mediate the attainment of the object, but so too did the socio-historical factors mediate against the implementation of the change process.

### **6.7.1 Socio-historical context of the Research**

Research by Grossman, et al (1999) reveals how the various settings in which pre-service teachers conducted their teaching practice impact the development of their belief and practice. Similarly, the setting of the research impacted the belief and practice of the research participants.

Following is a summary of the points:

- Antigua and Barbuda is a Small Island Developing State which is in the early stages of ICT adoption. Since the government of Antigua and Barbuda had placed a high priority on ICTs as an important tool for national development, it had provided laptops and high speed Internet and training to its teachers. While not mandating the use of ICTs the government was encouraging its use.
- The School of Education was instituting changes in the delivery of its programmes
  - The duration of teaching practice changed from 4 weeks to 10 weeks.
  - Courses were being revised and added.
  - Assessment of student teachers use of the technology was mandatory
- Tutors were encouraged to use a variety of approaches and strategies in the delivery of their courses even though there was no mandatory use requirement for VLE
- Student teachers had limited resource material, so tutors shared their resources freely with the students.

- Both tutors and student teachers have had a history of using the traditional face to face methods (with success) for teaching and learning.
- The research participants were being asked to engage in a labour intensive activity to develop online courses and there was no discussion about any incentive (monetary or otherwise)

An examination of all the factors presented above suggests that even without the introduction of a VLE, the setting was already tension laden. There were many initiatives which were being introduced which impacted the involvement of research participants in the activity setting. Herod and Fedor (2008) argue that since we generally experience a “roller coaster of change” with a number of changes being suggested or demanded by different entities, it adds to the complexity of change. They therefore emphasise the critical role of leaders in analysing a) what should be changed, b) what they know about themselves and the participants that would be involved in the change, and c) the context. Only then do they suggest that a strategy for how, when, and how quickly the change should be developed. Another aspect of the activity system to be examined is the subject.

### **6.7.2 The Subjects**

The research participants were the subjects of the activity system who were working together to prepare the student teachers to support student learning in the schools.

Here are some summary points about the research participants/subjects:

- The research participants were teacher educators who teach teachers
- They were conscious that they should model professional practice.
- They all applauded the initiative of learning to use the VLE

- They did not all believe that using the VLE was compatible with the course they taught nor with their teaching style
- They had limited typing and computer skills
- They were under tremendous pressure to adjust to the varied initiatives that were being introduced and were not being supplied with the requisite tools.

### **6.7.3 Division of Labour**

Division of labour refers to the tasks that the members of the community performed to ensure that the research participants learn to use Moodle. However, the teacher education institution in collaboration with the UWI had their own object, that of preparing the student teachers to teach. Although using the VLE could help to augment their face-to-face teaching, it was not critical to teaching the student teachers to teach. That suggests that there were actually two activity systems, but they should really have been one activity system in which the participants used the VLE to support student teachers as they prepared them to work in the classrooms. Unfortunately the participants made distinctions between the two activity systems. These two activity systems therefore created tensions in the minds of the participants. Furthermore with the absence of the mandate, the object was not fully realised by the participants.

Additionally, the subjects are not the only individuals who should perform tasks. There were institutional factors which also had to be addressed. The participants' statements, found in Appendix 9 C, point to the task of top management to provide the following:

- reliable Internet connectivity

- technical support
- mandate to adopt
- incentives
- technology infrastructure

The provision of this support could have gone a long way in enhancing the adoption process. Participants attested to the support provided during the workshop activities, such as online tutorial and the facilitators; however, they bemoaned the fact that there was inadequate technological and psychological support.

As suggested by many researchers, management support is a critical aspect to eLearning adoption (Fullan, 2010; Herold and Fedor, 2008; Singh and Hardaker, 2014; Maughan, et. al, 2012). Using the VLE was a college initiative and initial awareness and training was created for the select members of the college. Later the fact that another consultant was brought in to train another group of ASC lecturers is testament to the desire of the institution to continue the training of the staff. Unfortunately, there was no sustained support.

While we modelled our adoption to that which pertains in the developed countries special consideration should have been taken to ensure the necessary budgetary allocation for the supply of such things as the appropriate technological infrastructure and the provision of incentive (if monetary consideration is being made). According to Bhuasiri (2012) extrinsic motivation is more important to the adoption of eLearning in developing countries than in developed countries.

#### **6.7.4 Tools**

The main tools that should have been provided in this activity system were the Training sessions, technical support and internet access. As stated before, the participants were satisfied with the training sessions, but they longed for more technical support and other institutional support. While the main training sessions were deemed adequate the tools which should have been provided by top management were not adequate. This supports research by Yamagata-Lynch (2003) that the quality of the tools can frustrate the achievement of the object.

While all the participants were exposed to the same training, the four participants who eventually made the most use of the VLE were the most recent arrivals into the institution. It is likely that in addition to their intrinsic motivation that they may not have acculturated the norms and practices of the institution (Rogers, 2003) and were therefore more willing to venture into the new (virtual) environment.

#### **6.7.5 Rules**

Given the fact that the participants belonged to two major activity systems, they were expected to 'obey' the rules of both systems. Unfortunately, since the rules are mediated by the division of labour, it was not always possible for the subjects to attain the object of learning to use Moodle. It should be noted that it was the four who loved a challenge and had the appropriate computer and typing skills were able to make significant progress with Moodle.

## 6.8 Conclusion

In response to “*What were the participants’ retrospective perspectives on the process of learning to use Moodle?*” a number of issues emerge. Emerging from the data are suggestions that all the participants valued the prospect of adapting to the VLE. Admittedly, the perception that a change tool is valuable does not presume use of the tool; rather, it created a desire for its use. Furthermore, in a context where its use is not mandatory, the provision of incentives may have intensified the desire. Other factors must be evident for the implementation of the tool. On a personal level, efficient computer/typing skills are critical for all tutors. It cannot be assumed that participants own these skills. On an institutional level, there must be adequate support from leadership in areas such as technology infrastructure and incentive. The absence of these enabling conditions led to tensions in the activity system.

# **CHAPTER 7 – SUMMARY OF FINDINGS AND CONCLUSION OF THE STUDY**

## **7.1 Overview**

In this research, I investigated the processes by which the teacher education institution in Antigua and Barbuda learned to use Moodle, a VLE. The research questions for the study were as follows:

1. What is the process whereby a teacher training institution learns to adopt a Virtual Learning Environment (VLE)?
2. What were the systemic contradictions/tensions within the activity system as the community adapt to a Virtual Learning Environment?
3. What were the participants' retrospective perspectives on the process of learning to use Moodle?

In the discussions that follow, I present the summary of the findings under the following headings: (i) nature of the change process, (ii) tensions which existed during the process, (iii) significance of the study and (iv) final words.

## **7.2 Introduction**

In the first chapter, (1.2) I presented the factors which led me to engage in this research. I also outlined the fact that even though from an international, regional, and local level, the Antigua State College (ASC) was positioned to use the technology, the faculty had not received training to use Moodle. This applied research, therefore provided knowledge of how the participants gained the skills needed to support students' learning in this new environment. It also highlighted the tensions which



existed as the participants positioned themselves to adapt this new learning environment

### **7.3 Nature of the Change Process**

The change process started with the ASC sending 5 of us (faculty members) to Canada to learn lessons about how 5 of their institutions adapted to the VLE. Subsequently, the institution conducted a workshop to create awareness for the initiative and to train the staff. The process continued with my support of the research participants. This section discusses how I continued the change process and highlights how the participants used the VLE. Based on the literature concerning staff development, and the strategies which other institutions have used to transition to eLearning, I conducted workshops designed to provide the staff with the skill to use the VLE (2.5). Apart from the workshop, I conducted individual training sessions with some participants, and provided just-in-time support during the process.

#### **7.3.1 Nature and Facilitation of the Workshops**

Because of the iterative nature of the research process, during the process, it was important to find out the views of the participants concerning the workshops, so that improvement could be made to the teaching and learning exercises. Later, data gathered from interviews with the participants' regarding their perspectives of the workshops conducted to initiate them into Moodle use revealed the following:

- Participants appreciated the variety of strategies used to support their learning of Moodle: online tutorial, handbook, and PowerPoint presentations. They also appreciated the practical design of the presentation in the workshop which

allowed them to experience eLearning from the perspective of a student and also from the perspective of a facilitator

- They did not appreciate the workshops which focussed on the theoretical aspects of Moodle use. All participants who had participated in previous workshops preferred the last one since they felt that it was more practical.
- Participants also preferred the last workshop since they were involved in preparing for actual courses they expected to teach during the following semester. This supports the literature that adult learners appreciate practical involvement in task-oriented experiences (Knowles, 1980; Cercone, 2008).
- Having 2 facilitators, particularly one of their colleagues from the department, provided a greater level of support during and after the workshop.

The data generated during and after the workshops indicated that the participants developed the skills to differing degrees. (See 5.4). Generally, they found Moodle a useful electronic repository for submitting and storing assignment for students, sharing resources, including links to websites, PowerPoint presentations and word documents. There is also evidence that 4 of the participants used Moodle to engage the students in discussions, provide instruction as well as post students' grades and attendance. So what made some participants adapt to the VLE more than others?

Based on the responses of the participants, the answer seems to lie in the view (supported by research conducted by Mitchell and Geva-May, 2009), that some participants were more eager than others to try new ideas, approaches and technologies. Of the 13 participants, there were 4 participants (Ava, Mary, Jem and Ceci) whom Rogers, (2003) may have referred to as innovators– those who loved

trying something new – that were able to use Moodle to provide instruction, assess the student teachers and engage them in discussions. There were others, (Lillian, Gail and Lisa) who demonstrated knowledge of Moodle use by creating summaries for each week and posting some of their resources on line, but they were not consistent in doing so. The other participants made minimal use of Moodle.

The feedback from the participants suggests that future workshops would have a greater chance of enhancing the expertise of the participants if they a) are practical and relate to the participants real work, b) allow the participants to be actively engaged c) use a variety of strategies to engage the participants, and d) incorporate a member of the institution with the relevant skill set to provide ongoing support to the other participants even when the facilitator is not available.

#### **7.4. Tensions Which Existed During the Process**

The proposed transition from face to face teaching to a blended modality created tensions in the activity system. The research process was tension-laden. It started with the tension caused by the passage of hurricane Erica at the beginning of the research process, but there were other tensions. These related to a) technology, b) time, c) professionalism, d) socio-cultural context of the research, and e) leadership. The next four sessions focus on these tensions.

##### **7.4.1 Technology**

There were tensions related to reliability of internet access and the typing and computer skills of the participants. During the process, the participants were expected

to achieve the object of learning to use Moodle with the help of mediating tools. Notably, the mediating tool of the internet upon which the Moodle platform and the server were housed was inefficient and unavailable on too many occasions. This was a source of contradiction in the achievement of the object. As a result, some participants decided not to continue to try to use Moodle while others found other online tools to support their students' learning. Another source of tension relating to technology was the limited typing and computer skills of some of the participants. As a result, some found it too labour-intensive to place their resources on Moodle. Although they admitted that actual task of posting their course on Moodle was not difficult, they also indicated that they lacked the discipline required to acquire those skills and the discipline which they perceived would be needed to engage with the students online outside of the regular work schedule. Indeed, for those with limited typing and computer skills, the unreliability and unavailability of the Internet access only made it more difficult to get involved in the process.

#### **7.4.2 Time**

In the early stages of the process, many of the participants indicated that time was a critical factor in their lack of engaging. It appeared that time related to the discipline of sitting down to practice using the tools to which they had been exposed. Time was also needed to type the information which they wanted to upload. As stated earlier, for those with limited typing skills, this became very challenging. Other matters which related to time were occasioned from an administrative standpoint. First of all, the time the course shell was made available to the participants was critical. When the course shell was not provided early enough for the participant to engage the student teachers from the beginning of the semester, some participants were discouraged from

participating. Additionally, the time the workshop was held facilitated or hindered their willingness to participate in the events. (5.4.9)

### **7.4.3 Professionalism**

The setting in which the research was conducted may have created another type of tension. The participants were all teachers of persons who were learning to become teachers. Initially, all the research participants welcomed the opportunity to learn to engage in the VLE because they felt it would make them use current pedagogical methods and tools. This suggests that they all took pride in their craft. The fact that teachers mentioned the view that placing information on Moodle meant that they were putting themselves in the public arena, so they wanted to be careful about how they projected themselves, lends weight to the view that they wanted to be professional.

It was felt also that, as teachers of aspiring teachers, they were expected to model good practices of professionalism as it related to planning and confidence in delivery (5.4.9). There is the suggestion that it was this desire to be professional that may have hindered some participants from engaging fully when they realised that they did not have the requisite typing skills or adequate knowledge of the software. This may have created a conflict in their minds which was demonstrated in their unwillingness to “look foolish” while they learned.

### **7.4.4 Socio-cultural context of the research**

The social-cultural context of the activity suggests another factor in the research. At the time that the initiative was being introduced, the tutors in the institution were

being asked to respond to other change initiatives that were being introduced by the School of Education at the University of the West Indies and the government of Antigua and Barbuda (6.6.1). The tensions created by adjusting to all these initiatives impacted the participants as well. This has serious implications for the role of the leader in the setting.

#### **7.4.5 Leadership**

Leadership has a critical role in conducting an audit of its physical and human resources and the context in which the change is being considered and ascertain if, how and when the change should be initiated. Once the decision is made to initiate the change, the vision should be adequately communicated to all concerned. This vision should have been regularly communicated, and adequate measures for training and supporting the participants should be put in place.

Another important consideration is that one of the reasons the ASC was adopting to the VLE was to increase access to its courses, particularly in light of the fact that the government of Antigua and Barbuda had allowed many of its qualified and experienced teachers to take early retirement. It may be important for the government of Antigua and Barbuda, the employer of the teachers, to change the terms of engagement to include using a VLE, if it is deemed important. It is possible that this type of leadership could increase the eLearning adoption rate.

Another tension was occasioned in my role as Head of Department, researcher and implementer. During the process, I was so engaged in implementing the process that my documentation of the investigation (as researcher) often suffered. Additionally,

as middle manager, I could not make the activity mandatory, but as implementer I needed to urge the participants to be involved. The tensions in the entire research process are summarised in Table 7.1.

**Table 7.1 Summary of Problems Encountered and Solutions Sought**

	<b>PROBLEMS/TENSIONS</b>	<b>SOLUTIONS SOUGHT</b>	<b>COMMENT</b>
<b>INSTITUTIONAL</b>			
1	Unreliability of the Internet	Use of ABIIT website	Avoidable – better budgeting
2	Malfunctioning Server after storm-Erica	Use of ABIIT server	Unavoidable
3	Insufficient computers to practice outside of training sessions	MOE provided laptops to the department	Avoidable – better budgeting
4	Paradigm Shift of Teaching Practice procedures by UWI	No solution	Unavoidable – Less time to spend with learning Moodle
5	No policy to make Moodle mandatory No incentives	No solution	Avoidable – top management to put policy in place
<b>RESEARCH PARTICIPANTS</b>			
6	Limited typing skills	No solution	Avoidable – proper assessment of skills prior to workshops
7	Limited Word Skills – Online feedback	Training provided in using Microsoft Track changes and New Comment tools	Avoidable – proper assessment of Microsoft Word Skills prior to Workshops
8	Professionalism – desiring to project a positive image of a teacher educator	No solution	Avoidable – Need for practice to become more proficient
<b>PERSONAL</b>			
9	Multiple roles as manager, researcher and implementer	No solution	Avoidable - Redistribution of assignments
10	Illness and subsequent death of my parents	Temporary discontinuation of the research project	Unavoidable

Table 7.1 categorises the tensions under three headings related to the institution, the research participants as well as personal (issues related to me). Interestingly only three of the 10 issues raised in the table were unavoidable. These are, a) malfunctioning of server after Storm Erica, b) paradigm shift of teaching practice and c) illness and subsequent death of my parents. Had the other matters been addressed in a systematic manner, the adoption to the VLE would have been made easier.

#### **7.4.6 Summary**

Activity theory's emphasis on learning taking place in a social context mediated by tools made it a useful tool in identifying the contradictions which belie the engagement of the participants. It is this identification of the contradictions which was made visible through the multiple inputs/perspectives of the participants which made it possible for me to attempt to find resolutions for the tensions. Also, consideration on the context in which the events took place also revealed how the socio-cultural context also mediated against the subject.

#### **7.4.7 Recommendations**

In this applied research, I was involved in providing the pedagogical skills for the participants to adopt the VLE, while at the same time documenting the process. It was my assumption that the ASC had addressed all other administrative factors to support this online initiative. Now I have come to believe that any attempt at implementing an online environment should take a more holistic approach.



While we model our implementation from the developed countries that may have already addressed issues of infrastructure and bandwidth, we should be conscious of the fact that conditions in our developing small islands are different. As such, I recommend that the following should be put in place:

- a situational audit to determine the organisational readiness for the initiative
- adequate band width to support eLearning
- proper budgeting to support implementation and sustainability
- strategic plan for implementation
- provision of ongoing training and technical support
- policy for eLearning including the roles of all involved
- development of a unit to design/develop online courses

While it is important for these measures to be in place, the implementer of the initiative and other persons who would play a leading role in the implementation should be provided with clearly articulated written policies. These policies should include issues related to mandatory engagement and the provision of incentives. This would ensure that there are no unrealistic expectations.

## **7.5 Significance of the Study**

Two main interests motivated me to engage in this research: a) my interest in eLearning and, b) my concern about the underrepresentation of teacher educators both in research and in their lack of inclusion (by Ministry of Education) in discussions regarding school reform. My research has provided me with a deeper understanding of the structures our institution needs to put in place to be more effective in adapting to a VLE so that we can eventually offer courses online. It has also made me aware of

some of the views which teacher educators hold concerning their craft as they learn to use a new technological tool to support student learning. This section highlights the significance of my research in relation to these two areas as well as looks at other implications of the study.

### **7.5.1 ELearning**

The adoption of eLearning requires a consideration of many factors if it is to be effective. In a Small Island Developing State (SIDS) which is susceptible to natural disasters, and has limited human and financial resources, there is a great challenge to implement strategies that would not only ensure implementation, but sustainability as well. Of critical importance, however, is reliable and consistent internet. It was the non-functioning of the internet which prevented the research participants from applying what they had learnt after the first workshop. Furthermore, it was the unreliability of the internet access which was the most recurring theme in the third workshop as it often halted the progress of the workshop. Finally, it was the absence of reliable internet access which resulted in some participants discontinuing to use Moodle.

While issues of ensuring financial viability to ensure that the technological infrastructure for the initiative is robust and reliable, my research also points to the importance of administrative issues of monitoring, evaluation and accountability in ensuring the implementation and sustainability of the project. Without a mandate or incentive, it is mainly those participants, Jem, Ceci, Ava and Mary, who liked trying

something new - so-called 'innovators' and 'early adopters' (Rogers 2003) - that would be more likely to adopt an innovation such as the VLE.

