STUDENT SATISFACTION AND TECHNOLOGY INTEGRATION IN TEACHING AND LEARNING: THE CASE OF UNIVERSITY EDUCATION IN NAMIBIA

EFIGENIA SEMENTE

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* **Efigenia Semente**

*E-mail of corresponding author: esemente@nust.na

*Lecturer & Deputy HoD, Faculty of Management Sciences, Namibia University of Science and Technology**

Abstract

Purpose of the study: The purpose of this study is to assess Student Satisfaction and Technology Integration in Teaching and Learning: The Case of University Education in Namibia. The concept of customer satisfaction has attracted much attention in recent years. Institutions of higher education are accountable for their performance to their trustees, state boards, accreditation agencies, employees, parents, and of course, their students. Students are the reason for the existence of Institutions of higher education. Hence Student satisfaction should be the core business of such institutions. Yet despite a large body of research literature examining customer satisfaction and student satisfaction for that matter, researchers have not fully investigated the relationship between student satisfaction and technology integration in teaching and learning. This study explores the Challenges faced by academics in terms of technology integration in teaching and learning. It further assesses Students' Satisfaction in relation to Technology Integration in Teaching and Learning as well as the relationship between the use of technology in teaching and learning and Students Satisfaction.

 Research Methodology: This is a correlation cross-sectional quantitative survey. Responses were obtained from a 200 valid random sample comprising of Students and Lecturers at one of the major public Universities in Namibia. The responses were analysed using SPSS version 23. Both descriptive and inferential statistics were used to examine the research questions. Descriptive statistics were used to report demographic information and for inferential statistics, the principal components analysis (PCA) was used. Further, in order to explore the relationships between Student Satisfaction and Technology Integration in Teaching and Learning, Pearson correlation and analysis of variance (ANOVA), were used to address research questions accordingly.

Findings: The study found significant relationships between Technology Integration in Teaching and Learning and Students Satisfaction. The results prompted recommendations guiding effective marketing strategies for Institutions of Higher Education,   policy making in relation to Technology Integration in Teaching and Learning vis-à-vis Student Satisfaction.

Contribution: Regular appraisal of students satisfaction with technology integration is critical. Evaluation of lecturer's perception and awareness of technology integration is essential-to reduce the Knowledge Gap in the area of technology integration in teaching and learning. Specific studies related to technology integration in teaching and learning per discipline (Programme) are desirable since different Programmes may have different needs in terms of technology integration. Lecturers' commendations/support for technology integration is key to ensure adoption and full technology integration in the long run. Institutional Policy on course web/e-learning presence is fundamental

Keywords: *Technology Integration in Teaching and Learning, Student Satisfaction, Expectation Confirmation Theory (ECT)*

1.0 The Introduction

1.1 Background

Institutions of higher education are accountable for their performance to their trustees, state boards, accreditation agencies, employees, parents, and of course, their students (Bryant, 2006). Hence, student satisfaction is not only related to positive word of mouth but should be the ultimate goal for institutions of higher education.

In a teaching and learning setting, the student expects service quality in different facets. One such facet is through the use of technology as a tool to enhance service delivery and the students' learning capabilities. Hence, Technology Integration in teaching and learning is viewed by many as a catalyst to improved student performance and subsequently the Institution's performance. This study explores the relationship between the use of technology in teaching and learning and students satisfaction (Nevo & Wade, 2007).

1.2 Problem Statement

Despite the acclaimed successes of technology integration in teaching and learning in Higher Education and of its prospect of increasing students satisfaction (Elzarka, 2012), it seems that academics do not fully integrated technology in teaching and learning. On the other hand, students' satisfaction with technology integration in teaching and learning has not been comprehensively researched in some Institutions of High learning. Thus, the following questions are pertinent: What are the challenges faced by academic staff in relation to technology integration in teaching and learning? Are students satisfied with the current status of technology use in teaching and learning? Is there a relationship between technology integration and student satisfaction?

1.3 Objectives of this study

The objectives of this study were:

i. To determine if lecturers at one of the major public universities in Namibia are integrating technology in teaching and learning
ii. To assess students' satisfaction in relation to technology integration in teaching and learning at one of the major public universities in Namibia
iii. To establish the relationship between technology integration in teaching and learning and students satisfaction at the university

2.0 Literature review

2.1 Introduction

This section starts by defining the key constructs underpinning this study and concludes by providing a visual representation of the conceptual framework.

