

## Chapter 1

### ORIENTATION TO THE STUDY

*The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn.*

*Alvin Toffler (1928-)*

#### 1.1. Introduction

“It is amazing to me how in all the hoopla and debate these days about the decline of education in the US we ignore the most fundamental of its causes. Our students have changed radically. Today’s students are no longer the people our educational system was designed to teach. Today’s students represent the first generations to grow up with this new technology. ... What should we call these “new” students of today? ... But the most useful designation I have found for them is Digital Natives. Our students today are all “native speakers” of the digital language of computers, video games and the Internet.

So what does that make the rest of us? Those of us who were not born into the digital world but have, at some later point in our lives, become fascinated by and adopted many or most aspects of the new technology are, and always will be compared to them, Digital Immigrants.

The single biggest problem facing education today is that our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age), are struggling to teach a population that speaks an entirely new language.

So unless we want to just forget about educating Digital Natives until they grow up and do it themselves, we had better confront this issue. And in so doing we need to reconsider both our methodology and our content” (Prensky, 2001, p. 1).

### Background to the study

In June 2000, economics students in Paris circulated a petition calling for the reform of their economics curriculum. In essence, they were asking “...to escape from imaginary worlds” (Fullbrook, 2003, p.13). This protest was mirrored three years later by Harvard students, demanding “...better balance and coverage of a broader spectrum of views” and that which would “...not only teach students the accepted modes of thinking, but also challenge students to think critically and deeply about conventional truths” (Fullbrook, 2003, p.13). Students were demanding that economics teaching should move away from the purely theoretical world of (often ridiculous) assumptions to practical, applicable content, which would make sense in the real world and would assist in solving real-world problems, such as unemployment and inflation.

Nobel laureates for economics, Milton Friedman and Ronald Coase by supporting the belief that economics teaching is too removed from real issues and that there is something amiss in the education of future economists, state that “. . . economics has become increasingly an arcane branch of mathematics rather than dealing with real economic problems” (Snowdown and Vane, 1999, p.137). Coase maintains that “Existing economics is a theoretical [meaning mathematical] system which floats in the air and which bears little relation to what happens in the real world” (Coase, 1999, p. 2). “The field of economics was intelligent but obsessive, narrowly focused, and cut off from the outside world” (Campbell, 2004, online). Indeed, recently Fullbrook (2003) and Becker (2004) criticised the economic teaching fraternity in strongly worded statements, accusing academia of not keeping up with the times - in terms of content and presentation.

Furthermore, this gap in the teaching, this disregard for concrete realities, “poses an enormous problem for those who would like to render themselves useful to economic and social actors” (Fullbrook, 2004, p.13). Similarly, we need to move beyond the outdated chalk-and-talk lecture methods to the active learning techniques made available by experimental economics, games and simulations, and the internet (Becker, 2004, p. 52).

Becker (2004) further comments on the way that economics is taught by stating that the majority of instructional practices in economics courses are presented in a passive learning environment which does not allow for students to take an active role in their own learning. Critical reflection, independent learning and learner autonomy is not fostered. These important cognitive skills can and should be fostered by making use of information and communication technologies (ICT) in economics education.

According to Laurillard (1993, p.26), "...every academic subject faces this same kind of challenge, to help students go beyond their experience, to use it and reflect on it, and thereby change their perspective of it, and therefore change the way they experience the world".

Nevertheless, students still need to gain access to the academic environment of economics (Postman, 1995, p. 3). It will not solve the problem merely to change all economics teaching to practical applications and exclude all the theoretical grounding. A model to address the problem, whilst still including sound academic teaching and learning, needs to be used. However, inept methodology of teaching and learning in economics is further exacerbated by the critical issue facing higher education institutions worldwide - that of access and size.

In the USA, colleges and universities "...expect to enrol more than two million new full-time students by 2010 - a phenomenon referred to as Tidal Wave II" (Maclay, 2000, online). Tony Blair, Prime Minister of the UK, has overtly stated that he hopes to establish a "learning society" and that 50% of school leavers will register for a university education (Milliken and Barnes, 2002, p.223). "The growing demand for access to HE is a factor that continues to shape universities. Governments are generally putting pressure on universities to increase enrolments in order to ensure that more citizens receive higher education" (Bourlova, 2005, p. 6).

This trend is also mirrored in South Africa, where the government's national plan for Higher Education's (2001, online) goal is for participation to increase from 15% to 20% within the next 10 to 15 years. Given the current situation in South Africa with regard to the recent mergers of Higher Education institutions, this will lead to even larger classes.