It is notable that 4 of the 12 participants were able to offer their courses in a blended mode despite the fact that they all agreed that using the VLE was more labour-intensive, and they were all challenged by the unreliability of the internet access. It is also significant that those 4 participants are youngest in age. Also of note is the fact that all the participants attempted to engage in the initiative. The feedback from the participants also lend support to previous research which suggest the need for a) policy which would make engagement mandatory, and b) the offering of incentives. (Hegarty et al. 2005; Bhuasiri, et al., 2012)

### **7.5.2 Teacher Educators**

In this research, the research participants are teacher educators. Despite the fact that traditionally, teacher educators have not been included in educational reform strategies in any significant degree, my research suggests that the teacher educators are very conscious of the critical role they play in the development of the student teachers. Theirs is the complex task of not only teaching content and pedagogical knowledge and supervising the student teachers on teaching practice, but they are also starkly conscious of their role in modeling professional practice. Indeed, for some participants it was their unwillingness to project incompetent in use of the VLE that prevented some of them from engaging more fully when their typing and computer skills did not allow them to be efficient. This suggests that any initiative which

involves teacher educators must take into account the pride they take in their role of modeling professional practice. Furthermore, given the complexity of the role of teacher educators, consideration could be given to offering them the requisite support which would make the adoption more effective.

### **7.5.3 Contribution to Knowledge**

On another level, I am aware that many studies have been conducted in developed and some developing countries on faculty in higher education adapting to a VLE. Rarely has any research been conducted on teacher education in Antigua and Barbuda and certainly no study has been conducted in Antigua and Barbuda on a teachers' college or any learning institution in the twin island state adapting to eLearning. The study therefore adds to the limited research base on this topic in Small Island Developing States in the Caribbean.

### **7.6 Limitations of the Study**

Research of an interpretive qualitative nature comes with its own inherent limitations. Nonetheless, this research has a number of other limitations. First of all the boundary of the research is small. The focus of the study was one teachers' college. The small size also impacted the research since to reveal certain information about the participants would have compromised their anonymity. Secondly, since I was keen on adding to the body of knowledge on tutors in teachers' college, the views of the student teachers were not solicited. Their views could, however, could have augmented the report on the nature of the process that was being undertaken.

## **7.7 Other Areas for Research**

The findings of the research have highlighted other possible areas for research. Since this research focus was the tutors, further research could be conducted to investigate the perspective of the students regarding the use of the VLE. It may also be useful to examine how the use of the VLE contributes to improved student learning. Finally, since the context for this research is in a teacher education institution, it may be useful to investigate whether teachers in other departments respond in a similar manner.

Having generated this knowledge through the research, I look forward to sharing it with the relevant individuals, so that measures can be put in place to ensure effective adaption to eLearning by the Antigua State College.

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# APPENDICES

## Appendix 1A – Draft Outline of Teacher Education Orientation Workshop

### DRAFT OUTLINE OF TEACHER EDUCATORS ORIENTATION WORKSHOP

#### DAY 1

SESSION/ TIME	FOCUS	OBJECTIVES	ACTIVITIES
1  1 hr.	The Draft Harmonized Policy Framework for Teacher Education in the Caribbean	To revisit the policy recommendations for: Criteria for entry into teaching Entry level teaching competencies Teaching performance assessment Teacher evaluation and certification e. Career paths	Participants propose lines of action for teacher education institutions in order to accommodate these proposals.
2  2 hrs.	The teacher Educator	Re-examine the role and function of the teacher educator Outline a competency profile for the teacher educator Outline the professional development needs of the teacher educator	1. Presentation of task analysis of the teacher educator’s function and its required competencies. 2. Whole group discussion of issues in the presentation 3. Small group discussion of strategies for meeting professional development needs. 4. Presentation and discussion of proposed strategies.
3  2 hrs.	The teacher education curriculum: conceptual framework	Outline a conceptual framework for teacher education curricula Review entry level teaching competencies Review stages of teacher development Establish benchmarks for in-service teacher development stages	Presentation and discussion of the conceptual framework for teacher education curricula. Group task: brainstorm and establish competency benchmarks for the five stages (Berliner) of Teacher development. Presentation and discussion of groups’ products.

**DAY 2**

<b>SESSION/ TIME</b>	<b>FOCUS</b>	<b>OBJECTIVES</b>	<b>ACTIVITIES</b>
1 1½ hr.	Problem- based and inquiry methods in teacher education curriculum delivery	1. Introduce problem-based and inquiry approaches to curriculum delivery.  2. Explore the use of these approaches in existing programmes	1. Group task: examine sample course outlines that employ problem-based and inquiry methods to identify defining elements. Presentation and discussion on the problem-based approach in teacher education programmes. Presentation and discussion on the inquiry approach in teacher education programmes. Group task: develop course outline utilizing the problem-based/inquiry approach
2 3½ hr.	Information and Communication Technologies in teacher education curriculum delivery	Introduce the use of ICT as integral aspects of curriculum delivery  Explore the use of ICT in existing programmes	Demonstration of on-line platforms for course delivery  Demonstration and discussion on the use of on-line discussion forums and chat rooms as features of course delivery.

**DAY 3**

<b>SESSION/ TIME</b>	<b>FOCUS</b>	<b>OBJECTIVES</b>	<b>ACTIVITIES</b>
1 1 hr.	Approaches to working with teachers) to improve teaching competence: 1. Clinical Supervision	1. Review the principles of clinical supervision  2. Review techniques	Presentation on Clinical Supervision  Discussion of issues related to presentation
2 2½ hr.	Approaches to working with teachers to improve teaching competence: 2. Observation Techniques	1. Review techniques re observation of teaching 2. Practice observation techniques	Video presentation on observation techniques  Discussion of issues related to observation of teaching  Simulated role play to practice techniques
3 1½ hr.	The professional studies core of the teacher preparation programme	Introduce the modules in professional studies core	Presentation and discussion of the modules that comprise the professional studies core.

**DAY4**

SESSION/ TIME	FOCUS	OBJECTIVES	ACTIVITIES
1 3 hr.	The professional studies core	Develop teaching sequences for modules	Group task: develop teaching sequences for the modules
2 1 hr.	The professional studies core	Critique teaching sequences for modules Modify and revise modules	Group presentations of modules Discussion and revision of modules
3 1 hr.	Consolidation and reflections	Review of principal areas of focus of sessions Obtain feedback from participant's Explore the impact of workshop	Summary presentation on sessions "open mike"



## Appendix 1B – Report on Orientation Workshop

Department of Teacher  
Education

### Memo

**To:** Peecheeta Spencer, Principal

**From:** Patricia Benn, Head, Department of Teacher Education

**Date:** November 23, 2006

**Re:** Report on the OAS Orientation Workshop for Teacher Educators

This memo outlines the objectives and the outputs of the OAS Orientation Workshop for Teacher Educators which was held November 6 – 10, 2006, at The Multipurpose Cultural Centre, Perry Bay, Antigua. This workshop was a pilot programme in response to the challenge of having teacher educators specifically trained in the principles and practices of teacher development. Additionally, in light of CSME and other Commonwealth protocols for the recruitment of teacher educators, this programme was designed to help the Caribbean to be aligned with international standards with regards to teacher education.

### BACKGROUND

At the III Meeting of Ministers, fifth plenary session in Mexico in August 2003, Ministers adopted the declarative statement:

*“We underscore the importance of the forums for debating and exchanging experiences and proposals created by the nations of the Americas to generate a continuous process of education, assessment, training and professional development of teachers, which will serve as a tool for meeting the challenge of interconnecting education policy with social realities, in order to promote equity, overcome the educational differences existing between rich and poor, and with the help of modern information and communication technologies, devise pedagogical models that will afford teachers proper professional development”*

In December of 2005 OAS Hemispheric Project on Teacher Education Caribbean Sub-region hosted workshops which were held November 24 – December 03, 2004 at the Royal Palm Suite Hotel in Trinidad. These workshops were responses to the challenge of improving the quality of recruitment and selection, initial formation, professional development and evaluation of teachers in countries in the hemisphere. One of the outcomes of that workshop was a document outlining the harmonized policy for teacher education. Included in the document was the need for professional training for teacher educators.

### PARTICIPANTS

The workshops included participants from Ministry of Education in Antigua, The Department of Teacher Education and two other participants from the Ministry of Education in Montserrat and the Teachers' College in Grenada. All together there were approximately 8 full time staff members, 12 part time staff members and 7 persons from the Ministry of Education and two persons from the neighboring islands. The facilitator was Dr. Paula Mark, OAS consultant and Education Specialist.

### FOCUS OF THE PILOT PROGRAMME

The Draft Harmonized Policy Framework for Teacher Education in the Caribbean

- Policy recommendations

- The teacher Educator
- Assessment and evaluation of teaching
  - Clinical Supervision
  - Approaches to working with teachers to improve teaching competence
  - Observation Techniques
- Peer Coaching
- Problem- based and inquiry methods in teacher education curriculum delivery
- Approaches to working with teachers to improve teaching competence:
- The professional studies core of the teacher preparation programme

## **OUTCOMES**

‘The road we take should not be left either to fate or to inertia. It should be shaped by the active intervention of all educators and others in a social movement for educational change...’ (Hargreaves, 2001, p. 373)

Fortunately, there was active participation of all participants as we produced a number of documents at the workshop. During the workshop Dr. Mark asked that the participants (which included educators from the Ministry of Education and the Antigua State College) to form groups and outline the changes that would have to be made in three specific areas to facilitate the new vision for teacher education. Following are the areas in which we were asked to address:

Changes in

- Curriculum
- Ministry of Education
- College

**Following is the list generated by the groups:**

### **CHANGES TO CURRICULUM**

- Increase teaching practice time and focus less on theory
- Modify the content and organization of the courses
- Integrate theory and practice e.g. How does psychology affect teaching?
- Use of peer coaching more frequently
- Employ methodology that allows for experiential learning.
- Make allowance for adaptation of curriculum to suit the context/cultural reality
- Upgrade the physical resources

### **CHANGES MINISTRY OF EDUCATION**

Changes: Policy, regulations, governance

- Mandate/improved qualifications of staff (management in leadership for Ministry of Education personnel)
- Raise entry level qualifications for teachers
- Run pre-service training for prospective teacher simultaneously with present programme until all teachers are trained
- Improve communication between college and Ministry of Education in educational matters
- Effectively monitor to ensure the implementation of educational plans
- Continue Professional Development for teachers and teacher educators – should be periodic at specific times or within particular time frames
- Introduce a system of assessment and evaluation to at each level.

## **CHANGES AT THE COLLEGE**

### **STAFF**

- Upgrade the academic qualification of all staff members, from
  - first degree to Masters
  - Masters to Doctoral
- Provide Attachments
- Offer Sabbatical
- Retrain/upgrade staff every 3-5 years
- Offer opportunity to attend seminars.(e.g. from professional organization – for professional development
- Provide additional staff members – minimum of 2 tutors for each course

### **IMPLEMENTATION OF MASTER/COORDINATING TEACHERS**

These persons would work in partnership with the college to mentor teachers while they are on teaching practice. The process for implementing this system includes:

- identifying the teachers
- organizing a programme
- offering credit hours
- getting accreditation from other universities
- providing honorarium

### **Resources**

- Books
- Magazines
- Tapes/DVDs
- Subscription to professional journals
- Physical plant

### **Partnership with the Ministry of Education**

Greater partnership with the Ministry of Education

- e.g. i) Interviewing of new recruits into the teacher education programme  
ii) Involvement in workshop, seminars

With regards to the **professional studies of the teacher preparation programme**, a number of activities were generated that would improve the programme.

## **FOLLOW UP STAFF MEETING HELD FRIDAY NOVEMBER 15, 2006**

During the staff meeting the staff discussed their reaction to the workshop as well as the way forward. Having being told that we would have been involved in a pilot programme, the staff was disappointed that the workshop was more of an orientation than a pilot programme. The consensus was that while we discussed a number of very important issues, we would have like to have had more practical/hands on experience of issues discussed including areas such as clinical supervision and peer tutoring.

The comment of one staff member further succinctly summarised the reaction of the staff towards the week's activities. ... "The workshop just stirred up ants nests" as we were sharply reminded of the inadequacies of present programme that is being offered by the University of the West Indies and the inadequacies of the human and physical resources at our disposal.

Following are the needs that were identified:

*Changes in the*

Selection and recruitment of students in the Department of Teacher Education  
Entry requirement into the Department of Teacher Education  
Curriculum that is offered by the University of the West Indies  
Amount of time allocated to teaching practice

*Need for*

Pre-college courses to assist those deficient in language and mathematics skills  
Additional staff members  
Library  
Subscription to professional journals  
Attendance at international conferences/workshop  
Internet access  
Telephone lines  
Computers for the students  
Minister of Finance to tour the facility, see the needs of the department and allocate funds/resources to address the problem

This workshop confirmed that our programmes must be organised in such a way that the students develop an appetite for educational change that would ultimately lead to school improvement. This will have implications for the strategies we use to deliver the programme, the way in which we conduct the teaching practice sessions, and the partnership we develop with the school. However, the concerns go beyond the college/school relationship to embrace the organisational development within the school as well as policy issues within the Ministry of Education. As Sarason (1996) states,

*No complicated, traditional social institution can be changed only from within. There has to be some support for change from within, but there also has to be strong external, powerful pressures for change, powerful in terms of numbers, influence, and legislative legal policymaking responsibilities. Absent those external pressures, the institution will continue the adage ... the more things change, the more they remain the same. (Sarason, 1996: 338)*

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Retrieved June 25, 2006

## **APPENDIX 2 – ASC Synopsis of Draft Strategic Plan 2009 – 14**

### **ANTIGUA STATE COLLEGE**

#### **SYNOPSIS OF**

#### **STRATEGIC PLAN 2009 – 2014 DRAFT**

##### **Vision Statement for Antigua State College**

By 2013 ASC will be a university globally recognised for the quality of its graduates, its state-of-the-art facilities, its leadership in programmes offered and its research capacity contributing to an improved quality of life for Antigua and Barbuda and the people of the region.

##### **Mission**

ASC is committed to providing access to quality tertiary education to meet the needs of the nation and the region.

##### **Strategic Issues for Antigua State College 2009-14**

The following issues were identified in the Retreat as being important for planning ASC's growth and development in AY2009/10 to AY 2013/14.

##### **Passage of legislation to establish ASC as a statutory body**

To fulfil its plans and develop in the ways it has identified, the College needs to be established as a statutory body governed by a Council or Board of Directors. Retreat participants identified this objective as an immediate priority.

##### **Establish the national University of Antigua and Barbuda**

The establishment of ASC as a statutory body is separate from the GoA's plans to create a national public university that includes all tertiary institutions.

##### **Develop and offer undergraduate degree programmes from Associate Degrees**

As part of the national upgrading of the tertiary institutions, ASC will need to upgrade its existing Associate Degree programmes to Bachelor's level. By the end of the planning period, there may also be selected areas in which ASC can develop undergraduate programmes without having first developed an Associate Degree programme.

##### **Facilitate staff upgrading to Master's and Doctoral levels in areas of specialisation, and recruitment of Ph.D.'s for entry to University of Antigua and Barbuda**

Part of ASC's upgrading to the level of a University requires that academic staff have appropriate certification in their area of instructional specialisation. Academic staff need to have at least a Master's degree to teach at the upper levels of a university programme. ASC will need to devise a system to support those members of academic staff who need to upgrade their qualifications. One criterion for recruiting new academic staff members needs to be that these new academic staff members have the requisite certification to be able to teach at the

university level. Such changes in certification will require commensurate changes in salary packages to keep the staff members who have upgraded their qualifications.

### **Improve/enlarge physical facilities at ASC**

Participant groups at the planning Retreat unanimously identified improvement and upgrading of ASC's physical plant as a priority strategic issue. Although the groups did not reach consensus on the physical upgrading needed, the fact that all groups identified the upgrading of the physical facilities as a strategic issue makes the upgrading of facilities a priority issue. Determining priorities in building and/or refurbishing the structures on the campus will need to be a first activity in addressing this strategic issue.

### **Improve ICT infrastructure for use in administration and blended/distance learning**

Many of ASC's current business systems and administrative tasks (e.g. registration, issuing of transcripts, timetabling, accounting procedures, and grade storage) are executed manually, making the tasks time-consuming and subject to error. The availability of a server, dedicated computers, and trained staff to create an electronically-enhanced administrative system that stores and manages students' data and manages administrative systems for the students' life cycle is an urgent need of the College.

While some staff training has already begun to enable the College to participate in CKLN's creation of a regional tertiary learning community offering blended and on-line courses, more training in the use of the Moodle Learning Management System (LMS) and further staff training in course translation and development for blended or distance learning are still required.

### **3.7---Identify areas of programme excellence in ASC to offer through CKLN**

To build its credibility in regional tertiary education in this planning period, ASC can identify its areas of strength and develop courses/programmes that can be offered through CKLN. Using resources available through CKLN to support the curriculum development, staff training, and planning for distance education will increase distance learning capacity in ASC.

### **3.8 Stimulate and support ASC's capacity to undertake both institutional and original research in the College**

ASC has need for institutional research that collects, collates and analyses data on student applications, enrolment, achievement, certification and graduation. These institutional research data are very important in monitoring programme quality and in supporting accreditation applications.

As part of its aspiration to be identified as a university, ASC needs to encourage and facilitate its academic staff's undertaking original research and identify ways of supporting that kind of research.

### **3.9 Identify funding alternatives to increase available funds for the College**

Once ASC is established as a statutory body, it will be able to generate its own revenues to supplement the government subvention. The identification of alternative financial schemes to support the college will be an important strategic issue in the planning period. For example, ASC may wish to establish a consultancy service using ASC staff members to execute research needed for national development, or it may wish to collaborate on research projects with other more established tertiary institutions to develop its track records in research.

### **3.10 Establish a quality assurance system in the College**

Although there is an informal quality assurance system in ASC at present, the QA system needs to be strengthened and data generated need to be documented in a systematic manner so

that it can support management's decision-making and will support ASC accreditation applications.

### **3.11 Initiate accreditation applications and obtain accreditation by the national accreditation body for selected Associate Degree programmes**

The graduates of ASC need to be able to articulate into other institutions to continue their education. Accreditation of their certification will enable graduates to articulate seamlessly with further tertiary education programmes in the region or internationally and ensure that they do not need to repeat courses they have taken in the Associate Degree. Such accreditation will also facilitate partnerships between ASC and other tertiary institutions.

Regional accreditation is being organised under the CARICOM accreditation framework; however, individual countries are expected to have their own accreditation agencies. Antigua has already passed the legislation necessary to establish its accreditation agency.

### **3.12 Articulate ASC programmes with those of other tertiary level institutions**

As the result of establishing a quality assurance system and applying for accreditation of its programmes, ASC will enable its graduates to articulate to other institutions and have its programmes recognised regionally and internationally.

## **APPENDIX 3 A Report on Study Tour to Canada**

The Antigua State College is in the process of building institutional capacity for the delivery of courses online. To that end, a group of five persons travelled to Canada April 26 – May 1, 2009, “to gain as much historic and first-hand experience in the development and delivery of on line and distance modalities.”

After some background information about the team, the objectives and the institutions that we visited, this report will focus on the

The experience was a very rewarding one as we were able to visit five different institutions whose population varied but which were all larger than the Antigua State College. Additionally, it was interesting to note that there were similarities in the way they operated.

### **The Team**

A team comprised the following persons:

Mrs. Eloise Hamilton: Vice-Principal, representing management, overall institutional concerns

Miss Mitsey Weaver: Senior Lecturer, Advanced Level Department considering the delivery of Caribbean Studies and related academic courses

Miss Jacqueline Martin: Lecturer, representing technological concerns

Mr. Eustace Brown: Lecturer from Department of Engineering and Construction considering the delivery of the range of courses offered in that department

Mrs. Patricia Benn: Head, representing the Department of Teacher Education and responsible for curriculum issues on this tour.