2.2 Customer Satisfaction

Since the early 1970s the volume of consumer satisfaction research has been impressive. Numerous theoretical structures have been proposed to examine the antecedents of satisfaction and develop meaningful measures of the construct. The vast majority of these studies have used some variant of the disconfirmation paradigm which holds that satisfaction is related to the size and direction of the disconfirmation experience, where disconfirmation is related to the person's initial expectation (Churchill and Surprenant, 1982; Oliver, 1980).

2.2.1 The Expectations Confirmation Theory (ECT)

The Expectations Confirmation Theory/Model has been the dominant model in satisfaction research. The model has consumers using pre-consumption expectations in a comparison with post-consumption experiences of a product/service to form an attitude of satisfaction or dissatisfaction toward the product/service. In this model, expectations originate from beliefs about the level of performance that a product/service will provide (Jiang and Klein, 2009). In this case, the student enrols in the class and may find his or her expectations negatively disconfirmed, confirmed or positively disconfirmed. For instance, if the student believes that performance is less than expectations, then negative disconfirmation occurs; if performance matches expectations, then confirmation arises; and if performance exceeds expectations, then positive disconfirmation occurs (Oliver 1980).

According to Jiang and Kein (2009, p.384), "the Expectation-confirmation theory (ECT), posits that satisfaction is determined by interplay of prior expectations and perception of delivery. As such, there are many applications in research and practice that employ an ECT model". For instance, they further argue that Researchers may apply the theory in a multitude of contexts where satisfaction is a variable of interest, either as the dependent, mediator, or moderator variable. For instance, in the information systems (IS) literature, ECT model is used to test factors influencing satisfaction (Susarla, Barua & Whinston, 2003; Nevo & Wade (2007)). For this study, the ECT is used to assess students satisfaction as the dependent variable whereas Technology Integration in teaching and learning as the independent variable. Figure 1 below depicts the ECT model.
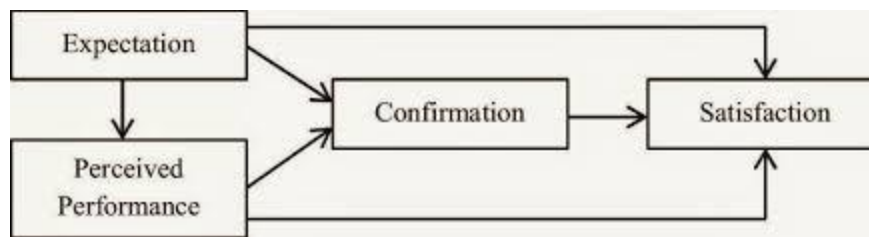

Figure 1: The Expectation Confirmation Model

Source: Adapted from Jiang and Klein, 2009

2.3 Technology Integration in Teaching and Learning

We live today in a technology enabled world. The major developments in technology that are affecting teaching and learning are endless (Bonk, Kim and Zeng, 2005). Table 1 below outlines the major technologies in teaching and learning.

Table 1: Technologies Integration Tools for Teaching and Learning

Technology	Description
Classroom Tools	computers, Projectors and Screens, PowerPoint slides
The Internet	The World Wide Web, Emails,
Computer-Mediated Communication & Learning Management Systems	Online teaching through E-Learning platforms such as Moodle, Blackboard and Open Source Management Systems
Synchronous Technologies	Skype, Bridgit, Centra, allows lecturers and students to participate in real time using desktop computer, laptop, or in some cases a mobile phone anywhere with internet connection. WEBX is another example.
WEB 2.0	This is a term used to describe a wide range of relatively lightweight tools accessible over the Internet, usually free or at low cost. E.g. Blogs and Wikis
Social and Collaborative Network:	MySpace, Facebook, LinkedIn, and Twitter
Multimedia Achieves and E-Portfolios	You Tube, iTunes, Flickr, or Google Video
Digital Simulations and Games	Educational course specific digital simulation games to improve student engagement and performance

3.0 Research Questions and Hypotheses development:

The following research questions and the related hypothesis are hence developed:

Table 2: Research Questions and Hypotheses development

Research Question	Null Hypothesis
1. Are lecturers at the public university integrating technology in teaching and learning? If not, what are the challenges?	1. Lecturers at the public university <u>are not</u> integrating technology in teaching and learning.
2. Are students at the public university satisfied with the current technology integration in teaching and learning?	2. Students at the public university <u>are not satisfied</u> with the current technology integration in teaching and learning.
3. Is there a relationship between technology integration in teaching and learning and students satisfaction at the public university?	3. There is <u>no significant relationship</u> between technology integration in teaching and learning and students satisfaction at the public university in Namibia

4.0 Research methodology:

4.1 Research Design

A correlation cross-sectional quantitative survey

4.2 Population, Sampling, Data Collection and Analysis Techniques

The study population comprises of both Lecturers and Students at one of the major public Universities in Namibia.