During the period 2000 – 2005, the University of the Free State's (UFS) Economics first-year class increased from 733 to 1269 - an increase of 73% over the period (H. van Tonder, personal communication, 15 August 2005). This trend was seen in all the other subjects in the Faculty of Economic and Management Sciences at the UFS. However, the increase in the number of students registered for courses was not accompanied by a concurrent increase in staff or capital outlay. Class sizes became unmanageably large, with individual staff members being responsible for up to 800 students at any given time. This led to the overburdening of lecturers and the inability to foster individual relationships with any students.

It has been argued that the strategic use of online resources in large lecture classes may result in some savings and the redistribution of teaching staff time (Twigg, 2003). However, more than 50% of the students enrolled at the University are from backgrounds where access to basic services, such as electricity, is not a given. The majority of students in the Economics 1 classroom have never been exposed to computers. Can the electronic media therefore be used successfully in this situation? Furthermore, although much has been written and researched in terms of technology, very little exists in terms of students' experiences of electronic learning (Meyer, 2005).

This research has been done in an attempt to address the challenges of improving the learning experiences of Economics first-year students in ever-increasing class sizes, by facilitating interaction via the use of e-learning.

## **1.2. Problem statement**

The main reason for concern is the absence of any interaction - which is essential for effective learning and teaching to take place - in a large class. Not only is there very little interaction between the lecturer and the students, but the subject-related interaction between students – both inside the classroom as well as outside – is virtually non-existent. A further dimension that exacerbates the problem is that there seems to be very little interaction with the study material or additional reading on the part of the students. This, in a residential, face-to-face setting, is a worrying fact that needs to be addressed. The question arises: what can lecturers do to compensate for the lack of personal interaction?

Essentially, interaction refers to three categories within the academic environment (Moore 1989, 17-18). These are:

- Interaction with the lecturer or facilitator;
- Interaction with peers;
- Interaction with content.

Hillman, Willis and Gunawardena (1994) add a fourth dimension to interaction, which is interaction with the interface. This type of interaction would form the boundaries which contain Moore's three types of interactions.

The merits of different types of interaction are discussed in Chapter Two. The way in which students experience a learning intervention will affect the effectiveness of that intervention (Bastable, 2003).

Given the above background, the title of this research project is the following:

**Learner perspectives on the use of a learning management system in first-year Economics.**

### 1.3. Research questions

In view of the above problem statement, the following research question forms the basis of this study:

**Learner perspectives on the use of a learning management system in first-year Economics.**

From the topic and the research question, three sub-questions emerged:

- How do students use technology to interact with the lecturer when classes become unmanageably large?
- What is the relationship between Learning Management Systems use and students' experiences of peer interaction?

- What possibilities exist to encourage students to interact with content by making use of a Learning Management System?

The first question focuses on the relationship between lecturers (or representatives of a lecturer) and students. The second question addresses the use of computers to foster better interaction and discussion between students. The third question concentrates on the possibilities which exist to foster better use of the content and material by students whilst making use of technology.

### **1.4. Purpose of the study**

The purpose of this study is to investigate how students experience the use of blended learning in a first-year economics class.

### **1.5. Objectives**

Given the purpose of this study, the objectives are to establish:

- Whether students use the Learning Management System to interact with lecturers;
- Whether a Learning Management System may effectively be used to create interaction between students and lecturers;
- How students experience online interaction with the lecturer;
- Whether students use the Learning Management System to interact with peers;
- How students experience interaction with peers in the online environment;
- Whether students believe that online interaction with peers is effective;
- Whether students use the Learning Management System to interact with content;
- Which of the different components of the Learning Management System affect students' learning experiences?

## 1.6. The scope and context of the study

Before the inclusion of CIE, there was very little contact with or interaction between students – both on a personal, as well as an academic level. Table 1 illustrates the structure of the course before the Learning Management System was introduced, as well as afterwards.

	<b>Before LMS introduction</b>	<b>After LMS introduction</b>
Course structure	2 lectures per week, 2 tutorials per semester	2 lectures per week
Assessment	2 tests and 2 tutorials per semester	2 tests, 4 online quizzes and 5 online discussions
Role of the Lecturer	Central to the learning process	Peripheral
Role of the student	Passive	Active
Role of lectures	Information transfer, learning content explained	LMS central to the learning process

**Table 1: The structure of the course before and after the inclusion of the blended learning.**

(Adapted from Johnson, 1993, p. 81).

## 1.7. Exclusions from this study

The study does not address the following:

- Learning experiences of Afrikaans-speaking, mostly white Ekn 124 students;
- The influence of the intervention on results;
- The role of the design on learning experiences;
- Academic backgrounds of the students;
- Personality issues on learning experiences;
- The role of computer literacy on the learning experiences;
- Demographic characteristics, such as race, gender or age.