### **The objectives**

The stated objectives of the tour were to:

- Identify the resources which must be put in place to deliver courses online
- Examine various Course Management Systems for the E-Learning Platform
- Observe curriculum design and content design for online delivery.
- Investigate methods of training for online tutors regarding course conversion and attaining various skills needed for the e-learning platform.
- Examine quality assurance standards and evaluation methods for use in the implementation of ASC pilot courses.

Discuss the issues related to this paradigm shift and impact on administrative procedures, general policies and issues of change management.

“The curriculum of a school is the formal and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes, appreciations, and values under the auspices of that school (Doll, 1996:15)”

### **Institutions visited**

Over a five-day period, the team visited the following institutions:

Humber College

George Brown College

Embanet

Loyalist College

Algonquin College

The visit to these institutions allowed us to observe the operations of both small and large institutions in Canada that provide online learning. As I reflect on what was said in our



discussions at the institutions, the following information must be borne in mind when we are considering *Curriculum issues*.

When planning online delivery, we should consider our learners and the environment in which learning will take place.

Who are the learners?

Generally mature students who are working adults who have rich work experience

Young people who want to accelerate their study time and or those who want to develop themselves academically while at the same time gain money to pay for their tuition.

We should therefore make the learning (a) meaningful, (b) memorable and (c) motivational. It is therefore important to consider the following:

Critical components of the online course development are

Planning and design

Development and implementation

Delivery and management

In the **Planning Design** stage, it is important to follow the steps below

*Step 1*

*List the objectives*

- Identify the strategies that will be used in this modality
- Determine acceptable evidence of students' learning (so what assessment(s) strategies will be used? Which is the most appropriate method for the achievement of the objectives?)
- Identify relevant course components including, syllabus, communication component – email, discussion etc. Copyright issues, content topics
- Determine the delivery strategy to be used – lecture notes/ video demonstration etc.
- Divide the course content into units – with corresponding assessment
- Provide online resources

## **Development and implementation**

*Step 2*

- Convert all content to Internet-ready format, HTML and collect images, sound and other multimedia
- Create a course site in the course management system (CMS)
- Test for accuracy in functionality of individual components including, content, content display, links

## **Delivery and Management**

*Step 3*

- Communicate with students
- Conduct discussions
- Track students
- Grade work
- Analyse feedback on the course

## **Learning Environment**

The learning environment is often asynchronous so that the learner is allowed the flexibility of accessing the material whenever they choose.

It is also Instructor-led to allow high level of three-way interactive  
Student-to-student

Student-to-instructor  
Student-to-content

### **Course Delivery**

When delivering the courses it is important to

- Develop the courses off line then load to the course management system
- If you change the course management system, you would be able to transport it from the bank more easily
- Use word files
- Use the same template for each course so that all the courses have the same look and feel
- Convert the information to Html format

### **Facilitation for online instruction:**

- Start with those who are interested – Those well respected faculty
- Explain that everyone does not have to teach online
- Encourage others to develop courses online
- Provide additional technical support service
- N.B some colleges use part time instructors only while others use both full and part time instructors, however, Algonquin uses part time only
- Offer training to staff to aid their facilitation online
- 15 hours – not necessarily all at the same time

### **Recommendations**

In light of the above, it is important that consideration be given to providing training for staff in

- Writing for online
- Using multimedia online
- Developing instructional design strategies
- It is also important that we provide opportunities to use the technology, initially to a) input grades online, b) mark attendance c) offer tests and quizzes. This type of training would familiarise the staff with the course management system. Later training would be needed with regards to best practices in course delivery strategies.

(Consideration could also be given to using Embanet (initially) to assist us in offering courses online.)

Antigua State College is strategically positioned to offer courses online, so I was very happy to be a part of the team that visited institutions in Canada to facilitate this process.

Doll, R. C. (1996). Curriculum Improvement: Decision making and process. Boston: Allyn and Bacon.

[http://edutechwiki.unige.ch/en/Curriculum\\_planning](http://edutechwiki.unige.ch/en/Curriculum_planning)

## APPENDIX 3 B Proposal for Study Tour

### ANTIGUA STATE COLLEGE

#### Proposal for a Study Tour to Canada to Visit Institutions Involved in Open and Distance Learning March 02 – 06, 2009

#### 1 Background

The Antigua State College is a public tertiary level institution with locations at Golden Grove, Nugent Avenue and Fort Road, St. John's in the twin-island state of Antigua and Barbuda. Its history involves the merger of two colleges which were already established at Golden Grove namely, the Leeward Islands Teachers' Training College and the Golden Grove Technical College. In addition, in 1978, the sixth forms of the secondary schools became a department at the College.

In 1988, the college established a partnership with the University of the West Indies in which arrangements were made to offer the first year programme of its degrees in Humanities, Natural Sciences and the Social Sciences. In 1998, the second year was offered which enabled students to complete the degree while only spending one year at any of the main campuses of UWI.

In keeping with the Colleges' Mission "to provide the professional needs of the country through the delivery of its programmes", the School of Nursing and the School of Pharmacy have become part of the ASC programme options.

While the College has a rich history in the education and training of teachers, the preparation of persons for the world of work and also the preparation of young persons to access higher education, there is a great demand to increase access and to provide more flexible modes of delivery.

In Teacher Education, the forces that drive these demands include:

- the development of a national policy which states that persons need to be certified as having successfully completed a programme in Teacher Education before they can be considered for a position in the teaching profession. This will be in effect as from 2010.
- the need to compensate for the loss of 200 teachers who opted for early retirement when a voluntary early retirement package was offered to all civil servants and consequently,
- the urgency to fast track the education and training of the persons who are already in service at schools in Antigua and Barbuda.
- Education and training in various disciplines have become more urgent because of :
  - an increase in the school age population due to immigration patterns.
  - globalization and the Caribbean Single Market and Economy (CSME) which have signalled the need to build a workforce with the capacity to operate in a global environment. This has created opportunities for educational institutions to rise to the challenge of creating a workforce with diverse skills and educational experiences. In many cases, it involves training and re-training of an adult labour force. These persons often require flexible asynchronous modes of delivery.
  - inability of the physical plant to accommodate the increased demand for education and training.

It is with these challenges in mind that the Antigua State College seeks to develop open and distance learning modalities in various disciplines to meet the need of the nation. The

limitations imposed by face to face delivery can be reduced while the teaching staff to meet the demand can be optimized in an e-learning environment.

The shift to an online and or blended mode of delivery is critical to meeting the need to provide residents of the sister island, Barbuda, equal access tertiary education and training.

## **2. Proposed Study Tour**

The Antigua State College is proposing that a team comprising an administrator and four faculty members visit a number of Canadian institutions which have distinguished themselves for quality in the delivery of programmes through online and distance modalities. The visiting team will seek to gain as much historic and first-hand experience in the development and delivery of on line and distance modalities. The lessons learnt will provide the basis for building institutional capacity for the delivery of courses on line.

The Team will be considering such matters as:

1. Appropriate technology for on line delivery:
    - Hardware and multimedia equipment needed
    - Software used for preparation of online content
  2. Physical Infrastructure required
  3. Training for technical staff
  4. Training for academic staff
  5. Curriculum issues to include:
    - Curriculum design for online delivery
    - Content management for on line delivery
    - Testing and evaluation for online delivery
    - Online pedagogical processes
    - Pitfalls to avoid in a multicultural environment
  6. Academic policies and guidelines
3. **Objectives** of the study tour will be to:
- Identify the resources which must be put in place to deliver courses online
  - Examine various Course Management Systems for the E-Learning Platform
  - Observe curriculum design and content design for online delivery.
  - Investigate methods of training for online tutors regarding course conversion and attaining various skills needed for the e-learning platform.
  - Examine quality assurance standards and evaluation methods for use in the implementation of ASC pilot courses.
  - Discuss the issues related to this paradigm shift and impact on administrative procedures, general policies and issues of change management.

## **4. Proposed Institutions in Canada:**

### **4.1 George Brown College – Casa Loma Campus, Ontario**

George Brown College is noted for innovative approach to learning and its strong link to industry. Of interest to the team, would be the Bell Centre which is a part of George Brown's Brown's Learning Innovations and Academic Development Division. The Bell Centre for Distance Education offers a comprehensive selection of courses on how to teach from a distance using the latest video conferencing and multi-media technologies.

### **4.2 Mohawk College – Hamilton**

Mohawk College forms a part of Ontario Learn with its consortium of twenty – two (22) community colleges will provide valuable exposure with regard to the development of consortia and how it functions.

### **4.3 Embanet - in Toronto**

Embanet provides online education solutions. This includes online programme design and development and technology support services for postsecondary educational institutions. This is a necessary consideration for the ASC as we may need to use a hosting solution in the first instance in order to establish our online programme(s) while relevant training and infrastructure is put in place.

#### **4.4 Loyalist College – Belleville**

More than forty (40) years' experience in the delivery of a range of courses in the applied sciences. Of interest to the College is the on-line course in Early Childhood Education.

#### **4.5 Algonquin – Ottawa**

Algonquin College offered more than 140 programmes in a technology-enhanced learning environment that flexibly meets the needs of students and faculty.

**The team** on this Study Tour will comprise:

***Mrs. Eloise Hamilton:*** Vice-Principal, representing management, overall institutional concerns capacity building.

***Ms. Jacqueline Martin:*** Lecturer, representing technological concerns Services

***Lecturer from Department of Engineering & Construction:*** considering the delivery of the range of courses offered in that department.

***Ms. Mitzie Weaver:*** Senior Lecturer, Advanced Level Department considering the delivery of Caribbean Studies and related academic courses.

***Mrs. Patricia Benn:*** Head, representing the Department of Teacher Education and responsible for curriculum issues on this tour.

## APPENDIX 4 A Participant Information Sheet

As a partial fulfillment of my course of studies leading to the award of a Doctorate in Education (Ed.D), at the University of Nottingham in the United Kingdom, I am required to conduct a research project. The title of my project is:

*The Adoption of an E-learning approach by the Department of Teacher Education at the Antigua State College: A Case Study of Expansive Learning in an Activity System*

Since offering courses online is new strategy for the Antigua State College, this project seeks to document the process by which we engage in activities to learn to use Moodle, so that we can eventually offer courses online. The research therefore explores our experiences as we engage in the project, the problems we observe in embarking on this new way of facilitating learning, and our recommendations for improving the process.

My intention is to research this process whilst we are engaging in it. In particular, I am interested in my role and how it changes, and in how we collectively learn through the process.

You will be expected to engage in discussions, (sometimes as facilitator) interviews and questionnaires, as the Department engages in this training for a semester, and the information gathered will help us to understand the process by which we adopt to e-learning. One of the main things I will do is keep a reflective journal to document my perceptions of the process. Hopefully our experiences can help other colleges who will later try to offer courses online.

There are no risks in engaging in this process. Your participation in the Moodle training and in the research is voluntary and you can decide how many of the Moodle functions you want to learn. As head of Department, I will respect the extent of your participation; however as the person conducting the training and research, I will encourage you to learn together and from one another.' I assure that as we learn about each other, the information will not be used in any way that could be detrimental to you, and that you will be given anonymity, so your personal information will be kept confidential.

If you require any further information about the research, you may contact me, the Researcher:

Patricia Hill-Benn [ttxpb2@nottingham.ac.uk](mailto:ttxpb2@nottingham.ac.uk) or [hillbenn@gmail.com](mailto:hillbenn@gmail.com) (268) 721-7599 or

My Supervisors: Tony Fisher [tony.fisher@nottingham.ac.uk](mailto:tony.fisher@nottingham.ac.uk) and

Roger Firth [Roger.Firth@nottingham.ac.uk](mailto:Roger.Firth@nottingham.ac.uk)

If you wish to make a complaint about my involvement in this research, you may contact the Research Ethics Co-coordinators:

Professor John Holford: tel: 0115 951 4486

Dr. Alison Kingston: tel: 0115 951 4420

E-mail: [educationresearchethics@nottingham.ac.uk](mailto:educationresearchethics@nottingham.ac.uk)

## APPENDIX 4 B Participant Consent Form

### PARTICIPANT CONSENT FORM

**Project title:** *The Adoption of an E-learning approach by the Department of Teacher Education at the Antigua State College: A Case Study of Expansive Learning in an Activity System*

I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand and agree to take part.

I understand the purpose of the research project and my involvement in it.

I understand that I may withdraw from the research project at any stage and that this will not affect my status now or in the future.

I understand that while information gained during the study may be published, I will not be identified and my personal results will remain confidential.

I understand that I may be audiotaped during the interview.

I understand that data will be stored electronically and only the researcher and her supervisors will have access to them.

I understand that I may contact the researcher or supervisor if I require further information about the research, and that I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research.

If I need further information, I may contact the researcher, her supervisors or the ethics coordinators below.

**Signed** .....  
(Research participant)

**Print name** ..... **Date**  
.....

#### Contact details

Researcher: Patricia Hill-Benn [ttxpb2@nottingham.ac.uk](mailto:ttxpb2@nottingham.ac.uk)

Supervisors: Tony Fisher [tony.fisher@nottingham.ac.uk](mailto:tony.fisher@nottingham.ac.uk) and  
Roger Firth [Roger.Firth@nottingham.ac.uk](mailto:Roger.Firth@nottingham.ac.uk)

School of Education Research Ethics Coordinator:  
E-mail: [educationresearchethics@nottingham.ac.uk](mailto:educationresearchethics@nottingham.ac.uk)

## APPENDIX 5      Impact of workshop 1

The workshop was held from Tuesday 25 – Thursday 27 August, 2009, a week before the first semester began. The first session was held from 9:00 a.m. – 10:30 a.m. to familiarise all staff members who had had no exposure to Moodle. On the other two days, the sessions were held from 9:00 a.m. – 12:00 noon. The specific objectives of the other two days as outlined by the facilitator were to help staff to be able to:

Explain what a learning management system is

- Identify Moodle as a learning management system
- Identify at least 3 ways in which you can use Moodle in your teaching and learning
- List the major activities involved in administering your course in Moodle
- Understand at an introductory level course blocks, how students are enrolled in a course, user profiles, using groups
- Identify sites to get help and more information on using Moodle

Additionally staff members would have

- Observed in the role of instructor at least one course/site set up in Moodle through a guided tour by the facilitator
- Observed the use of Moodle tools – setting up a grade book, making calendar entries, setting up a discussion forum
- Written a profile for their Moodle page

The afternoon sessions were devoted to assisting the IT staff who would be working on the “back end” of Moodle ensuring that the technological infrastructure was in place.

The workshop facilitator made the participants aware of the different types of Learning Management Systems (LMS) both open source and proprietary and then demonstrated how Moodle is used by showing us a course that she was teaching using Moodle. The workshop exposed us to very important aspects of Moodle as well as other tools that could be used in online learning including:

- How the Moodle platform operates including how to use ‘administration blocks,’ how to edit our profiles and create a forum and add activities
- How to use blogs and wikis
- How to change course settings, add resources and activities

In addition to orienting the participants on how to use Moodle, the workshop provided a very broad overview of tools such as blogs, wikis, and podcasts which could be used in online learning.

During the workshop the research participants were very involved in the activities. By the time the facilitator outlined how the students could benefit from blogs, one research participant saw an opportunity for the student teachers to use this tool for reflection during teaching practice and inquired about whether they could restrict the readership.

### *Impact of the workshop on the participants in DTE*

In the staff meeting, following the workshop, one faculty member suggested that we expose the student teachers to Moodle so that they (the student teachers) would appreciate their responsibility in using this LMS. While there was general agreement that we should orient the student teachers, one member cautioned that we were not ready since most persons had not



posted much on Moodle. After some discussion, it was agreed that by the fifth week of the semester, everyone should have posted enough information for us to orient the students. The next section highlights my own reflection/analysis of the workshop.

### **Reflection** on the workshop events

My initial reaction to the attitude of the participants is seen in my personal note after the staff meeting.

### **Excitement**

I am really excited about the enthusiasm of the staff. But they are ready for more than I had planned. They are so eager! One commented that she had seen a video that she would want to use with her class. I need to do more advance planning...

Request a Moodle shell which I will organise by 'topics'. For each topic will be steps on how to execute different Moodle functions ...

Upload a word file e.g. Course outline, assignment

Upload a web file

Add attendance – from side block

### **Personal notes, Friday August 28, 2009**

The workshop had exposed the participants to more information than could have been assimilated in such a short time (2 half days), but it did give us an overview of how Moodle and other web-based tools could be used by teachers and students. Based on my own experience of learning to use Moodle, I knew that the participants would need more time to interact with the software if they were to become proficient in its use. It was here that I saw myself playing the critical role of providing support and training since *time* is seen as one of the 10 most critical issues in achieving institutional success in this change process. (Arabasz, et. al., 2003; Elton 1999)

Unlike previous workshops on Moodle that I had attended which focussed mainly on hands-on, 'how to' perform tasks – how to add a resource, edit profile, and add an activity, this workshop situated Moodle in the broader frame of other course management systems, issues such as netiquette and other web tools such as podcast and wikis that could be used online. On a more personal level, it exposed me to a framework on which I could build to provide more in-depth training and support for the participants.

It must be made clear that while the faculty was learning how to use Moodle, the IT staff was also learning how to set up the platform and assist us in our use of it.

## APPENDIX 6 Topic outline of Information on Moodle

### Topic outline

Congratulations! You have successfully logged in to the Professional Development activity.

Please read the Welcome Message and make comments or submit any question you have about this “activity” to the Discussion forum, "Reaction to online learning".

Consider the scenario below.


You were involved in a very successful project (in which you did most of the work) and at a public ceremony, when the participants in the project were being acknowledged, the other two persons who worked along with you were named and given high praise for their excellent work and your name was not mentioned.


To test your ability to submit an assignment on line, go to “I can submit” and follow the prompts to submit an e-copy of your answer to this scenario to me.


By doing so, you will experience what your students will be doing when they submit a document to you.


 News forum

 Welcome Message Word document


 Reaction to online learning Forum


 I can submit Assignment

 General comments Forum


 Attendance

### EDIT YOUR PROFILE

Let’s pretend that we exist in the virtual environment and we would not normally see each other. How would we humanize the course so that we feel we know each other? One way to do so is to present your profile. If you have not done so already, please edit your profile page so that we can learn more about you. 


- 1 How? Click on the word Profile in the Administration block. When the screen opens, click on Edit and write about three sentences to introduce yourself. Now upload a picture of yourself (head shot) so that everyone in the virtual environment can see you. 

### ADMINISTER YOUR CLASS

- 2 Click on the attached file, Administer, for a summary of each link in the Administration block 


 ADMINISTER file

### ADD CONTENT/RESOURCE

One of the first activities that you may wish to do is to add content to your course. Your content may be a) a word file, b) PowerPoint slides, or c) a link to online content. Click on the file “How to add content” (a word file) to get instructions on how to add content to your course. 

- 3 You will also see "Videotaping the classes" which is a link to an online content.


 How to add content Word document

 Videotaping the classes file

- 4 **ADD ACTIVITIES** 

There are a number of activities that you may want to add to your course. The "Add an

*activity*" menu allows you to add activities such as Assignments, attendance, Forums, Quizzes, Chat etc. The document "Add activities" outlines how to add Forums and Assignments.


 Adding Activities file

### **ENROLL YOUR STUDENTS**

Now that you have added content/resources and the various activities, it is time to

5 enroll your students into your class. 

Click on the icon Enroll to learn how to enroll your students.


 Enroll file


6 **SET UP A GRADE BOOK** 


The MOODLE grade area is very important tool for tracking students' scores.