Responses were obtained from a valid random sample comprising of 200 Students and 10 Lecturers at the Faculty of Management Sciences at the University. The responses to the two questionnaires were analysed separately using SPSS version 23. Both descriptive and inferential statistics were used to examine the research questions. Descriptive statistics were used to report demographic information and for inferential statistics. Reliability test and principal components analysis (PCA) was used. Further, in order to explore the relationships between Student Satisfaction and Technology Integration in Teaching and Learning, Pearson correlation and analysis of variance (ANOVA), were used to address research questions accordingly. The Reliability of the instruments were established through Cronbach's Alpha

5.0 Results and discussion:

Table 3: Students Demographic Data

	N	Minimum	Maximum	Mean
Age	197	18.00	44.00	22.2284

Table 3 depicts a response rate of 99% from the students and a mean age of 22 years.
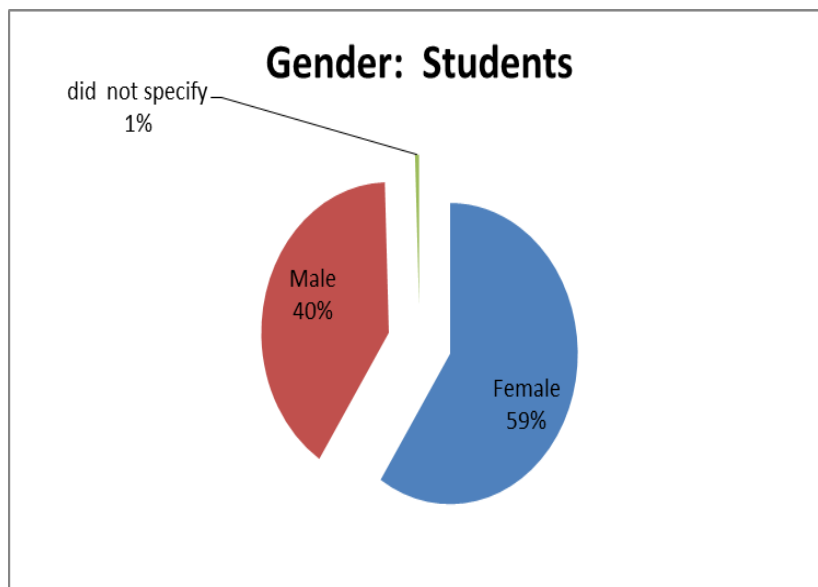

Figure 2: Age distribution among Students

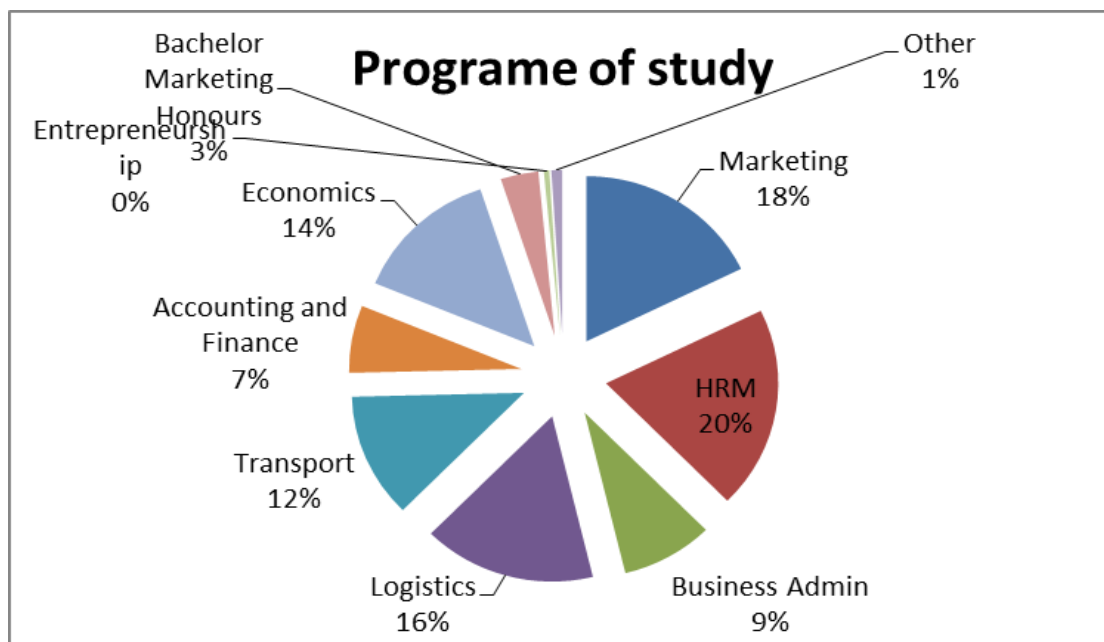Figure 2 indicates that 40% were males, 59% were females and 1% did not specify their gender.