## 1.8. Limitations of the study

The following limitations of this study should be taken into consideration:

- The study is about the personal learning experiences of Ekn 124 students using CIE in their course. Transferability of the results is therefore limited.
- Only students in the English medium of instruction class were included in this study. Since the majority of these students are not English mother tongue speakers, this might have had an effect on the results.
- Following on the previous limitation, the majority of students are from previously disadvantaged backgrounds and may have experienced the use of computers as a novelty. This could also have tainted their experiences.
- This research was limited to one semester only. Students may have experienced the use of the Learning Management System differently over a longer period.
- Only Economics students were involved in the research. The content of the subject, which is reportedly complicated, may also have had an effect on the learning experiences.

## 1.9. Significance and potential contribution of the study

As mentioned previously, the problem with many tertiary institutions is the fact that classes are becoming larger and interaction within these classes is not taking place. However, interaction is a vital ingredient for any learning experience to be optimal. Hence the following question comes to mind:

**Can the use of a Learning Management System replace the contact that has been lost?**

This research provides a basis for further research into the field of interaction and computers. Educators who are interested in making use of blended learning may find the findings interesting and applicable to their own situation.



## **1.10. Research method**

Qualitative as well as quantitative methods of data collection were used. However, the bias was toward qualitative measures, with some quantitative interpretations to support the findings. The questionnaires were mostly open-ended, semi-structured or unstructured and the focus group meetings were unstructured.

## **1.11. Research design**

This research was conducted in the form of a case study, which Gillham (2000, p. 1) defines as "...a unit of human activity embedded in the real world which can only be studied or understood in context which exists in the here and now that merges in with its context so that precise boundaries are difficult to draw."

In essence, the primary defining feature of a case study is the fact that there is a multiplicity of perspectives rooted within a specific context (Richie and Lewis, 2003, p. 52). In the context of this research, then, the multiplicity of perspectives lies in the fact that each individual role player may have experienced the use of a Learning Management System in a different way. This case study aims to give the reader a sense of having experienced Ekn 124 through the eyes of the first-year students, the tutors and the lecturer involved.

### **1.11.1 Population and sampling**

The population for this study was the Ekn 124 class of 2004, English medium instruction. With regard to the paper-based questionnaires, all students attending class on the days that the questionnaires were administered were asked to fill them in. The total number of students registered for the course was 648 (H. van Tonder, personal communication, 8 November 2004). Group 2, which was invited to the focus group meeting, was selected by means of stratified sampling where all the different demographic characteristics (stratums) of the Ekn 124 class were represented.

### 1.11.2 Data collection

Data were collected by means of questionnaires (unstructured and semi-structured), informal discussions with students, focus group meetings with tutors and students and a course evaluation. Table 2 summarises the types of instruments used, when the data collection was done and who the target group was.

Instrument	Target	By whom	When
Focus group discussions	Tutors	Researcher and observer 1	18 August 2004
	Tutors	Researcher and observer 2	21 September 2004
	Group 2	Observer 2	17 November 2004
Questionnaire: Semi-structured	All students of case	Researcher	2 August 2004
Questionnaire: Unstructured	All students of case	Researcher	20 September 2004
Questionnaire: Semi-structured	All students of case	Researcher	25 October 2004
Course Evaluation: Semi-structured	All students of case	Programme Director	28 & 29 October
Observations: Academic Discussion forums (online)	Group 2	Researcher	Throughout Second semester
Observations: Informal Discussion forums (online)	Group 2	Researcher	Throughout Second semester

**Table 2: Research instruments and data collection schedule.**

## **1.12. Data analysis**

Data received were paper-based, tapes and electronic. All the data were transcribed by the researcher. The initial planning was to make use of a qualitative analysis package, Atlas TI, but I decided to use manual, fingers-on-keyboard content analysis. I felt that I would be able to better understand and make sense of the students' comments by reading and rereading, as well as listening to the information (Selwyn, 2002). After the initial reading and listening, data were open-coded so that an initial code list was drawn up. This was done until saturation point – where no new codes were uncovered (Selwyn, 2002, p. 18).

### **1.12.1 Authenticity and trustworthiness**

The findings were given to the observers of the focus group meetings, as well as colleagues in the Department of Economics at the UFS. Member checks were done after the focus group meetings and peer reviews were done by the observers for analysis and interpretation checks.

### **1.12.2 Crystallisation:**

Multiple methods of data collection, including several questionnaires, discussions and observations, were used.

## **1.13. Literature control**

“A substantive, thorough, sophisticated literature review is a pre-condition for doing substantive, thorough, sophisticated research” (Boote and Beile, 2005, p.3). Much has been written on electronic learning as a form of distance education, the interface and the importance of the interface for e-learning and the role that the computer will play in addressing future teaching and learning strategies. However, there is a gap in the literature concerning the use of blended learning and the experiences of students making use of the different components of the blend. Shortcomings in the literature, contradictions and different studies will be discussed.