### **ADD A QUIZ**



We will follow the guidelines to add a quiz to you class.

7 You you will then have an opportunity to complete a quiz! 

 I can Teach Online Quiz

 Testing Quiz

 What is language Forum

8  How to submit Assignment 

9  Course Outline file 

10 

11

## Appendix 7 A Workshop Handout

### “I am living in Cyber Space! Will you join me?”

Welcome to this Professional Development activity! I would have said Professional Development course, but it is not exactly a course; rather it is an activity in which you, as a faculty member of the Department of Teacher Education (DTE) have accepted the invitation to participate in this qualitative research, to explore our experiences of adapting to e-learning. This research is a partial fulfillment of my course of studies leading to the award of a Doctorate in Education (Ed.D), at the University of Nottingham in the United Kingdom. The title of my project is:

*The Adoption of E-learning approach by the Department of Teacher Education at the Antigua State College: A Case Study of Expansive Learning<sup>1</sup> in an Activity System*

Since offering courses online is new strategy for the Antigua State College, this project seeks to document the process by which we engage in activities to learn to use Moodle, so that we can eventually offer courses online. The research therefore explores our experiences as we engage in the project, the problems we observe in embarking on this new way of facilitating learning, and our recommendations for improving the process. As the Head of the Department, I will be a participant researcher, as I document the process by which the department learns to use Moodle as part of a College-wide initiative.

You are invited to read the document entitled Moodle functions and indicate the number of Moodle functions you wish to learn. This will help me to know which guidelines I should upload first.

To assist you, I have used the topic settings so that you will be able to go to the specific topic(s)/functions in which you have decided to engage, and get reminders about how to engage in that specific activity.

Thanks again for engaging in this very historic activity!

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<sup>1</sup> Yrjo Engeström, Professor and Director of the Center for Activity Theory and Developmental Work Research at University of Helsinki, refers to ‘expansive learning’, a process in which the entire organization, the researcher and participants develop through participation in an ‘activity system’.

Engestrom, Y. (2001) Expansive Learning at Work: Towards an Activity Theoretical Reconceptualization. *Journal of Education and Work* Vol 14 No. 1

To access Moodle, the course management system that we will be using, you must do the following:

Go to the website: [abiit.edu.ag](http://abiit.edu.ag)

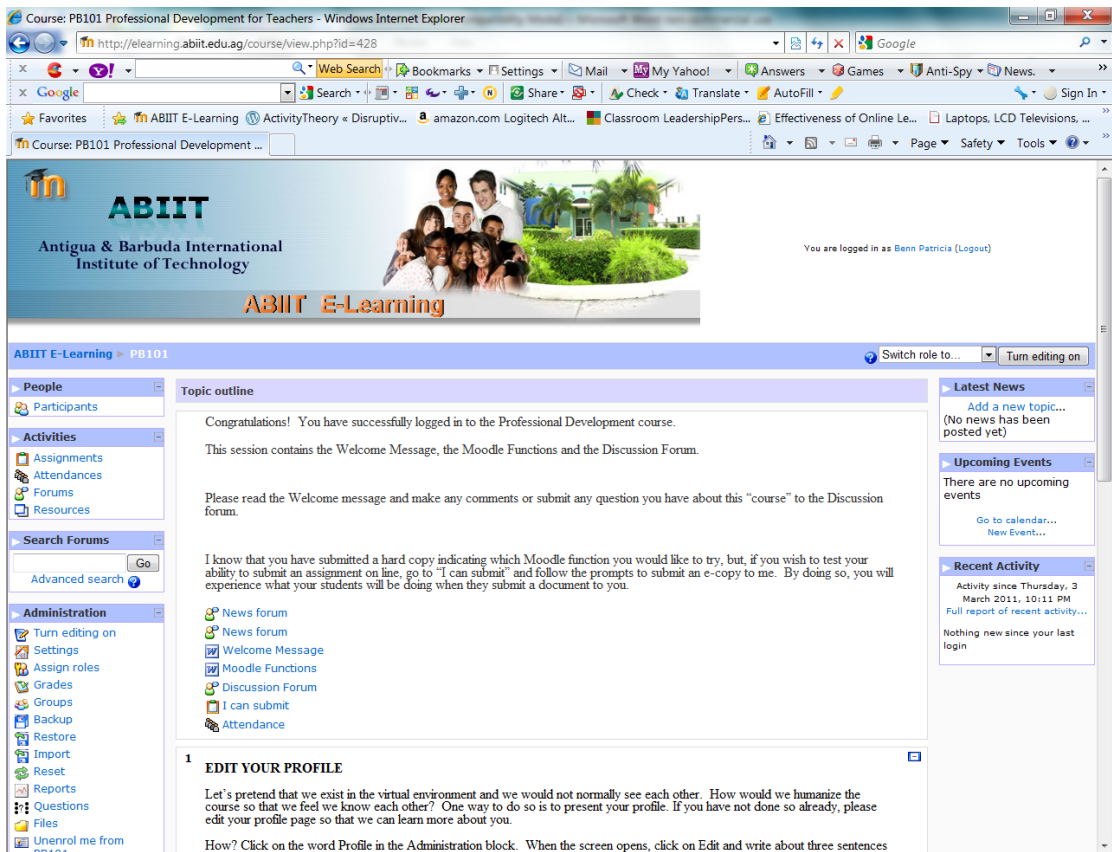
Click on E-Learning in the bottom right hand corner.

Insert your username and password

Click on the course that is available to you

The screenshot shows the homepage of the Antigua & Barbuda International Institute of Technology (ABIIT). The header includes the ABIIT logo, the full name of the institute, and a 'Quick Links' dropdown menu. Below the header is a navigation bar with links for Home, Academic Programmes, Enrolled Students, Prospective Students, ABIIT Services, and Faculty. The main content area is divided into several sections: 'ABOUT ABIIT' with a list of links (History, President's Statement, Dean's Statement, Admissions, Tuitions & Fees, Current News, Location); 'Contact Information' with the institute's address, phone number (268-480-3400), and email (info@abiit.edu.ag); 'Latest News' with a list of recent updates (Spring 2011 Course Schedule, New Tuition Payment Plan Policy, Student Discount Program); and 'QUICK LINKS' featuring 'E-Learning', 'msdn Academic Alliance', and 'SONIS'. A callout bubble with the text 'Click here' points to the 'E-Learning' link. The footer contains copyright information and contact details for the institute.

In this first exercise, I would like you to go to the **course PB101 Professional Development for Teachers**. It contains the instructions necessary to perform the activities online. If you have done so successfully, you should see the following page.



## EXPRESS YOUR DESIRE

I know that you have submitted a hard copy indicating which Moodle function you would like to try, but, if you wish to test your ability to submit an assignment on line, go to “I can submit” and follow the prompts to submit an e-copy to me. By doing so, you will experience what your students will be doing when they submit a document to you.

## EDIT YOUR PROFILE

Let’s pretend that we exist in the virtual environment and we would not normally see each other. How would we humanize the course so that we feel we know each other? One way to do so is to present your profile. If you have not done so already, please edit your profile page so that we can learn more about you.  
 How? Click on the word *Profile* in the Administration block. When the screen opens, click on *Edit* and write about three sentences to introduce yourself.  
 Now upload a picture of yourself (head shot) so that everyone in the virtual environment can see you.

## MAKE YOUR COURSE AVAILABLE TO STUDENTS

At the moment, your course is not available to your students. You may not wish to have your students access the course because you are still working on it. Once you have decided that you want your students to access the course, you must do the following:  
 Click on **Settings** in the left administrative block.  
 Once you see **Edit course settings** scroll down until you see **Availability**.  
 Click on the drop down arrow until you show **This course is available to students**.  
 Scroll down and click **Save changes**

## CONTENT/RESOURCE

One of the first activities that you may wish to do is to add content to your course. Your content may be a) a word file, b) PowerPoint slides, or c) a link to online content. Click on the file "How to add content" (a word file) to get instructions on how to add content to your course.

You will also see "Videotaping the classes" which is a link to an online content.

### How to Add Content

#### *Adding a file to your course*

To add a file to your course, you first need to be in the **Editing Mode**. Enter the editing mode by clicking on **Turn editing on** from the top right hand section of the page.

Decide in which week you would want to add the content. Click on the **Add a resource** drop-down box and select **Link to a file or web site**. The window below will open.

The screenshot shows a form titled "Adding a new Resource to topic 1". It has a "General" section with a "Name\*" text box and a "Summary" text area. The text area has a rich text editor toolbar with options for font (Trebuchet), size (16pt), color, background color, bold, italic, underline, strikethrough, link, unlink, list, indent, outdent, undo, redo, and help. Below the text area is a "Path:" label with a search icon. At the bottom, there is a "Link to a file or web site" section with a "Location" text box containing "http://" and a "Choose or upload a file ..." button.

**Name** – Insert the name of the resource

**Summary** – Insert a brief description of the resource

**Location** – this is the actual path to the file or website

If you are uploading a file, click on **Choose or upload a file**. The page below will appear.

The screenshot shows a file manager interface for "DYTEPC101 > Files". It features a table with columns for "Name", "Size", "Modified", and "Action". Below the table are four buttons: "Make a folder", "Select all", "Deselect all", and "Upload a file".

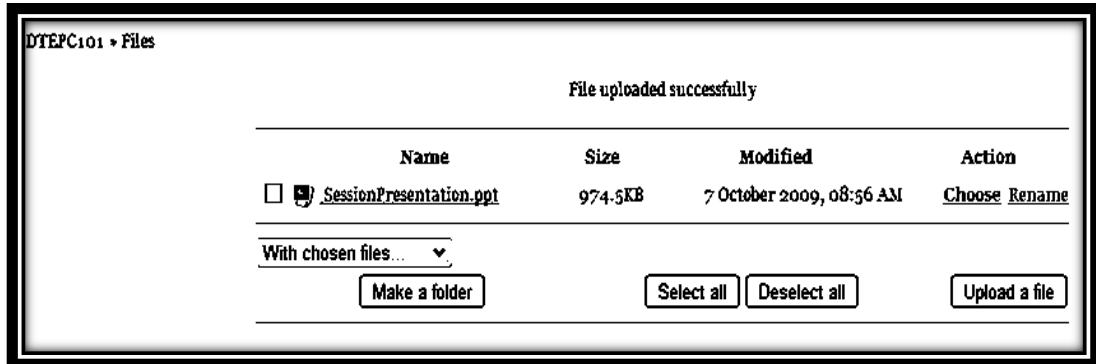
Name	Size	Modified	Action
[Make a folder] [Select all] [Deselect all] [Upload a file]			

Click on **Upload a file** to select a file from your computer (hard drive, flash drive etc.)

Click on the **Browse** in the pop up window, then, select the file you want to upload (select open).

Click on **Upload this file** to complete the file upload. Your screen should now look like the image below

Click on **Choose** to select the file.



Click on **Save and Return to course**.

Your file is now available for the students to view and download.

You can use this same process to add other electronic files such as PowerPoint slides, PDF documents, video files etc.

#### ***Adding a Web Link to your course***

Adding a web (URL) link follows a similar process as adding a file.

Click on the **Add a resource** drop-down box and select Link to a file or web site.

When the window opens, at

**Name** – Insert the name of the web link

**Summary** – Insert the relevance of the link

**Location** – Insert the web site address (if you already know it)

Click on **Search for web page** if you need to find the web link.

In the **Window** option, select **New Window**.

Now Click on **Save and Return** to course.



## **APPENDIX 7 B Workshop PowerPoint Slides**

### **Slide 1**

#### **ONLINE FACILITATION**

Meeting the new students in the new classroom

Facilitator: Patricia J. A. Benn

May 31 - June 2, 2011

### **Slide 2**

#### **WHY AM I HERE?**

- What made you choose to spend your down time this way?
- What do you hope to gain from the experience?
- My expectations

### **Slide 3**

#### **2010 SLOAN SURVEY OF ONLINE LEARNING**

- Survey of more than 2,500 colleges and universities nationwide reveals:- 5.6 million students were enrolled in at least one online course in fall 2009
- Enrollment rose by almost one million students from a year earlier

### **Slide 4**

#### **2010 Sloan Survey of Online Learning**

- "...largest ever year-to-year increase in the number of students studying online,"
- "Nearly thirty percent of all college and university students now take at least one course online."

### **Slide 5**

#### **What is E-learning**

- Learning facilitated and supported through the use of information and communications technology (ICT). eLearning includes -
  - delivery of courses
  - on-line assessment
  - student to student and student to teacher communications
  - use of Internet resources
  - other learning activities involving ICT and the Internet

### **Slide 6**

#### **Advantages to learners**

Learners can

- Access the course anytime anywhere
- Collaborate
- Gain individualized attention
- Involve in more analytical thinking when they have to consider and construct responses
- Construct knowledge after sharing their ideas

### **Slide 7**

#### **Disadvantages**

LEARNERS

- Feel isolated
- Have limited access to Internet
- have limited public speaking practice
- Miss out on non-verbal communication

## **FACILITATOR**

- Have Bandwidth/browser limitations that may restrict instructional methodologies
- Be uncertain about who is doing the work

## **Slide 8**

### **Course Management System (CMS)**

- MOODLE - Modular Object-Oriented Dynamic Learning Environment."
- Originally developed by Martin Dougiamas
- Allows educators to create online courses, which students can access as a virtual classroom.

## **Slide 9**

### **Other CMS**

- Moodle
- Sakai
- Angel Learning
- Desire 2 Learn
- Blackboard
- Illuminate

## **Slide 10**

### **HOW CAN I USE MOODLE?**

- Offer courses fully online
- Augment Face to Face interaction (blended learning)
- Deliver content
- Encourage collaboration among students
- Let's take a tour

## **Slide 11**

### **MOODLE HOME PAGE**

- Includes
  - list of participants
  - calendar with a course schedule and list of assignments
  - online quizzes
  - forums, where students can post comments and ask questions, glossaries of terms, and links to other Web resources.

## **Slide 12**

### **KEYS TO SUCCESS**

- Map Curriculum– break down course content into sections that can be assessed
- Link to Internet resources – virtual library, web resources
- Communicate electronically– e-mail, chats, discussions
- Track students – observe their interactions and support
- Support students and teachers –network administrator

## **Slide 13**

### **Key characteristics of E-moderator**

#### **YOU MUST HAVE PEP**

- Perseverance
- Enthusiasm
- Plenty of motivation

## **Slide 14**

### **Course Orientation**

- CONTENT

- Handouts
- Video
- ACTIVITIES
  - Quiz
  - Forum
  - Chat (a real-time synchronous discussion)
  - Forum (asynchronous discussion)

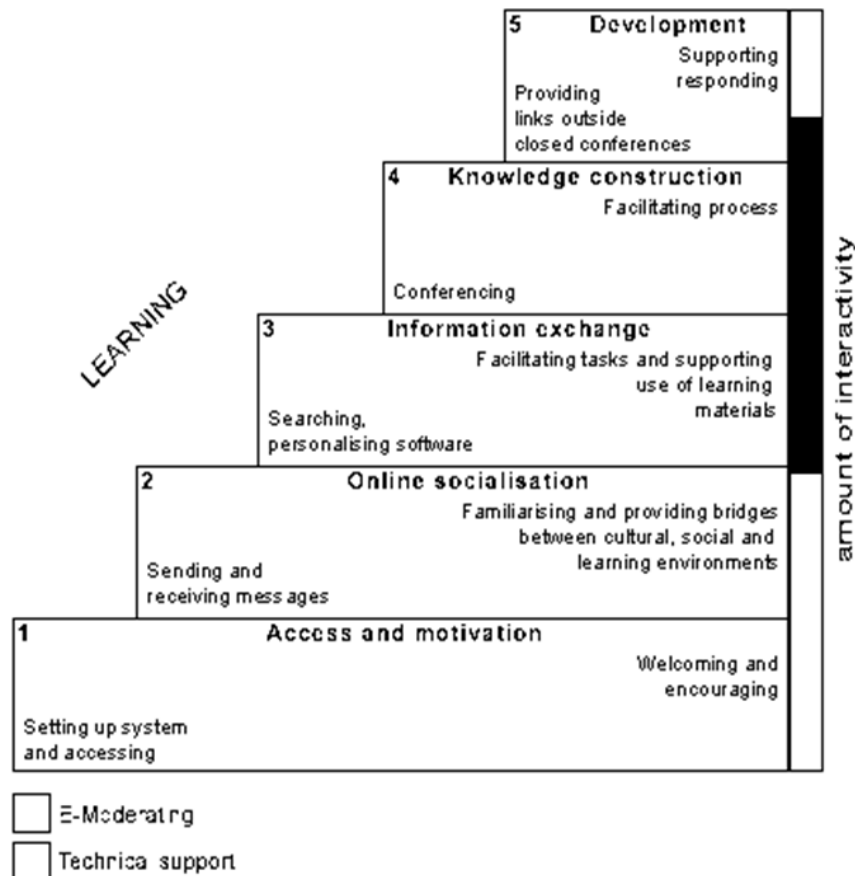
**Slide 15**

**Models of learning and teaching**

- Three models of learning pedagogy which have been developed specifically for eLearning are
  - Mayes' *Conceptualization Cycle*
  - Laurillard's *Conversational Mode*
  - Salmon's *E-tivities*
- All of these models are significant in conceptualizing levels of eLearning and online learning and teaching activities.

**Slide 16**

Gilly Salmon's 5 stage model (communication)



**Slide 17**

**STAGE ONE: Explore Technology**

- Set up the class room
- Invite the students to enter
- Welcome the class
- Introduce yourself
- Provide practice with easy assignment
- Assist the students

- Motivate the class

### **Slide 18**

#### **SET UP THE CLASSROOM**

- Key feature – Settings
- Main areas
  - Topic or weekly outline
  - Start and end date of the course
  - Show grade book
  - Groups
  - Availability
- Add content and Resource
- Develop activities to facilitate interaction

### **Slide 19**

#### **Invite the students to enter**

- Find out from network administrator the guidelines for access
- Send e-mail to students outlining how to get into the classroom. Example from current course
  - Website – <http://elearning.asc.edu.ag:8080>
  - User name – Firstname.Lastname
  - Password – Welcome!
- Your new passwords must have at least 7 characters, a capital letter and a symbol.

### **Slide 20**

#### **Welcome the class**

- Congratulate them for entering successfully

### **Slide 21**

#### **Introduce yourself**

- Provide a brief profile of yourself and encourage them to do the same.

### **Slide 22**

#### **Provide practice with easy assignment**

- Use icebreakers to get them involved
- Quizz
  - What they hope to get or put in
  - Something they are good at
- Offer prizes
- Post images about yourself, favourite food, book country and why you have chosen them
- My brand – something you always use
- Talents – money given – how you would spend it

### **Slide 23**

#### **Assist the students**

- Check to see how often students have accessed the site.
  - Participants
  - Click on the students name
  - Click on Activity Reports
- Ask a question
- Send and e-mail

### **Slide 24**

#### **Motivate the class**

- Respond to the post made by students

- Contact them (by email) if they seem not to be attending or participating in the class

### **Slide 25**

#### **How to facilitate interaction**

- A small amount of information, an invitation or a challenge
- An invitation to make an online contribution
- An interactive element, such as responding to other contributions
- All the instructions are contained in a single online message, including details of the purpose, the tasks and how to respond.