Figure 4: Programme of Study

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Figure 4 indicates that most of the students were from the Human Resources 20%, Marketing 18% followed by the Logistics Programmes respectively.

The reliability test for the student questionnaire reached a Cronbach's Alpha of .86 and the lecturer questionnaire reached .73 which suggest a good reliability for both questionnaires.

The response rate from the lecturers was 100%.

The study found that Lecturers at the public university are not integrating technology in teaching and learning (Insignificant at .721).

The study also found that although the lecturers are not integrating technology in teaching and learning, the students at the public university were satisfied with the current technology integration in teaching and learning (Significant at 0.00). The study further found that there was a significant positive correlation between technology integration in teaching and learning and students satisfaction at the public university as shown in figure 5 below.

Correlations[b]

		ThechnologyIntegration	StudentSatisfaction
ThechnologyIntegration	Pearson Correlation	1	.566[**]
	Sig. (2-tailed)		.000
StudentSatisfaction	Pearson Correlation	.566[**]	1
	Sig. (2-tailed)	.000	

[**]. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=197

Figure 5: Pearson Correlation (Technology Integration and Students Satisfaction)

The main reasons suggested by lecturers for not integrating Technology in Teaching and Learning were are follows:

1.   I do not integrate technology in teaching and

learning because I'm comfortable with my current

teaching strategies (.50)

2.   I do not fully integrate technology in teaching and

learning because my students are comfortable with my

current teaching strategies (.430)

3.   I do not fully integrate technology in teaching and

learning because there is no adequate ICT resources at the institution (.340) In a nutshell, the present study confirmed that the main reason why lecturers do not integrate technology in teaching and learning is due to the fact that both lecturers and students get to a situation whereby they become comfortable with their current teaching an learning practices that they create a comfort zone around it that at the end, it becomes difficult to change. In most cases, this behaviour leads to   resistance to change. Further, the study established that there is a significant relationship between technology integration in teaching and learning and students satisfaction at the public university– the positive correlation suggests that an increase in

technology integration in teaching and learning results in student satisfaction and the opposite may also be true.

6.0 Implications of the Study:

In light of the above findings, it is concluded that there is a positive relationship between technology integration in teaching and learning and students satisfaction. It was also concluded that while lecturers may have one perception of what technology integration in teaching and learning means, the students may have a completely different perception of what it means.

7.0 Recommandations

Regular appraisal of students satisfaction with technology integration is critical. Evaluation of lecturer's perception and awareness of technology integration is essential-to reduce the Knowledge Gap in the area of technology integration in teaching and learning. Specific studies related to technology integration in teaching and learning per discipline(Programme) are desirable since different Programmes may have different needs in terms of technology integration. Lecturers' commendations/support for technology integration is key to ensure adoption and and full technology integration in the long run. Institutional Policy on course web/e-learning presence is fundamental

8.0 Limitations and Future Research:

This study was limited by the lack of clarity in the literature in terms of what constituted full, average and limited technology integration in teaching and learning. Hence the study focused mostly on whether there was technology integration or not in teaching and learning. The study was guided by the self-reported behaviour of lecturers and students and hence this may have affected the assessment. The study also found a gap in the literature to illustrate the concept of full, average, limited technology integration; concepts that could further be explored in future studies.

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