## **1.14. Ethical considerations**

Because I was so closely involved in the project, ethical issues were of utmost importance. These issues include the focus group meetings and my personal involvement. Thus, independent people were present at all these meetings and all transcripts were given to the persons for member checks. The data interpretation and analysis chapters have also been given to the observers to check for interpretation bias.

One of the responsibilities of a researcher is to protect the participants from harm - both physical and psychological (Ethics issues in qualitative research: 1999, online). For this reason, the following were done:

### **1.14.1 Informed consent**

All students were informed in writing via their course guides, as well as verbally in class for the first two weeks of lectures, about the research project. Every time a questionnaire was completed in class, students were reminded of the purpose of the research. They were also told that they need not participate if they did not want to.

### **1.14.2 Anonymity**

I informed the students about the purpose of the study, but assured them that all information would be treated anonymously and that at no stage, would I request their names or other information which could identify them.

### **1.14.3 Withdrawal from the project**

Students were informed that they could, at any stage during the research, withdraw and that they would not be disadvantaged because of their decision. The questionnaires were filled in during a class period and handed in at the end thereof. Students who did not want to complete the questionnaire, simply did not do so. Because of the number of students in the classroom at any given time, it was not possible to identify students who did not hand in the questionnaire.

A copy of the information given to the students is attached as appendix 1.

I was not always sure what the next step in the research project would be. I was led by the outcomes from the previous data collection instrument. Students were informed about the method that I was going to use.

The Dean of the Faculty of Economic and Management Sciences, as well as the Head of the Economics department at the UFS, gave permission for the project to be carried out and for me to collect data as the semester proceeded. Summaries of the results have been forwarded to the Dean as well as to the Head of Department.

### **1.15. Role of the researcher**

I was directly involved in all aspects of the course. I was the English medium lecturer, the project manager for the course, as well as the person in charge of the tutors. I also designed the course initially and was the driving force behind the implementation of a blended model in the Economics Department.

## **1.16. Outline of the study**

### **Chapter 1: Orientation to the study**

In this chapter the background to the study is described. The general lack of research in the field of economics teaching, as well as the resistance to the use of CIE within the economics teaching fraternity, is discussed. The current debate within the teaching of economics adds to the urgent need for more interaction and engagement when lecturers rethink their economics courses.

### **Chapter 2: Literature in context**

Chapter 2 discusses the current literature available in the field of technology in education and effective learning. Gaps and shortcomings in the literature, contradictions in findings, as well as current studies will be discussed.

### **Chapter 3: Research methodology**

Chapter 3 discusses the methodology and design of this study, which lies within the Interpretivist (Burrell and Morgan, 1979) paradigm. Each student's experience is unique and lies within the individual because of their involvement with their own learning. At the core of the research is the need to observe and understand the functioning of Ekn 124 students. The aim of this study is to understand how the students made sense of their learning experiences.

The research strategy chosen is a case study. In this study, the main focus is on students' qualitative experiences, and I as the researcher, had very little control over the way in which students would respond to the teaching methodology employed. The importance of current events was central to the outcomes. The characteristics of a case study as they apply to this study, is summarised in the form of a table in Chapter 3.

Different instruments were used to collect data. These include questionnaires, (semi-structured and unstructured), focus group meetings and online observations. Data were collected throughout the semester and analysed continuously. All the students were included in the completion of the questionnaires, but only one of the groups was

invited to the focus group meeting. Chapter 3 discusses the sampling method used to select the group.

Chapter 3 concludes with data capturing and analysis, shortcomings and sources of error.

#### **Chapter 4: Findings**

In Chapter 4, the different categories as revealed through extensive coding, will be discussed. These categories will be substantiated by means of code-words and concepts, as well as substantial quotations from the different data collection instruments.

As the data were read and re-read, three core categories (first level) emerged. The general themes of the core categories are as follows:

- Lecturer/facilitator related
- Peer related
- Content related

Within each category, recurring themes were identified. These themes will be elucidated and examples of students' comments will be presented.

#### **Chapter 5: Conclusions and recommendations**

In this chapter, the findings will be placed in the context of the conceptual theory upon which the research is based. The different theories, which inform the research questions, will be linked to the results and the literature in context, as discussed in Chapter 2. Chapter 5 also allows for personal reflection on the study. Recommendations for further research will be made.

### **1.17. Summary**

In Chapter 1, a general overview of the research was given and the research question was introduced. In order to answer this question, as well as the sub-questions, several focus group interviews were held, questionnaires were completed, and observations were made. It is envisaged that this study will add to the literature on learning and especially blended learning. Different options and choices within the blended model were used and students' reactions to these tools were recorded. Educators can select the different tools to create a unique learning experience for their students – from a minimal presence, to a full blend of learning. Chapter 2 discusses the recent literature which is relevant to this study.