### **Slide 26**

#### **STAGE TWO: Socialize**

- Establish working groups
- Get to know each other
- Lay down ground rules
- Establish guideline for length and frequency of post

### **Slide 27**

Establish working groups

- Key feature in the administration block
  - Groups

### **Slide 28**

#### **GET TO KNOW EACH OTHER**

Getting to know you

- Descriptive words about you (5)
- If you were an animal which would it be
- Kind of packer are you
- Historical figure you identify with

Anticipation of what is to come

- Scenarios for discussion
- Example: You are marking the exams and you notice that one student has produced answers for a different set of questions. What might have happened?

### **Slide 29**

#### **Lay down ground rules**

- Responses
- Participation
- Feedback
- Netiquette

### **Slide 30**

#### **Establish Guidelines for Length & Frequency**

- How often should students log on?
- How many hours can they expect to spend each week/day?
- How often will you provide feedback?
- Within what time frame can they expect a response from you?

### **Slide 31**

#### **Guidelines for moderating**

- Acknowledge and appreciate students contribution
- Be welcoming
- Respond to disagreements – Restate students' point to acknowledge it then state your own view (don't attack the student)

- Speak from your own perspective or from someone else's. Try to avoid being absolute about anything
- Finish with an open question

### Slide 32

#### STAGE THREE: Exchange information

- Be friendly
- State purpose of the discussion
- Offer incentive for participating
- Encourage them to give ideas
- Provide some thing for them to do and a reason to interact with others
- Encourage them to respond

### Slide 33

#### Using electronic information

- Suggest why they would want to read or use or benefit from them
- Indicate the quality and validity - date , usefulness
- Decide how you will encourage participation
- Set criteria for good and bad site – use the criteria to evaluate the site

### Slide 34

#### Great thinkers

- Provide Speeches of great thinkers from your discipline ask students to summarize in 12 words
- 'Post card' messages from one of the thinkers – how would you respond
- Research well known figure - interview

### Slide 35

#### STAGE 4: Knowledge Construction

- Design e-tivities that have variety of interpretations and perspectives
- Build knowledge - Practice knowledge management skills
- Concepts
- Positions
- Summaries

### Slide 36

#### Concepts

- Introduce concepts, ideas and theories for examination, exploration and application
- Example:
  - Present concept etc.
  - Ask students to find examples
  - Compare and contrast examples
  - Demonstrate how concept does or does not apply to particular example

### Slide 37

#### Positions

- Allow students to adopt different positions
- Example:
  - Allow each student to react to the concept from the position of persons in different disciplines lawyer, teacher, doctor
  - Use case studies with questions
  - Provide challenging problems with variety of solutions

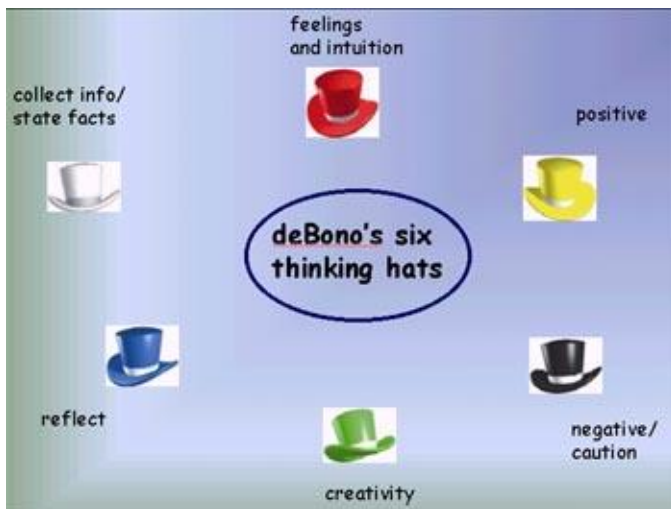
### Slide 38

## Summaries

- Encourage students to review or summarize
- Example:
  - Investigate a topic or area to contribute to a project
  - Critique or combine information
  - Rework ideas or discussions using techniques such as concept mapping

## Slide 39

Assign roles to participants in accordance with Edward De Bono's Six Thinking Hats



Each cap represents a point of view or an approach to the problem

## Slide 40

How the thinking cap works



**White Hat Thinking:** Data, facts, information known or needed.



**Black Hat Thinking:** Difficulties, potential problems. Why something may not work.



**Red Hat Thinking:** Feelings, hunches, gut instinct, and intuition.



**Green Hat Thinking:** Creativity - possibilities, alternatives, solutions, new ideas.



**Yellow Hat Thinking:** Values and benefits. Why something may work.



**Blue Hat Thinking:** Manage the thinking process, focus, next steps, action plans.

## Slide 41

**STAGE FIVE: Development**

- Emphasize accountability and responsibility
- Focus on self-reflection and evaluation of learning
- Footprints

## Slide 42

Activity: Respond

- It has taken me forever to understand this assignment and even now I think I understand and have spent ten hours doing the assignment I do not here from you. Are you there? PB

### **Slide 43**

#### **Laurillard – Prepare students**

- Orient students to why the topic is important and interesting
- Describe what they already need to know to make best use of it
- Define the learning objectives and how they are assessed
- Offer a diagnostic pre-test to orient them to what they should focus on
- Suggest time to be allotted
- Provide preliminary exercises



## APPENDIX 8 – Sample of Transcriptions

### *2011 Sample TRANSCRIPTIONS*

#### INTERVIEW WITH AVA

ME: How do you feel about engaging in the process of putting your course online?

AVA: I like the process. *I like online the eLearning platform*

ME: What do you like about it?

AVA: The autonomy. I do believe that learning that it enables is long term. It has challenges because of its very autonomy, but I think it is worth it. I speak first of all from my experience. I did XX online.

ME: So you were an online student! Is this the first time that you are getting to be a facilitator?

AVA: Using the Moodle as a full environment?

ME: Yes. You have some ...

AVA: blogging ... using wiki

ME: So is this the first time that you are facilitating online?

AVA: Yes

ME: So you said that you liked it. Now what are some of the challenges?

AVA: The challenges the students. I think face-to-face interaction. It is another way of instructing and attending. I don't know if they think there is no class. There go in and see what there is and wait until the very last minute to post. That is my experience for the Moodle

ME: Uh huh

AVA: I posted like 35 days ago. Today I get an email from them that they cannot open the readings.

ME: That means ...

AVA: That they had not tried to open ... so I realise that I have to stay on top of them all the time. That's what I am doing now. I have been calling them 3 times. I have been calling them. Finally, I got 2 of them, but I have to be after them. [There are 3 students in the class]

ME: And that is my next question. What have you done? ... What strategies have you used to ensure that they get online?

AVA: What kind of challenges?

ME: You said it's the students...

AVA: To get them to see that this is another way to attend class is another challenge.

ME: Now what challenges do you find for yourself?

AVA: For myself?

ME: Yes

AVA: To find a way to get them going, participate, share, discuss, yes.

ME: I have been looking at the course shell and I'm trying to see how many of them have engaged. I can see that not many of them have.

AVA: The posting and ... when comment on one or two of each other

ME: What do you plan to do to help them?

AVA: First they are doing the assignments, but they are not discussing in the forum. The girls tell me that they meet. They actually meet. For example the first two assignments, "Why must student learn xxx?" They met several times and discusses, so that's how they do. Two of them actually met!

ME: Oh it's only two?

AVA: It's three. Two girls working at Mionsaer School and the third ... So they meet so I guess for them it's weird to go online when they meet f2f. Well for me the xxx programme... I still met f2f and worked in groups of 10 while we were working at a publishing house. We never ... and so we had no alternative but to discuss everything online.

ME: So what strategies have you used to help them to work online?

AVA: I placed shorter deadlines. I actually placed one for the submission of assignments and one for discussing. They are posting on time now and they are discussing a little more... The associate degree girls

ME: So it's a learning experience for you and for them!

AVA: Yes. I think I have to place shorter deadlines... maybe shorter assignments ... shorter readings. I realised that when they said that they could not open the file.

ME: Yes. One of them took a long time to open. I found that it couldn't open from there.

AVA: Initially, I placed the readings and the questions to answer in the Files on the left hand side. [Administration block]

ME: If you put it in Files it goes into your files.

AVA: Had they told me before ... but I notice that they told me 2 days before the deadline, so I said, "So we wasted like 2 weeks!" ... while I was thinking that they were working ... reading ... but then they were not doing it. (laugh) ... and I know that they are a bit ashamed that I had caught them.

ME: You can see if they have gone online. Let me show you. For example, Gloria went 28 minutes ago. The last time you were there was 12 hours. ...

AVA: Yes they have been submitting the first part of the assignment.

ME: If ever you want to know when they last went on line ... for example Marlini, go to activity post

AVA: She never ....

ME: Yes. But she could not get it opened. She never went her. So for each of the students you can tell whether they got online or not.

AVA: Yes. I know they are working.

ME: I spoke to Marlini and Gloria last week and they were a bit concerned, I think, with the whole idea of online. Of course they are accustomed to having a teacher being there all the time, but I guess they are aware that the situation is different, but what I was thinking, for each of these weeks they were supposed to have a class, they should have had an overview of what is expected of them... To give the student more guidelines. One of their concerns is that they were not getting any teaching... readings and assignments but no teaching.

## **INTERVIEW WITH CECI**

ME: How do you feel about being involved in using Moodle?

CECI: Excited first of all. This is such an exciting way to teach! I think is the way we should be going. We can continue professional development on teachers without taking them out of the class room for long periods of time. I think it is a new exercise that we should all undertake.

ME: So are you seeing this as an avenue that you could use to conduct different professional development for teachers (apart from the course that you are teaching?)

CECI: Yes, yes

ME: Is this something that you would promote ...?

CECI: It is something that I HAVE BEEN promoting

ME: Since when

CECI: I almost did a presentation on Moodle at ICT fest. It's just that I didn't think that I was versed enough, but I was asked to do one because they know that I speak about it all the time

ME: Since you started ...

CECI: Since I started here I was doing some investigation on it. Then you called me and that's why I said yes. I was researching it, then I got the opportunity to work with you and I have been pushing it

ME: I really find that it is an exciting way to teach, myself, but I notice that some have engaged and some have not. So what do you find are some of the challenges and some of the successes?

CECI: At first getting the teachers to get access, the reliability of the internet was also another challenge but after you overcome that I think it is relatively easy to activate it to go around. I am still learning so sometimes I don't fully remember so I have to refer to my notes and sometimes I can't find them.

ME: But you should be able to refer to the Professional Development course which I placed on Moodle.

CECI: Oh! I never thought of that (laugh) I didn't think of doing that.

ME: It's still there

CECI: I see it's there, but I never thought of going back to check it.

ME: It is my way of giving my staff Professional development. Even as I think of the graduation for Open Campus ... when you think about it, these persons have done a whole degree online and I think is up to us to teach our teachers this new way.

CECI: Let me tell you ... Why I'm excited about it is because I did my degree online... totally online and I'm doing the XXX qualification totally online. I have this thing for the online and I want to see how I can use that here. I realise a lot of adults who want to do an extra class here and an extra class there, but they do not have the time to sit down in the classroom. That's what started me researching Moodle ... I have these children ... I don't have anyone to monitor them. So what if we use Moodle. That got me started.

ME: So your interest was piqued with your studies. You know you are similar to me! It is my own studies that made me interested in online learning. And I say we never seem to have enough space to train our teachers.

CECI: Especially when they spoke about Barbuda, I thought that a combination of the Moodle and something like Skype where you could actually see ... no big cost. Teachers in Barbuda could be taking part of the same lesson.

ME: I agree with you fully, but what I need is to get my staff involved because it's one thing to say this can happen, but if the staff is not ...

CECI: I agree

ME: So now that it [the ADE programme] has started in Barbuda, what I'm trying to do now is for the courses that are being offered in September that the tutors who are teaching it now have their courses set up. It is a challenge to have that done because tutors are finding it difficult to...

CECI: I just make time. I just clear a weekend or clear a day that I'm going to spend ... I think it was Thursday I was up until 1:00 am doing Moodle... fighting with it. My grade book was not averaging right. So I find the time to do it.

ME: Eh ... Eh... so you clear ....

CECI: I say this afternoon is for Moodle. I'm going to set up my work for the teachers. I know I have a test on Wednesday so I say when I go home I'm setting up that test. It's a matter of planning time.

ME: What I've done with some people who want to do and don't seem to get it organised, I tell them, 'I want an appointment with you.' So I have an appointment where they give me an hour and I walk them through. Some people are independent learners, like you ...

CECI: Yes. I just read and when I don't ... Google.

ME: Not everyone is like that so I wanted to ensure that you get through.

CECI: In the beginning, I think I had the first five weeks set up, but the problem was that the teachers were not getting online it kind of stalemate before ... now they realise that they are all on, everybody is on, and it's to go back now that everyone is on.

ME: What I find about yours is that you have given able to give them an overview..

CECI: That is my problem; I wasn't getting the overview done.

ME: Ok

CECI: That's why you see in the last one October 10 – 16. [She was not getting the colour to add to the heading, so I showed her how to do it] When I go home, I will try it. I'm going to try this at my computer at work. I wasn't seeing this.

ME: So you wanted this ...

CECI: Blue – I will go to work and set it up. This, this is not popping up. Now I know I'm going to ... I'm killing myself hours to get this done.

ME: What I find is good, and not everyone does it even though we talked about it at the workshop. Give an overview so that when someone comes to that section, they see everything. What I would like is that, like Mary, she puts in information there and tells students to go it ... but even if you are not there ... You have given directions What you could do to add to this is to give more specific directions for each activity.

CECI: Even though they got on later, I told them it's all there. I reopened the quiz for those who did not get a chance to do it, so they had a new deadline to complete it

ME: What do you feel would be the benefit of the students having all of the information?

CECI: It's there for them so that they can use as a resource ' cause I tend to put information there so that they can use later on and also get to see what other persons views are on a particular topic and that there is a message centre they can communicate with each other if they have a problem. There are a lot of things that they can do there. It's stuff that they can use for themselves also.

ME: Okay. One of the teachers said that having all the information on Moodle could be a good source for revision. Your course is 100% course work, but at the same time they can go back and see, but in a regular class setting if you are doing a video, students do not have access.

CECI: And I tell them that I will put all the info we will use in class ... even more that we will use. I tell them to go ahead then if there is a quiz; I include some of the information to ensure that they are reading. But I don't necessarily go in class and read the whole thing.

ME: I really appreciate what you're doing

CECI: I have set it up now that every class they have to sign in and that's what marks my register and if I am not there it marks the register once they get on. At ASC sometimes we have problems with Internet. But once there are no problems, everyone should sign in.

ME: For the first question related to the challenges, you mentioned the internet and access. How reliable is the internet now?

CECI: Here at ABIIT its fine, but sometimes you go and you cannot get access to the internet and sometimes it's so slow. Last class it was fast. The day before that it was so slow. Sometimes it's 10 – 15 minutes before everyone gets on and gets access. Se we have to be doing something while that loads up. And we continue the class.

ME: That's the challenge. Then I asked about the strategies you use and you said you cleared specific time/days. What have you done to encourage your students to use Moodle?

CECI: I place assignments online. They do discussions online and as of last week, the register was marked online

ME: So do you mark the register online even if the person is in class?

CECI: Yes. They must show that they have accessed Moodle so if I have a test everyone should be able to do. If they had a problem with access, they should say immediately.

ME: You said that you put discussions online. If you have a discussion online, do you still have the discussion in the classroom?

CECI: No. Last time, I put the discussion online and I told them that I did not want to hear any talking.

ME: So you designate time for them to do the discussion online during the class time... so in a sense you are teaching them to use Moodle!

CECI: One session I was in the class another session I wasn't in the class; so I did it both ways. When I wasn't there I told them. In the classroom, I say for the next 10 – 15 minutes. I say no talking just write so I should not be hearing you explain to this one, put your comments on the discussion board.

ME: Do they get graded for the discussion?

CECI: No. They get graded for participating in the discussion? I have to work out how to work that because I set it up but the two groups are not saying the same thing. One group is saying 20% another 25%. I think it's something with the set up so I have to go back in.

ME: Ok. I like what you are doing because you are making it mandatory for them to get on.

CECI: Mandatory.

ME: If you have work on Moodle and the students do not think they have to get on they won't. It's something that I have done when I started using Moodle first. I made sure that the students get on and then allow them to practice sending messages so that they now how to do it when they are not in class. So have you shown them how to see their grades?

CECI: Yes. That's how they keep track of their grades. Work that I've that I have marked, I have put on the grade book.

ME: Have you been able to let them send you their assignment and then you send them back a corrected version?

CECI: No. I haven't done that.

ME: Do you remember how to do it?

CECI: No.

ME: For this one, you would have to go to add an activity – advanced loading of files. Let me see if I can find one.

[I reminded her of track changes function and showed her how to upload the corrected file into Moodle.]

CECI: I will try that. I have not used that one. That's one I need to look at.

ME: This is an important feature. Suppose you were offering this course to Barbuda. They should be able to give you information and you should be able to provide feedback.

CECI: I agree.

ME: What I am hoping is that those in Barbuda also meet face to face, so even if they do not have a teacher, someone can go over.

CECI: This is how I envision it too.

ME: The person can go down for the weekend.

CECI: I remember when this thing came up for discussion – Barbuda teacher training. I wondered why everybody making this big thing. There is something that is called Skype...even before I knew about Moodle. If you have a teacher teaching a class, for example in the evening one afternoon, all they need is a projector and we can email them...but I got into Moodle. It's no big thing... All you need is a classroom and a projector.

ME: Well, you see, it's the vision... and it depends on what you know too! How do the students feel about it?

CECI: They like it. They like the fact that they can do a test and check the answers immediately. They like the fact that they can do a test more than once. I had set up a test like this.

ME: Like the one I showed you at the workshop?

CECI: Yes ... with the understanding that it is the last grade that is going to stay

ME: Okay

CECI: That was a true and false. I told them that it's the last grade that will count. Some tried. Some kept the grade. The information is there for them to use

ME: But some persons do not know what is out there.

ME: Is this something that you would like to continue?

CECI: It is something that I would like to use everywhere I am teaching people.

ME: Do you realise that you can backup and reuse this course?

CECI: Yes I backed it up.

## **LISA**

ME: How do you feel about engaging with Moodle?

LISA: For me ... well with my secondary students ... very helpful.

ME: In what way?

LISA: They love independence. In term of ... they are more independent so they will access the information that's there. They work on the information that's online. The Primary students are not so gifted.

ME: But I'm not seeing ... [There was no online activity]

LISA: That was last semester.

ME: Oh. Okay. So that was last semester. You found that the students are more independent learners.

LISA: They are more independent, more tech savvy, I guess. The primary students and the Early Childhood ... they would say "Miss Lisa, just print off the thing and give me."

ME: I was telling somebody that I downloaded a research that I have to read up on ... I might even do it tonight. There is K-12 online learning now!

LISA: My uncle made a comment to me one time and said that classrooms are going to be obsolete.

ME: Your uncle said that?

LISA: I was kinda offended when he said that but ... I guess

ME: Even if the class room is obsolete, the teachers cannot be obsolete. Technology cannot replace teachers. ...

LISA: He was trying to make a case for me to get out of teaching and enter [another field].



ME: In terms of how you feel about working with Moodle... you said that the last semester

LISA: I think the problem with this semester is that it came at the time (pause) by the time it came on, I was already head long into the programme.

ME: When I thought about your course and what you said was happening with it, I was wondering if you could not consider using it in a different way. You have taught certain topics ... for each of the sessions ... let me give you an example. [Showing her the course shell of another tutor] This is Ceci's course ... and she really is running along the way that she should. ... At first she did not give an overview of what is happening in that week... of the module. These are some resources. For each of these topics, you could ask your students to upload a number of activities, a number of resources, video clips resources related to the topic that could be used with different age groups so that at the end of the course, your site would have been populated with a number of resources and activities that your students could use when they go back into the classroom.

LISA: I see what you are saying.

ME: ... Yes. The course might be short, but are the students really proficient in their knowledge of all the topics?

LISA: That is a concern I have

ME:... cause I remember speaking to Grace and she too found that there are some areas of her course that were scanty, so she did some sessions that were higher than A' Level and caused them to supplement so that they were more proficient... at the end of the day I would hate to think that they had only 5 modules to complete and were not proficient ... it would be a travesty ...

LISA: I'm looking at whether it's something that would ...

ME: So you have not taken them higher than where they were?

LISA: No... but they have taken us up with them. They would read up and explore.

ME: So they would be able to help.

LISA: Well

ME: How many do you have all together?

LISA: Seven of them. I have Matuke and Jason as well who are not majors.

ME: Before I go on to my next question ... What are some of the challenges that you have had?

LISA: Basically, I forgot how to do certain things, but at the time I was using it, there was a tutorial course as well so that I could always go back to it.

ME: What course was that?

LISA: The one online.

ME: You mean the one I created? It's still there

LISA: It's still there? 'Cause I'd referred to it to see how to start a discussion or how to ... There is a handout I had as well.

ME: The same one I had given to you?

LISA: I am not sure. "I'm living in Cyber space"

ME: That's the same one. So you just went back to the resource.

LISA: Yes that's how I learn.

ME: What's the challenge this time around?

LISA: It just came at a bad time.

ME: When you were using Moodle before, what did you do to ensure that the students were involved?

LISA: What did I do? ... With the Secondary, once they know that the information was there, they would do the work. The only problem I had with them was that they did not like having to upload assignments online.

ME: Why didn't they like uploading?

LISA: I think a part of it was with one assignment I had put a time and after that they could not hand it in.

ME: So really, it was the students' interest that caused them to get online more so than something you had to do. Amazing!

LISA: I really wanted to do it this time especially with Course X but by the time I got it [course shell] I was headlong into my course and almost to the end of it.

ME: Would you use this modality to offer courses again.

LISA: Yes I would. If I have to do Course X again it's going to be an online course.

ME: What would you think would be the advantage of doing so?

LISA: It would allow me to make available a lot of information. Most of what I am doing is researching and bring to the students. That can be done online.

ME: That assumes that online is just for uploading resources ... but if a person is in another country, that's not enough.

LISA: Well the resource is there. They can access it. They can discuss and get clarifications etc. But I honestly feel the Course X needs to be online.

ME: I see that your view of online is just for giving information. Any comments?

LISA: Nope.

ME: Not right now. Ok.

## Sample Transcripts from 2015 Interview

### INTERVIEW WITH GAIL

#### All participants were given the same introductory statement

##### Introductory statement

Thanks for agreeing to talk to me A few years ago, I was engaged in research which involved teaching the staff to use Moodle so that we could have another avenue to relate to students and we would eventually be able to offer courses online. The purpose of the research was to investigate the process by which the DTE learn to use Moodle as a precursor to offering courses online and to determine the tensions which exists in the process.

**Me:** Are you currently using Moodle

**Gail:** Very limited extent

**Me:** Very limited. How are you or were you using it?

**Gail:** Well I was using it to provide information to students and to store records. But then I, you see in teacher education, we don't do the same courses every semester. So I worked with one course and that was there and when I got to another course I just could not find the time to put the information on and so on so that is what impacted my subsequent use of it.

**Me:** Okay so the issue was uploaded information for the new course

**Gail:** That is what basically right

**Me:** How did you come to be a Moodle user?

**Gail:** It was through you as a matter of fact first introducing it to us and then Mary she did some follow-up workshops afterwards and so on.

**Me:** But why did you decide to do it? I mean somebody could introduce you to it but ...

**Gail:** (Interrupting) You mean apart from the workshops and encouragements?

**Me:** Yes

**Gail:** I just thought it would be convenient for the students to access information if I am not there.

**Me:** So mainly if you are absent

**Gail:** Not just in my absence. If I am absent. I might be there but outside of the classroom. I might want to double check something... It would help the students to keep with the course whether I am absent or present, because I am seldom absent... It's more a continuity outside of the scheduled class.

**Me:** They are able to access the information. As you reflect on the whole phase in the life of the Department of Teacher Education, what do you recall of the process of using Moodle?

Gail: In terms of what? In terms of whether it was a smooth or ...

Me: Anything. What do you recall of the process?

Gail: Well, I would say it was, it was to me a modification. It started off with some reluctance then you got enthused about it then it kinda waned when you realise that you have a new course. Well you know that you have other courses. If you really want to continue using Moodle you will have to spend the time to put the additional information and so on. So I would say that the process has been one of successes and set backs

Me: If you were to describe it in one word.

Gail: What word would that be? Hmm (pausing) Undulating.

Me: 'Undulating' because it ebbed and flowed right? Do you think you started off with reluctance or you started off with excitement?

Gail: Well I started with a bit of hesitancy because I am not basically a computer... well, I think I'm getting more and more into the technology. Somebody looking on might actually think that I am quite a technology person, but they don't know where I have come from. I came from a place where I'd say "I can't do this; give me a book." Give me a book. Let me read a book but I've come a far way from that.

Me: And now CXC has you marking online!

Gail: Exactly

Me: But when you think of implementing Moodle into the DTE, do you think that was a good innovation for Teacher Ed?

Gail: Excellent because if we are going to keep up with the trends around the world I think ... and the capacity of Moodle the services that are possible. You know the operations that are possible I think really it was a good thing. And I think generally department members think it's a good thing. It's just that the inconsistency of the connectivity online and TIME that's what you hear everybody say, Oh they don't really have enough time to put all that information on.

Me: So you are saying that if for example you could get to send your soft copy and they could upload it for you, you think that would assist in the process.

Gail: Yes that would assist in the process

Me: Now when I presented my findings I had presented it in 6 phases, not that I had planned 6 phases but it turned out to be 4 separate workshops that I had conducted ... so I just put them into phases so I just want you to tell me in which area you were involved. In 2009 you weren't with us were you?

Gail: No I hadn't started

Me: When did you start?

Gail: 2010 or 2011. I probably came in 2011

Me: In 2011, we had a workshop at the main campus. Were you at that workshop?

Gail: Yes

Me: What do you recall of that workshop?

Gail: It was downstairs? Where was it? That Moodle workshop

Me: That one was upstairs in the lab

Gail: (pausing)

Me: I know that it has been a while back. Let me tell you who was at that workshop. You had people like Bob, Mary... We had somebody from the School of Nursing, we had Kloe.

Gail: What were the topics?

Me: (Showing her the booklet that was used during the workshop)

Gail: Oh yes, I remember. I remember that booklet. What I remember is that you had walked us through the steps of the setup and everything. And I remember specifically an activity with different hats. You can get the students involved how to be part of a forum introducing yourself, the welcome message how important ... yes I remember now I remember. That handout triggered the memory

Me: That's why they advise that we have artefacts to jolt people's memories

Gail: Yes yeah

Me: So that one was held at the end of the semester at the ASC. The next one we had was at ABIIT ...

Gail: ABIIT with Mary assisting you. I remember that.

Me: What do you recall of that one?

Gail: That one

Me: I think we had ... this one (showing her another booklet used in the training)

Gail: I think we went through basically the introductory part. We got a refresher of that and then we went on to looking more at some of the features like storing the grades, making quizzes we actually did that made a little quiz in that work shop or that one was what Mary did by herself

Me: We had the making quiz in the one up here and we asked that you make an assessment ... let me see what we have here. We had the quiz and I think I remember showing how to repeat the quiz, so you can do it over and over if you wanted.

Gail: Over Yes I remember or you can set a limit and so on

Me: Right, right and I had everybody in everybody's class

Gail: Yes that's right. We became students in each other's classes

Me: Now what would you say are the basic tensions that existed in the whole process in all the things you were doing from well you did it from 2011

Gail: What I would say is familiarity mostly with the icon that was something. That was one. As people got familiar, so that was one basic tension. And also another tension

“Is it worth the while? Am I going to be able to really use it because of the connectivity? I can’t do everything at home. There are times when I have to do things at work. Do students have the connectivity required and so forth? Those I would say stood out.

Me: I remember one time I interviewed you and you said that one of the issues related to using Moodle was that the information would be make public

Gail: Right

Me: So you wanted to be careful about what you put in the public arena. Is that still an issue for you?

Gail: I think less so now than then, probably because I was new to Teacher Education and fairly new to Teacher Education and you were very conscious that there would be other these are courses that were University of the West Indies courses and since they would be in the public domain, the subject coordinator can check to see so you want to make sure that the information is not only accurate but sufficient and you know those kinda thing.

Me: You know it’s good to hear that kind of clarification. Initially because you were new, you want to know that what you put in the arena was ...

Gail: You feel that you would be judged by the way people... (Pause) This is your projected self in a way

Me: Right. Yes, but do you feel more comfortable now

Gail: Yes. I think I have greater confidence

Me: So moving forward, that would not really be an issue

Gail: No no

Me: See we are getting different perspectives now. Moving forward, what would you say we could do differently?

Gail: You know, I don’t think people should be coerced into using Moodle but perhaps some kind of incentive to those who take the time, make the effort so that people are motivated to use it.

Me: Ok

Gail: In addition to that, I think the strategy of providing assistance for example people providing the soft copy that would be another thing. Give some incentive and then provide support

Me: What kind of incentive you think would be ...

Gail: I can’t help you. The idea just crossed my mind when you asked. It’s not something that I have thought about.

Me: It’s something that I have asked others if there should be monetary incentive or less teaching time or some other incentive because yes

Gail: It’s not something that I have thought about. It just came into my head. Something like if you take the time to put all of this online maybe less teaching hours so you still say that

we actually using a blended approach. So instead of let's say instead of 5 face to face hours you do 4 because you have things online and students are required to actually spend the time. That's the part that I'm not sure is gonna work.

Me: So you are saying now. Let's suppose you have 3 face to face allow a person to do 2 or 1 and then you work the rest online?

Gail: So that we really actually move in the direction of blended because we can't say we are doing this because we want to encourage a blended approach to teaching and then people do all this work and they are not really benefitting in a sense because they still have to have their full 4 hours or whatever

Me: Ok. That makes sense. Is there anything else you would want to add concerning the whole process and any recommendations?

Gail: All I'd say is just keep at it because change takes time and it might seem that we are not getting anywhere. Change is something people react to differently. Some persons are going to get on board immediately but there are others even though you might not be seeing any tangible evidence sometimes there might be a mental process taking place. So change is actually happening and the fruits are going to be seen later so just keep at it. Eventually we're gonna get there.

Me: I'm actually pleased that some persons are using it. Because I know the difficulties.

Gail: And you know even though they might not be using Moodle so much I don't think it's just ... Moodle is software. My impression was not just that you were promoting Moodle but you were promoting the use of technology and I can say from that I have come a far way because I now have my blog and I have a blog for the XXX. That did not go as I had hope not the XXX the [Other] teachers and I thought that they would it to provide information to the others but it didn't go so well. That is the last set of [Other] But I'm going to use it in the vacation time to put information there for teachers. So all XXX ... can go on and access it and get support on different topics. So ... people might not be using Moodle as you would like but I think people are moving ahead with the use of technology. I am one.

Me: Well I was surprised that when you couldn't get on you started a blog

Gail: I started with Moodle and when I was getting problems I started a blog

Me: And I was pleased with that because I was seeing that yes we want the learning management system because it is something that is constant and you could go back and check. But I was happy that persons saw technology as a way in which they can still engage there students outside of the regular class time

Gail: That's right

Me: Of course we would like to see full scale everywhere but it's a start.

Gail: That is the thing

Me: Well, thank you very much.

## Interview with JEM

Me: Are you currently using Moodle?

Jem: Well ... yes. Currently in the sense that the semester has finished, but we did use it for the semester 2 course.

Me: Oh okay. So how are you using it? How are you using it? Well the semester is here. How are you using it?

Jem: For this semester we used for... we used it for uploading information uploading files. We also used it for discussion those two ways the Moodle was used this time around and for assessment purposes. Uploading files which the students could download files and they also had the opportunity to download into discussion forums and they also had assessment activities

Me: So is it that you had quizzes?

Jem: Yes

Me: Ok. Were there multiple choice?

Jem: They were multiple choice all of them yes

Me: Oh Ok alright. And how did you find the whole process of learning to use Moodle

Jem: Well for me or for the students?

Me: For you. Well you can tell me for both

Jem: Ok for me it was a wonderful experience I had an experience before actually several experiences using the type of learning platform so it wasn't new but as a lecturer actually creating a course, online and so forth that was a new experience for me but it was one that I found very interesting challenging at times but the support that you provided with the booklet and even having Mary to provide support whenever I had issues that I really couldn't overcome myself.

Me: uh huh

Jem: I think overall though that it was a very exciting experience ... That is why I would continue to use that learning modality in my teaching.

Me: But what made it so exciting? I'm curious as to why you are excited because that's not everybody's experience so what made it so exciting for you?

Jem: I think just being able to ... the idea that my students would benefit from using the platform, a different way to engage the students without having to be distracted by different internet opportunities or avenues. There is everything that you can get within the Moodle. So you can have blogs, you can have your discussion forum, you have instant messaging, you can have video chat, so everything that is available to help with the teaching-learning process could be accessed using Moodle and I like that. And I was able to explore quite a bit. The Moodle that ... the eLearning platform for ABIIT is called e-Learn platform it's I think instructor friendly. Everything is at hand. Instructions as to what should be done when. So it's really easy to work within the Moodle and also it doesn't matter where I am once I can have



internet access I am able to go online and improve on what I'm doing. So it's always an exciting experience for me.

Me: Okay...but earlier you said it was challenging sometimes.

Jem: Yes the internet part... not being able to access the Moodle at times when I **really** need to especially in the classroom and I find it affects me because I have a tendency (and I'm working on it) to like when things go as I've planned although I always have a backup. In the classroom you always have to have a backup.

Me: Yes yes

Jem: But it's challenging at times because at time you know sometimes ideas and even if you write it down you're ready now to create a particular activity but you can't get to the Moodle or something changes. I've had the experience where the eLearning I think it updated so ABIIT on a yearly sometimes a termly basis. They update the eLearning program that is called.

Me: The Moodle program

Jem: Right. And so the changes that are made that sometimes a little frustrating because you are accustom to one format and then it may even remove materials yes, but it's somewhere else but when you go to the technician he would say now it is in this. It is in this particular category.

Me: Ok

Jem: Those are the little challenges that I faced that I think ....but it didn't discourage me I think I could have done without but life is made up of challenges. But for me it is accessing the eLearning platform when I want to and cannot because of whatever internet challenges.

Me: Ok. Now as you reflect on this phase that phase in the life of the department what do you recall of the whole process of learning to use Moodle?

Jem: (cautiously) Well I will speak on my part although I'm aware of some of my colleagues' experiences. I will speak about me. I think it was very supportive experience that is what I recall. The encouragement to use Moodle... Becoming aware of the benefits of using that type of platform and the support that was given. I think it was the support that added to the overall experience so it was very productive for me because of your support, Mary support even how to access resource and how to set up different activities. I remember we did get a booklet to help me set up attendance all those different areas so I think it was the support that really made a difference when I look at it.

Me: When you think of the department of teacher education itself, to what extent was implementing this innovation a good idea

Jem: Well for my courses, it was a *wonderful idea*

Me: Why?

Jem: Because everything cannot be covered in class, and having the eLearning platform affords the students and me the opportunity to work outside of the face to face structure that is there. It affords the opportunity to further augment learning by having times beyond the 8 – 4:30 where you can go and reflect on what happened. You can capture experiences. So you

video tape or audio tape and you can upload that, for you lesson on to the Moodle. It allows students the opportunity to go and source information that they would have used, look at it in detail and reflect on that experience. As it pertains to assessment what I found really really helpful is that you can set up activities assessment activities in a way that the students get really constructive feedback that it may be time consuming to do individually but in that program you put in your comments and according to the category of the students' performance they are able to get feedback right away.

Me: Are you referring... explain what you mean by that.

Jem: I'm going to speak about multiple choice because I use mainly multiple choice. I'm able to indicate for incorrect responses what the correct responses should have been and give an explanation why.

Me: yes yes

Jem: So the students get that type of feedback

Me: Do you think it's something you can use again

Jem: Yes It is always there it is always there. Even the experience I had Mrs. Benn. This is what makes it exciting for me. I tried to change the questions that I create or post on the Moodle and sometimes I may not have at hand, depending on where I am, I may not have at hand a hard copy a hard copy of what I would have done and I'm able to go into the Moodle and it has a bank there for me and I'm able to look at it edit it and I'm able to determine whether this is what I gave two years ago this is how I'm going to change it a bit and this is how the students responded. It might have been a difficult item so maybe I need to make it be lower rather than initially on the test. I also have the opportunity with multiple choice which I tried this semester. It worked very well. I had the opportunity of shuffling.

Me: I was going to ask you that. I love it

Jem: Shuffling the items but not only the items but also the alternatives so even if the students wanted to collaborate when they should not, because we didn't do in class because of the situation that we were facing, it had to be something done at home but we did it at the specific time so if they wanted to collaborate they would not have had sufficient time because the items was shuffled and I'm telling you the feedback that I got from those students (by the way they were so elated that they could have administer the test and they did not have to be in the classroom setting because I taught them assessment and we looked at not only on site assessment and the examination structure that we normally have but online. Some of them were not convinced that ethically the online assessment would be something that could have valid interpretation because students (from their experience) tend to cheat a lot

Me: Yes

Jem: But the feedback that I got. They didn't have an opportunity to do that and I guess some of them said that to me because they went into it, "ok we're all going to be able to see this, and we can" And the questions were shuffled and even the responses because they were talking and they realize that all had different keys. The keys were different.

Me: ok ok

Jem: It was something that they appreciated so even with the use of the Moodle, I think what it also helps to do is to model student teachers what they in their classrooms because

they may not they have a Moodle, but they may have other programmes that they can use. For example there is the blog. Blogger allows them to create assessments online.

Me: The blogger does?

Jem: Blogger, yes. There is that component where they can do the select response assessment format online so they actually see what they can do see what they can do. The experiences that their students can have. But let's go back to the question for the department. For me I think that using the e-learning is something that I would do even more. I think I could have used it more. I didn't use it fully with all that I know it offers. I did not use that platform fully. I can't speak about my colleagues, how many of them still, other than one who I know she is really into it ... even beyond what I can do ...what I am doing. She's really into it. But the others I'm not sure but I think it is something that I think can be even better used.

Me: Ok but to what extent was it a good idea for the department of teacher education. You know we talked about it generally and I know about your own personal experience excitement but the department itself

Jem: I think it's a great idea Mrs. Benn because our programs are structured in such a way that our teaches from Monday to Thursday they are here from about 8:15 to 4:45 it's quite a lot for them to cover in their courses, and so they need me to give them that additional support that they really need to excel, not just academically but as an educator. Holistically they need to have something that they can take beyond the regular classroom and I think this platform is doing that for them. They are taking it beyond. They can access it at any time. They can have access to the lecture any time even though they have WhatsApp and so far the point where all the students would have access to because not everybody has access to the WhatsApp. I think that is what it does for them. It really augments the program that we have here.

Me: Right, right. Okay, okay. So it gives added opportunity for them to interact with the material and with you beyond the class time

Jem: And their classmates which is very much needed

Me: But do you find that they do it a lot?

Jem: I find so and more so because they are now doing an EDEC course in semester one where Mary explores all types of ICT's and they have to do it using the eLearning platform so at least in second semester they are very much familiar with how to manoeuvre.

Me: Ok

Jem: The eLearning platform so it's not so much of a challenge with this cohort as it was with previous cohorts because they were doing it for the first time they come with the previous knowledge and skill so we can really maximize on how we use the platform.

Me: Ok there's one other area I want to look at because I know with your excitement you could share more but I know we have time constraints. I looked at the whole process in terms of these phases which I made when I presented my documents in terms of the data. I looked at it in the phases I put it in phases because I felt as if it was very episodic. It did not happen in first semester then second semester and so on. There are certain things certain activities that happened very well very productive and then there was a wane as so on. In first semester of 2009 was when we started then nothing much. (Showing her the visual map that I had

prepared. Then we have in 2011 and then here. Now in which phase did you enter the department.

Jem: (Pointed to phase 5)

Me: So you came in the phase 5.

Jem: Yes

Me: So how many workshops did you attend?

Jem: I can recall at least 3. I can recall this session here I think we had a week we did have a week of activities yes

Me: So you came in 2011

Jem: August 2011 with the XXX, so I would not have been here for this.

Me: So August 2011. We would have had ...I think I might have had an individual interview with you. Not interview a workshop with you to expose you to Moodle. That's in September.

Jem: Yes, yes.

Me: So I think that's when you came in and I asked how many persons I asked you if you would want to be a part of it and you said yes and then I think ok. What do you remember of that process, that stage when you were introduced to it for the first time?

Jem: I remember that we had, we were able to be on the learning platform

Me: Where exactly did we do it?

Jem: We were next door in room one in one of the rooms it was either the second or the last room and I remember we had the booklet. We had to actually go in and use the booklet and actually create different activities. We have to create attendance, invite other staff members in, different tasks we had to complete. It was very practical and at the same time, projected on the whiteboard, just in case we had any challenges, I recall that you would go in and to provide support so we could actually see what was happening when we were working. I recall that ... even the introduction with my setting up of my course. I think it started there.

Me: I remember that interview what I'm saying, that Workshop. Was that the workshop when Mary and I collaborated?

Jem: Yes

Me: So you were really in the last formal workshop

Jem: I didn't realize it was last

Me: There were about three of them and you were in the last formal workshop. What is your reflection of the experience?

Jem: I can recall being very intrigued by the idea of using Moodle coz I had the experience as a student and I knew how valuable it was. I found that the workshop was a lot that we had to do but it was manageable because of how practical it was.

Me: Do you think if you had not been a student it would have made a difference of a learning management system if it would have made a difference?

Jem: I don't think so. I like to experiment with new strategies anything to get my students to learn anything to help my students I would have been excited.

Me: oh okay

Jem: And anything that would make life easier for me because once you would have created a course Mrs. Benn, I'm telling you. You keep adding to it and you have it there. You can make the changes and it just become easier. And that is what I think I thought about okay I can have one platform one area something that I can see this is my course and so I can see the development of a process over a period of time.

Me: I hope you're backing up your

Jem: Yes. I remember that that is one of the points that you made about the backing up. I can remember you said that it was very important because you can access it at any time. I remembered and it did come in handy. That backup came in handy when the system was changed from eLearning to eLearn. Because it was backed up, I was able to get every file even the conversations that the students had and assignment that they had uploaded even that ... uploading assignments that can be used for future classes ...

Me: You're saying it makes it easier for you. You're saying that you are so excited, but there are some people who find it challenging and time consuming. How do you reconcile the two?

Jem: It is time consuming but I look at I have to put in this time in order to accomplish my goal which is to become more efficient to be current, to provide for my students, and so I don't mind putting in the time. I'm accustomed to putting in a lot of time in planning and I just see it's part of my planning!

Me: Okay

Jem: So it's part of my planning so I say to myself, I don't wait until before the week before the semester begins so right now I'm thinking about semester one. And all the changes that I want to make for this particular cohort. So I work on it a little at a time. Now if you don't work on it a little at a time, it may be overwhelming once the semester has started and you have other tasks to do especially marking students' work, giving feedback and so on. But you wait until the last minute then it is going to be overwhelming. I tend not to wait until the last minute because I don't function very well under extremely stressful situations consistently. There are times when you have to at the last minute because of what occurred but for it not to be a staple, to be under stress. That's not me. So I do a little at a time and I have fun while doing it. I guess it's the interaction with the computer. I don't know I just enjoy these things.

Me: Okay

Jem: And I'm a very visual person, so it appears that part of me

Me: Could it be that that excites you and energizes you but maybe that is something that is a deterrent for those persons who don't have the same skill and that excitement for change and so forth?

**Jem:** It could be and then I like a challenge I do like a challenge even though when you get a challenge and you need help, you just ask for help. I know if there was a situation that seems a little difficult I can try new things and think out of the box how I can overcome this.

**Me:** Very interesting well I don't know if there is anything else to say. You mentioned that you would have continued with it for another time and so forth. So you were only in the last workshop that we had but you found it exciting enough. It coincided with your personality. Would you say it coincided with your learning style?

**Jem:** I think. The doing and actually seeing ... I think so. I really think so

**Me:** And did it coincides with the kinds of course that you taught

**Jem:** I wouldn't say that it has to do with the course. I'm saying that even if I taught math or language or whatever the course is, I would just find the way to use that learning platform.

**Me:** Okay. I must say thanks. You energize me even more because that's how I feel about this platform. And it's now 11:35 and I really don't want to keep you. It's about 24 minutes. I think we can stop here. Thank you so much I really appreciate it.

## **KLOE**

**Me:** Are you using Moodle

**Kloe:** No. Not at all

**Me:** Any special reason?

**Kloe:** I guess because with the setting up we didn't know which host we were going to use ... if we were going to use ABIIT as a host or state college ... just the harassment of it. If it was just easily assessable and you know and it were set up for us and we had some body there who could set up for us and we just access it easily, then I guess I would have used it. But just the harassment of it I just feel that I did not want the additional harassment.

**Me:** I would like you to share with me very frankly how you felt about engaging in the process of learning to use Moodle.

**Kloe:** I felt a little well not really nervous a little hesitant. I felt it would have been time consuming taking away time that sometimes technology can be a bit unpredictable because of you don't have reliable internet the harassment of it... so I was a little hesitant, sceptical of learning... But I saw the need of learning how to use the technology to enhance, you know, classroom instruction.

**Me:** uh huh

**Me:** So as you reflect on that phase in the life of the department, what do you recall of the whole process of learning to use Moodle?

**Kloe:** What do I recall? Like a memorable experience?

**Me:** Well it might not have been memorable, but what do you recall of the process?

**Kloe:** I think it was a useful process. Like when you did the training with us. I think it was just before the summer vacation before we got back to school. I remember that time, just before you came up here and you did 2 or 3 days training with us. That was good. You gave hands-on experience with doing certain things. Even when we had the training up here as well... You know, uploading files, using the class register. .. So the training was good at that moment. But then, because I was not really using it and practicing, I basically, you know, with it a'm ... got out of touch so when I wanted to use it I had to go back to notes. I had to be there looking for notes to see where was this that told us how to do this because I was basically out of touch. And so because I was out of touch because there was not like a continuous process of using it, I got rusty and didn't really want to harass myself with it.

**Me:** Oh okay

**Kloe:** But the training sessions were very good. They were hands-on and we learnt a lot. But I was neglectful in not practicing.

**Me:** In my write of it, I presented the process in about 6 different phases. I looked at the first phase. The first phase for me was when we had Ms. Aisha Wood-Johnson the lady from Trinidad came.

**Kloe:** And we were up here

**Me:** And we were up here. Now we are going to go through each stage and I am going to show you certain things to remind you. Now this occurred in 2009. And that was just before the semester began, right?

**Kloe:** uh huh

**Me:** Now when the semester began, I asked persons ... no after the workshop, I asked individuals what they would want to learn to do, remember that. So I gave everybody that... and people indicated that these are some of the things ... not everybody indicated every single area, but they showed what they would want to learn. Now what I would want to find out from you (because this is what I recall) after that initial training, we were ready to move forward I recall there was a storm and we could not move on as we would have liked. What is your recollection of that time?

**Kloe:** Yes we had this and we could do all of these things. Edit our profile, upload, forums and so on. But something happened I don't know if we lost internet ....

**Me:** Yes there was a storm ...

**Kloe:** I didn't even remember that.

**Me:** Yes.... And just when we were ready to use it.

**Kloe:** So somehow we didn't use it that semester and a'm so well for myself I don't think I was practicing to do these things ... because it was the first time and in the absence of continuous practice, you actually lose the skill and the knowledge.

**Me:** 'Cause the website was not up

**Kloe:** No

**Me:** Now after that, I know I got the staff ... I just brought these to remind us. I remember just to show ... that I contacted ABIIT so you were able to get onto the ABIIT website. Now the second semester the second semester that was the first time that we were engaged in that extended teaching practice. Remember?

**Kloe:** When you say extended ...

**Me:** Remember the 10 weeks?

**Kloe:** Yes

**Me:** And some of us thought that would have been a good time to use Moodle. What is your recollection of that period?

**Kloe:** I'm

**Me:** We didn't get to use it the first semester because of the different things that were happening because of the challenges with the storm. Do you recall anything and how you felt about using Moodle? Some persons had as many as 20 persons to supervise.

**Kloe:** It was difficult to be on Teaching Practice and to administer our courses using that. ... I don't recall ... I don't recall what happened in great detail

**Me:** uh huh

**Kloe:** A'm I can't recall but I don't remember using Moodle a'm ... for my course

**Me:** For your course at all... Okay, Okay. Well, a whole year passed before we had another workshop. We had a workshop in 2011 because I had to pause from it ... because that was the .... I paused for a year because that was the time that my mother died right, so I know I just rested the whole process. We started off again and by the next year we had a workshop at NTTC.

**Kloe:** Eh huh

**Me:** Now again, let me jolt your memory.

**Kloe:** NTTC?

**Me:** NTTC. I am not sure you attended that one. When we were at NTTC, I had 3 sessions there. And we had **SIWIPAM**.

**Kloe:** SIWIPAM?

**Me:** That was a way I was trying to help people to remember certain things. You don't remember that? Maybe you were not a part of that ...

**Kloe:** Tell me. Tell me some other things. Jolt my memory

**Me:** So I gave things like "We are living in Cyber Space. We are living in Cyber Space will you join me. I think it is something like that that I had. And I had ... and I encouraged persons to use the different information ... and I had hats. Remember?



**Kloe:** You actually gave a booklet and I think I have the booklet and I sometime refer to it. Something like creating the environment ...And you referred to the benefit of having blended classrooms ...online and face to face

**Me:** what do you recall of that?

**Kloe:** You taught us ...exposed us to some basic skills ... and I vaguely remember you showing us how we can retrofit our courses to make them a mixture of online and face to face ... like if we are not able to be there face to face, learning can still take place ... Once you organize it properly. It can be done. And that is the way to go ... to not have completely face to face courses. I remember that.

**Me:** That was also still during teaching practice time ...

**Kloe:** Yes and you were saying that if you are not able to go to classes because you were out on the field you could still have the students engaged.

**Me:**

**Kloe:** I felt it was workable feasible something that we could have done, but we did it minimally like corresponding to the students via email, uploading a file ... maybe talking on a blog ...but that was the extent of it

**Me:** So what I'm understanding from you is that if the course were set up for you, and you just had to interact with the students ...

**Kloe:** Yes

**Me:** The course is set, all the material is placed online and you would have preferred that

**Kloe:** Yes. Because, as I said it is a lot of harassment because to prepare for the course we have to do a lot research prepare lecture notes do our readings in preparation – then to now have to sort of like put it on the system it takes away from the time cause we really do not have much time to prepare. Think about our assignments what we're going to give getting our marking pieces together and so on.

**Me:** So if you were to get somebody to set up everything ...

**Kloe:** Yes.

**Me:** You give them all the information

**Kloe:** Yes and even if they sit down with me and we do it together it would have helped

**Me:** So you would have been happy to have someone set up the course and all you do is to work through the assignments with the students and respond to their queries and so forth.

**Kloe:** Yes Yes

**Me:** Ok Ok No we had another workshop (up here). That's was when we were able to send emails ... well we set up our classes so that everybody had their own little a'm Moodle class and people were doing things like send assignments to each other and so on. In terms of the effectiveness of that workshop, what would you say you came away with?

**Kloe:** I came away with some basic skills. Downloading file, uploading a file, creating a class register...I don't remember if we went into grades ... like letting the students access their grades. There were a lot of very practical things and there were reasonably simple to do.

**Me:** But it's just that it was too time consuming for you to continue to do it.

**Kloe:** Yes Yes

**Me:** And with the final workshop, what you're saying is that you got more hands-on. That's the one that was at ABIIT. Well how do you think it could have been done to make it better? Let's suppose were not able to get someone to set up your course for you. What could we do to make the whole process better? I am seeing that there are tensions in relation to time. Time it takes to upload information and so on, but time is not the only tension Teaching practice was taking place then, but let's suppose all things were equal what could we do to improve the process going forward?

**Kloe:** Apart from the time, if it were possible to have some sort of tech support working along ... somebody who was able to help you if you had some immediate queries or any immediate difficulties that the person is there to help was there to rectify it right away. Well you know the person is able to deal with all of us... give us that individual attention. Well if we could have somebody to give us that immediate, immediate support. Because once I come across any difficulties or harassment, I'm not going to knock up with it. I'm not going to push ahead with it. But once I have that immediate support, I'm going to press ahead and use it.

**Me:** So technical support is what you want. So there are two main things you are saying you would prefer – one that the course is set up for you And barring that, that you would have technical support. If you were being paid separately to do it, would you do it?

**Kloe:** Separately to do ...

**Me:** To set up your course.

**Kloe:** If I was paid? To use Moodle?

**Me:** Well the thought just came to my head.

**Kloe:** Not necessarily ... but I guess so that could be a motivation. But not necessarily if it is too harassing even with money I would not do it. It has to be easy. I can't take on any more harassment and stress.

**Me:** Ok

**Kloe:** Because like let's say even the summer course, even if they are paying, if I had the option not to do it I would not do it

**Me:** Even if they are paying

**Kloe:** Yes, because I don't want the additional harassment ... so money is not the motivation. If there is support, if there is smooth sailing that is what would make me do it.

**Me:** So it's not a matter of a need for incentive and so on.

**Kloe:** No

**Me:** You just want to know that it is easy for you to work with it and that you are not given any additional responsibility.

**Kloe:** Additional responsibility any additional stress. 'Cause it's already stressful you know organizing the courses and teaching and going out on teaching practice. It is already stressful mentally and physically on us so I don't an additional ..

**Me:** Do you find working in the department of teacher education stressful.

**Kloe:** Yes it can be

**Me:** Because I'm noticing that in the conversation you are saying if there is no stress no harassment.

**Kloe:** It can be especially during teaching practicum when we have a lot of students it can be draining. Because can you imagine teaching sometimes we have to teach that particular day and still going out to see three students driving from Bolans to there. Just that alone is physically taxing. Then sitting down and evaluating a lesson ... three lessons in a day and still have to teach a course. It can be.

**Me:** I notice that the time that we had the first workshop was in the first semester. The next time was in second time was in the second semester. The other time was at the end of the second semester so that was after teaching practice. And the last time too it was after teaching practice. What time would you say is the best time to have it?

**Kloe:** The best time may be just before semester one. Like maybe the week or so before the semester opens ... So that we can come with all our materials for that particular semester and start to prepare to use Moodle for that particular semester and start to use Moodle for that particular semester

**Me:** Do you think you will be able to complete it in one week?

**Kloe:** Well

**Me:** If you had to post things online

**Kloe:** Yes. Because in the summer vacation we would have been preparing our materials and so now that week it would be basically putting it all together ... because we have all the material ... let's say you do it at the beginning of the semester the first or second week and we are still shaky with it. Because two weeks or three weeks have gone ... because that's how I felt. The semester has already started, already gone; I would not even bother with it. But if I'm starting with it at the beginning of the semester, I would be more committed to staying with it and doing it. But once time has passed in the semester, I am saying why use it. For example, if I've already started using a manual register, I'm not going three weeks in the semester be motivated to use it.

**Me:** I see what you mean. Well, I appreciate your help

**Kloe:** You're welcome

**Me:** And we hope that eventually we would be able to do something that would help.

## **INTERVIEW WITH CAROL**

**Me:** Are you currently using Moodle?

**Carol:** No. Me personally? No

**Me:** Did you ever use Moodle

**Carol:** No. Lemme say no

**Me:** And why didn't you use it

**Carol:** umm

**Me:** I want you to be as honest with me and as front as possible

**Carol:** I'm trying to think of the time frames the times. Actually, the time that I was planning to use it, it kinda of coincide with the same time when I pick up Teacher Ed, being head of department so it was already challenging just the thought of even teaching a course while doing that ... never mind to find additional time to get all my things together and get them up on on the server. I have spoken to even Mary and we had planned to meet and get some stuff together to get the loaded up, but administrative did stuff took over

**Carol:** You know became priority so I just never got a chance to get that off the ground

**Me:** So what you saying did you get engage in any of the training session

**Carol:** Yes yes

**Me:** But you never actually used it

**Carol:** Beyond what we would have done in the training like things like, you know being able to upload your coursework, things like that, you know, how to create a test but actually implementing it in the classroom... No

**Me:** As you reflect on that phase in the life of the department what do you recall about the whole process of learning to use Moodle?

**Carol:** The actual using of it itself or just learning to use Moodle.

**Me:** Learning to use Moodle

**Carol:** Well I think it was insightful, you know, I think though, and maybe it's just part of the teacher mentality sometimes. We get so used to doing things one way, and so therefore we fight when something new comes on.

**Me:** uh huh

**Carol:** But I do remember though, from what I can recall, the last time we did a training session persons were much more willing than the first time. I think we had a session up here a few years back, but the last time we met at ABIIT, I think people were much more open to the idea. And a few at different levels tried a little thing, you know? And I think we all left with very great intentions great intentions about what we're going to do but different reasons why the plane didn't take off. I think the interest though was much more evident that time around.

**Me:** So are you saying that teaches generally, from you experience, teaches generally resist change?

**Carol:** I think so. Yeah I think generally we tend to, especially when it comes to technological well at least in this culture, there always going to be those who embrace it

**Me:** Yeah

**Carol:** And then there are those who is skeptical but they are always quite a few who are like ok “nice to know but um I'll keep on doing things the way I'm doing them.

**Me:** So do you think that the fact that there were a number of different workshops at different times made people become more interested over time or it happened to be that the last time happened to be a good time for people to learn it.

**Carol:** I'm not sure that the time really made any difference because I think it was at the end of the semester, just like we had done up here before. I wonder if maybe too over the last few years there have been a lot of talk about the whole ICT integrating technology in the classroom and certainly as educators it's kind of difficult for you to be assessing teachers' use of technology in the classroom when you are NOT using it in the classroom. And so I think there is a level of openness, so even it was last year yeah, internally, we had a workshop, and it was out of staff interest. And you know they recognizing their deficiencies we couldn't have not addressed all the deficiencies, but at different times persons are much more open now to learning more skills ... whether it is ... well the last time we looked at how to create a movie, pulling things from offline and creating a movie. So there is an openness and I think too and I think maybe it's the intimidation of feeling that you are really ignorant and don't want to feel foolish. But when I think people recognize that you're not alone ... most of are foolish so we were all kind of laughing at each other and struggle through the process together so I think there was a bit more openness now to the idea of trying something.

**Me:** Ok. Now to what extent was the implementation of this innovation a good idea for the department of teacher education?

**Carol:** I think the whole idea of online learning and Moodle?

**Me:** Yes

**Carol:** Well I think it has a place and I think even this year I came face to face and recognizing that we need alternatives, you know, with the foreign language situation when we had the foreign language teacher leaving and not having ...well she's willing to continue the course, but she's not here in person

**Me:** Right

**Carol:** And quite frankly, she is the most, in terms of expertise, she is a person who is most compatible in terms of teaching the course and so I think, I suppose, people just have to trust leadership and I think that's what the problem. Sometimes we can't always see where and so the resistance comes, but now looking back I'm seeing that we do need to have a bit more flexibility and diversity to how we deliver instruction. I still can't see all the kinks, how it will all work out for all the courses but then I also think of the Barbuda situation and it's still something that we still need to explore

**Me:** I had wanted that so much for Barbuda. You know that.

**Carol:** We still need to explore it because the rest of the class still has not yet ... the class that initially started.

**Me:** They have been continued

**Carol:** They have only been doing one at a time. One is now finishing. One is in the process I think I saw another name up to come over.

**Me:** But they could really have been doing it and they could have Ustream so they could have streamed the classes so they could get the lecture discussions and so on afterwards.

**Carol:** So I think we still need to explore different options of how we can make things accessible.

**Me:** So when you said sometimes we need to trust leadership, what were you referring to?

**Carol:** Well I was thinking, at the time you would have, I guess you would have seen the need or at least, a great idea about where we could be a few years down the road. Well maybe for many of us, at the time, we were thinking that life is fine right now. You know, you're not thinking of the difference options and where this could be in terms of the foresight and I guess the visionary of leaders the sometimes we just need to ... so that's what I was referring to. Generally that is what happens

**Me:** Yes... yes

**Carol:** People that can lead can kinda see all the things.

**Me:** I know the principal had that vision and that's why she actually learned how to offer courses online. I did a course on it and she did it too, because she saw the need and she saw how it could expand the college. Anyway, there's something I want to look at. In my write up of the dissertation, I presented it in terms of phases, not because I had planned it in these phases, but based on what I saw, it was very episodic. ... so I just want to see if this is how you saw it as well. We started in 2009, the lady who came from Trinidad her name is here, this lady Johnson. Remember we had a workshop here? Were you at that one?

**Carol:** I'm not sure

**Me:** She came and conducted a workshop. Ok. You were not there for that one. But she had conducted a workshop and based on the fact that department seemed, well I had the keen interest and I thought that this is one department we can use, they had allowed teacher education to be the key department to be involved. Now the next year nothing happened my mother got sick and eventually died, so that phase is blank. Then there was another phase where we were at NTTC. Do you remember we had a workshop at NTTC?

**Carol:** yes

**Me:** I think I did a workshop with Maurice. Do you remember that phase?

**Carol:** Vaguely

**Me:** So what do you recall about that particular phase? I had an acronym like SIWIWAM

**Carol:** I remembered in one in this room over here so I don't know if it is the same one you're referring to.

**Me:** No that was at NTTC.

**Carol:** At NTTC I recall the men from Barbados doing something up in the room at the computer lab upstairs. But that's not about open learning.

**Me:** Yes probably management systems. Wait I have ... (I presented the workshop booklet)

**Carol:** That booklet looks familiar. I have one of these.

**Me:** You have one of these (laughing) okay so you don't remember too much about NTTC. You just vaguely remember there was a workshop there. Actually it was a three day workshop over 3 weeks and so maybe that's why you can't remember. So you remember we started here. You remember there was something here at the Antigua State College compass. What do you would call of this phase. That's phase 4

**Carol:** What do I remember in terms of what we learned or just ...

**Me:** What do you remember of that phase same here and you had so what can you remember about that?

**Carol:** It was like now... at the end of the semester, if I remember correctly. I don't remember if it was over it 2 or 3 days

**Me:** It was about 3 days

**Carol:** Yeah and I think too that same booklet there. I think we also had, we were supposed to try to bring a course that we had that we were going to be doing for the upcoming semester that we could try and start to use something authentic for the semester to insert the information. Having that Handbook helped it's something you can refer to. I still have mine

Both (laughing)

**Me:** Although this would not be relevant now for everything simply because they have updated Moodle

**Carol:** Right But I think you had said that too in previous times. So that's what I'm remembering.

**Me:** Do you remember things like sharing information with other participants or anything like that

**Carol:** In terms of us assessing each other

**Me:** No when we were doing the workshop

**Carol:** In terms of sharing ...

**Me:** One of the things I was trying to do is to help the participants to see what the students would experience, so I think at one time I even asked you to invite people to be part of your course and to send information.

**Carol:** Oh like that you mean actually when you were asking, my mind was going back. I'm still trying to figure out what could have been going on at that time cuz I remember having to leave one or two times so I'm trying to figure out what was going on during the time.

**Me:** I don't think you stayed for the whole session. Did you?

**Carol:** I think I missed a day. I remember us having to do upload a profile ... our hello that introduction phase and things of that nature for all classes. I'm not remembering a whole lot

**Me:** Okay Now, the last phase of this workshop was at ABIIT and you had ...

**Carol:** I don't think I stayed out the whole thing.

**Me:** We had this. Remember this? (showing her the booklet)

**Carol:** Yes

**Me:** So this would give you step-by-step and this was the one that Mary and I facilitated, alright, because one of the things the research shows was that when you are doing something of this nature, it is good to get somebody who is part of the institution involved so that the knowledge does not remain in one person. So what do you recall of that period?

**Carol:** Well I think that was I remember that that's the one I refer to in terms of overall openness. We were much more open to the idea than the phase 4 one. I think we, the participants, I think I remember most persons from the staff being there, at least the first so although there was the frustration that the internet was not working as you wanted it to and things not as you would like I think though even that session I think began to let us recognize that we are all in the same boat in terms of it's not as if some persons are ... I know though people would have different levels of skill ... overall the willingness to ask for help and to work along and help each other. So I remember that from that particular one.

**Me:** Would you say that this kind of collaboration among staff helped the process or was it that people just felt more open based on what they might have been hearing all the time.

**Carol:** I think it helps! Because without it, the ball will be dropped I'm thinking too... I guess more critically having someone on staff easily accessible that would provide that constant support.

**Me:** You were saying something before.

**Carol:** I was saying the importance of having the online technical support. I think is very critical for whether or not the plane takes off on not simply because it is new the persons are not open well wide open

**Me:** I wonder if it is online support you mean or does it have to be online or just somebody there.

**Carol:** Not online I mean. Not online I mean. No preferably there.



**Me:** You just said online support

**Carol:** No the technical support

**Me:** Right

**Carol:** So, for example, although Mary may not be certified in anything, her willingness to assist and constantly nudging and inquiring have opened the door for all the persons to try to begin to want to try other things.

**Me:** Yes

**Carol:** When I go online, for example, the modern language situation. Initially, I know I had asked her to meet with Mary and she did. And they went through a few things. But as soon as, you know, you leave and you going to try something and it didn't work, if there is not somebody to come back and to ask to inquire so how, where are things then it is easy to just find an alternative approach to doing it, which is what happened...

**Me:** When I interviewed you then, you said if you felt that it was mandatory you would do it Do you feel that you would do it if it were mandatory or ... just because just because it were mandatory or do you feel that it is something you should do anyhow?

**Carol:** You see what's going through my mind is I see value in it and I guess I am seeing an increasing value for it and it is something that I would love to see different persons try at different degrees. For me personally, yes. And I guess it's because I am thinking of myself in different roles as opposed to now.

**Me:** At that time how you felt as opposed to now

Laughing

**Carol:** Because there are some things that I could just get done and manage online and not have to go into the classroom.

**Me:** uh huh uh huh

**Carol:** I can see it being of greater value to me now.

**Me:** Ok.

**Carol:** Yes definitely

**Me:** So you wouldn't do it just because somebody mandated it but you see value in it for you.

**Carol:** Right

**Me:** Do you see value in it for the students?

**Carol:** Well depends on the situation. Because ... you see I guess I'm not necessarily one who thinks that we do an online course because ... because, you know. I guess I'm thinking of ... there are times when it is needed and so there needs to be that level of flexibility.

**Me:** Because there are hybrid ways in which you do it. You have face to face and you have online. There is no one way in which you can use the platform.

**Carol:** Right

**Me:** Cause you know you can even present a lecture and let them watch it and you have questions that you could ask them. There are different modalities

**Carol:** I guess I'm thinking about that because I guess I'm thinking that it depends too on well, in my mind, disciplines it depends too on the nature of the course. So if you're teaching a heavy content course, I can see a lot of that being able to be done online ... and yes, although for practical you can facilitate you can do video recordings and what not, it's just not the same as being live. You know, not being able to provide that immediate feedback and so I can see it varies.

**Me:** So do see your course as a practical course?

**Carol:** Some are some and some are not.

**Me:** And so you would necessarily find it as critical for you to use it all the time

**Carol:** I can see, for example, the upcoming content course, a larger part of that can be done online. Most of it definitely can be done online. For the course that was done this semester some of that could have been done online and a lot of the resources are online. A lot of the things that I had shared with them were sent to them electronically and so I guess the difference is that is the planning for it ... because if I'm going to facilitate doing online discussions then I have to plan differently and so sometimes it's the time to sitting down so that you can plan for it and do it differently that stops the process not that it's not a good idea

**Me:** Ok so in summary what would you say were the major challenges for you not to use Moodle over that period of time?

**Carol:** Honestly it was just ... it just boils down to making or finding the time to do the planning that is to be done

**Me:** Ok

**Carol:** The planning cuz I think, unless it's my misperception, the planning would be different to planning a face-to-face class than an online course. And yes if needed not to be yes it could be just a matter of the quiz being done online and those could have been done too (laughing)

**Me:** Time

**Carol:** And certain times you're crunch for time in terms of actually finishing the test so you would have to get it done in advance so that you can have it and upload it and to test it to make sure there is no ... that all the technical things are worked through. So for me, it would be time so I wish there would be a 2 weeks that everybody could just allocate that everybody had to submit ... I think ... who was talking about it? Yeah I think tell you I was talking about this ... Allocate this period, well I look at this... Whatever needed to be done to be submitted online that we would submit it and put it together so that when September comes you already totally.

**Me:** So what if we could find a way to ... if all tutors could give e-copies of what they want to put if somebody were to get it done, do you think you would use it?

**Carol:** Yes

**Me:** You sound very confident now.

**Carol:** Well. I see myself. Once I myself know.

**Me:** Once content is up and you had some training in, to use it, do you think you will use it?

**Carol:** Yeah

**Me:** Are you suggesting that one of the major things, one of the major challenges, is actually sitting down and putting the work up?

**Carol:** I think so and I think too, initially too, some of the hindrances would be first of all, there were new courses for me and so you're still trying to put things together so I'm trying to figure out what I'm doing now so I don't want to think about what I'm doing now plus figure out how to do it differently. So now that you have some PowerPoint presentations, although you tweak them every year, but they are closer to being, you're much more with what you're doing, it's easier to have there's some things that are more easily accessible now. So I can say, course outlines you've already made some tweaks. So they are closer to being ready to be uploaded.

**Me:** So you're saying now that if somebody were to ask you to give all soft copies for all the materials that you would want to use

**Carol:** Maybe not all but for the first until

**Me:** I'm serious but of course

**Carol:** So you going to test the theory?

**Me:** Well it's something that I'm working on and I think it's something that we are exploring. Some people are interested and over the course of those years, they've said, "Oh yes good idea," and so on, but it's been getting the information up. But you're saying that one of the reasons you could put things up is that you were learning a new courses that you are teaching and that it came at the time .... Ok alright. Is there anything else you would like to mention?

**Carol:** Nothing that comes to mind. Not right now.

**Me:** Well thank you very much

## APPENDIX 9 A- Participants' Perception of Student Related Factors

Factors	Actual statements	Tutors
Student related	<p><i>It is time consuming, but I look at I have to put in this time ... to become more efficient, to be current, to provide for my students..."</i></p> <p><i>I think what it also helps to do is to model student teachers what they can do in their classrooms ... For example there is the blog, blogger allows them to create assessments online."</i></p>	Jem
	<p><i>"...a very technical a very high IQ kind of people they were able to do a lot of the work on their own. And Moodle facilitated that. "</i></p> <p><i>You see, Student 1, and Student 2 are reserved. They don't talk a lot in class, but they have the most to say in the forum. ... when they had their forums and their blogs and so on, they were the ones doing the talking."</i></p> <p><i>The students just having the information there. You can access at any time. And then I think, one of the things it allowed them to do is to learn their way and it showed me what they were more into."</i></p>	Lisa
	<p><i>"[I'm] you're not always there... everything would be there for them. It would save them not working because I'm not there"</i></p> <p><i>"Well in relation to the students, they liked it. They liked having the work just there..."</i></p> <p><i>Sometimes you really want to single out a student and you really want to be able to call them in and have a chat with them an interview a face to face interview. That you couldn't do because they were online.</i></p>	Grace
	<p><i>"I just thought it would be convenient for the students to access information if I am not there"</i></p> <p><i>Do students have the connectivity required and so forth?</i></p>	Gail
	<p><i>...it did allow us to go really deep in all the debates in the forums in the intellectual exchange that happened....it was great....and their time... their rhythm ....their pace to process all the input from all the readings</i></p> <p><i>the learning environment gave them the time and the necessary forces for them to process and reflect on their readings. It was not just the writing....I think.....it helped. They were also supposed to answer to each other's contributions.....That also made it more natural.....I suppose because it was real exchange.</i></p>	Ava
	<p><i>I need to have information somewhere for the students so they are more using it as a repository bank for the students"</i></p> <p><i>"I found the trainees too appreciated the fact that I don't have to wait on my actual physical facilitator to be able to learn something."</i></p>	Mary
	<p><i>I like the idea that the students would have other means of learning rather than the face to face and all of that</i></p>	Lillian

## APPENDIX 9 B - Participants' Perception of Instructor Related Factors affecting Moodle use

Factors	Actual statements	Tutors
Instructor related	<p>“...wonderful experience ... I found very interesting, challenging at times</p> <p>“I do like a challenge.”</p> <p>“It is time consuming, but I look at I have to put in this time ... to become more efficient, to be current.”</p> <p>“It helped me to track, especially the discussions, the thoughts of my students, particularly the ones who are apprehensive to speak in class. Secondly, it has given me the opportunity to provide as many resources as possible without having to print, so financially, I think it is beneficial for me as a lecturer. Also, with organisation, I think it is very helpful”</p>	Jem
	<p>I just need to be disciplined and sit down and do the stuff”</p> <p>...for me it was just getting the material ready to be uploaded.”</p>	Lisa
	<p>“It was not that difficult to use, you know... ...we couldn't remember all the different icons. It's something you have to practice all the time in order to be versed at it.</p>	Grace
	<p>“there were new courses for me and so you're still trying to put things together so I'm trying to figure out what I'm doing now so I don't want to think about what I'm doing now plus figure out how to do it differently.”</p> <p>“Sometimes we can't always see where and so the resistance comes, but now looking back I'm seeing that we do need to have a bit more flexibility and diversity to how we deliver instruction.”</p> <p>“Honestly it was just ... it just boils down to making or finding the time to do the planning that is to be done.”</p>	Carol
	<p>“learning something new is frustrating”</p>	Mary
	<p>Very easy one for me.....natural one. I felt at ease with that environment. ...As a teacher I felt it was wonderful to be able to do the teaching I have been doing over here in an eLearning dimension. So it felt like a natural way to move on.”</p> <p>“It takes a lot of time; it probably takes more time than teaching face to face you teach a whole group so in one hour you do all of them.”</p>	Ava
	<p>“...started with a bit of hesitancy because I am not basically a computer... I came from a place where I'd say, 'I can't do this; give me a book,' But I've come a far way from that.”</p> <p>“...started off with some reluctance then you got enthused about it then it kina waned...”</p>	Gail
	<p>“I felt it would have been time consuming taking away time that sometimes technology can be a bit unpredictable</p>	Kloe
	<p>“Sometimes the challenge is to twinning my work and spending so much time with the online course because you know you have to spend so much time with the computer ...It takes a bit of time.”</p> <p>“I also liked the challenge of learning something new and doing something different then.”</p> <p>“And too, for some of us, we were a bit comfortable with our old ways and we didn't readily embrace the change and do it as we should and could.”</p>	Lillian

## APPENDIX 9C Participants' perception of institutional related factors

Factors	Actual statements	Tutors
Institutional related	<p><i>I found very interesting, challenging at times, but the support that you provided with the booklet and even having Mary to provide support whenever I had issues that I really couldn't overcome myself...</i></p> <p><i>"But for me it is accessing the eLearning platform when I want to and cannot because of whatever internet challenges."</i></p> <p><i>"...they update the eLearning program... changes that are made are sometimes a little frustrating because you are accustom to one format and then it may even remove materials, but it's somewhere else but when you go to the technician, he would say now it is in this it in this particular category."</i></p>	Jem
	<p><i>"You had a course online how to do... so you could always go back there and see how to do anything that you couldn't do at the time. So I think that that kinda made it easier for us"</i></p>	Lisa
	<p><i>"Learning to use it was not that difficult, but as I told you the part that turned me off was the connectivity."</i></p>	Grace
	<p><i>"It's just that the inconsistency of the connectivity online and TIME that's what you hear everybody say, Oh they don't really have enough time to put all that information on."</i></p> <p><i>"Am I going to be able to really use it because of the connectivity? ... Do students have the connectivity required and so forth?"</i></p> <p><i>"I don't think people should be coerced into using Moodle but perhaps some kind of incentive to those who take the time, make the effort so that people are motivated to use it."</i></p>	Gail
	<p><i>Apart from the time, if it were possible to have some sort of tech support working along ... somebody who was able to help you if you had some immediate queries or any immediate difficulties that the person is there to help was there to rectify it right away."</i></p> <p><i>"If it was just easily assessable and you know and it were set up for us and we had some body there who could set up for us and we just access it easily, then I guess I would have used it"</i></p> <p><i>"The best time [for the workshop] may be just before semester one. Like maybe the week or so before the semester opens ..."</i></p>	Kloe
	<p><i>"also other factors like unreliable Internet the server ... being down so at times the actual platform itself was not accessible even if it was accessible there was some error in being able to log in or even if you log in it was freezing so these factors at times kind of hampered the process."</i></p> <p><i>"I think it's the way to go in terms of we're now using technology in the classroom and everyone must use it but we still need to know how to use it appropriately."</i></p>	Mary
	<p><i>I guess more critically having someone on staff easily accessible that would provide that constant support."</i></p> <p><i>"So, for example, although Mary may not be certified in anything, her willingness to assist and constantly nudging and inquiring have opened the door for all the persons to try to begin do want to try other things."</i></p>	Carol
	<p><i>"We didn't have the systems and some students didn't have."</i></p>	Lillian

	<p><i>“ If we had said perhaps as I’m saying now, ok we’re going to offer two courses online and you’re going to be in our cohort and we’re offering courses online. So you would now be in that frame that Reading that semester is online.”</i></p>	
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