

CHANGE MANAGEMENT IN E-LEARNING
IMPLEMENTATION IN MALAYSIAN PRIVATE
HIGHER EDUCATION INSTITUTIONS

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FACULTY OF EDUCATION

UNIVERSITY OF MALAYA

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LIST OF ABBREVIATIONS

Analysis of Moment Structure	AMOS
Structural Equation Modeling	SEM
Multivariate Analyses of Variance	MANOVA
Statistical Package for the Social Sciences	SPSS
Deputy Vice Chancellor	DVC

University of Malaya

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CHANGE MANAGEMENT IN E-LEARNING IMPLEMENTATION IN MALAYSIAN PRIVATE HIGHER EDUCATION INSTITUTIONS

ABSTRACT

The purpose of this research were to analyses the status and trend, to explore the problems and challenges, to explore the ways to facilitate educators and to analyses the impact of certain identified variables to adapt change management due to e-learning implementation in Malaysia private higher education institutions focusing on educators' perspectives. The conceptual framework model was modified in combination of various theoretical framework of Systemic Change Model which were by Joseph (2010) and Laird (2004) E-learning Cycle Model. Self-administered questionnaire was the data collection instrument for quantitative method and interviews were conducted as data collection method for qualitative research. The samples were educators from private higher education institutions with vision or mission based on e-learning implementation in Malaysia. The questionnaire was adapted from Siebel 4.0-2 Survey Questionnaires (SSQ) by Hambling, 2010. As per findings, through review of the vision and mission in the selected private higher education institutions they integrated teaching and learning, advancement of the knowledge based on e-learning and leadership in service and outreach. The study also found that majority of educators' in the respective institutions was Chinese female lecturers with 2-5 years of working experience. Majority of the lecturers were not married and in between 25-35 years old. Majority of the lecturers were Master's Degree holder and full time working in the respective institutions. This revealed that the junior lecturers were comparatively better in various perspectives such as in different software programs usage, exploring websites and consumption of multimedia tools for e-learning purposes than the senior lecturers in the respective private higher education institutions. There were 99% of the respondents stated that there were no policy on e-learning at respondents' institutions. Majority of the respondents also strongly agreed that more experts were needed to handle change management due to e-learning implementation. It also revealed that advancement in internet with digital realm were reshaping the dimension of e-learning implementation. According to these research findings, as progress through the processes of change management the management facing challenges when creating a new change management plan, engaging with stakeholders, countering resistance to change, and measuring the effectiveness of implemented changes to meet the strategic goals. This study also revealed that

availability of skilled trained staff and educators' working relationship with e-learning centers in each institution was vital for overall success of change management in e-learning implementation among educators in private higher education institutions. The study found that educators' lack of innovation, ineffective roles in decision making for e-learning implementation acquisition were the reason for their resistance to change, fear of change and feeling of insecurity. The study found that a quality and standard in handling change management due to e-learning would enhance e-learning utilization among educators' in private higher education institutions in Malaysia. As a concluding remark, the successful change management among educators needs the concerted efforts of all stakeholders.

PENGURUSAN PERUBAHAN PELAKSANAAN E-PEMBELAJARAN DI INSTITUSI PENGAJIAN TINGGI SWASTA MALAYSIA

ABSTRAK

Tujuan kajian ini adalah untuk menganalisis status dan trend, meneroka masalah dan cabaran, meneroka cara-cara untuk memudahkan pendidik dan untuk menganalisis kesan pembolehubah tertentu yang dikenalpasti untuk mengadaptasi pengurusan perubahan berikutan pelaksanaan e-pembelajaran dengan memberi tumpuan kepada perspektif pendidik di institusi pengajian tinggi swasta di Malaysia. Model kerangka konseptual telah diubahsuai dengan gabungan pelbagai rangka kerja yang terdiri daripada teori sistemik berdasarkan perubahan model oleh Joseph (2010) dan Kitaran e-pembelajaran Model oleh Laird (2004). Borang soalselidik dipilih sebagai instrument untuk mengumpul data dengan menggunakan kaedah kuantitatif dan temubual telah dijalankan sebagai kaedah kualitatif. Sampel bagi kajian ini adalah pendidik dari institusi pendidikan tinggi swasta yang mempunyai visi atau misi berdasarkan pelaksanaan e-pembelajaran di Malaysia. Borang bagi kajian ini telah diadaptasi dari Siebel 4.0-2 Survey Questionnaire (SSQ) oleh Hambling (2010). Dapatan kajian ini menunjukkan visi dan misi di institusi pendidikan tinggi swasta yang terpilih mengintegrasikan pengajaran dan pembelajaran, perkembangan ilmu yang berasaskan e-pembelajaran dan kepimpinan dalam perkhidmatan. Kajian ini juga mendapati bahawa pensyarah majoritinya adalah wanita yang berbangsa Cina dan mempunyai 2 tahun hingga 5 tahun pengalaman bekerja. Sebahagian besar daripada pensyarah tersebut berumur di antara 25-35 tahun dan berstatus bujang. Pensyarah yang merupakan sampel kajian ini mempunyai Ijazah Sarjana dan bekerja sepenuh masa sebagai pensyarah di institusi pengajian tinggi swasta yang terpilih tersebut. Ini menunjukkan bahawa pensyarah 'junior' didapati lebih baik dalam pelbagai dimensi berasaskan penggunaan laman internet dan alat multimedia yang berbeza untuk tujuan pengajaran dan pembelajaran. Terdapat 99% daripada responden menyatakan bahawa tiada dasar mengenai e-pembelajaran di institusi pengajian tinggi swasta pilihan untuk kajian ini. Majoriti responden juga bersetuju bahawa lebih banyak pakar diperlukan dalam mengendalikan proses pengurusan perubahan untuk menangani perubahan yang disebabkan oleh pelaksanaan e-pembelajaran. Ini bermakna perkembangan internet di alam digital ini di sector pendidikan perlu didalami dengan mengambilkira proses pengendalian perubahan yang mantap. Menurut hasil penyelidikan ini, kemajuan melalui proses pengurusan perubahan pengurusan menghadapi cabaran semasa membuat pelan pengurusan

perubahan baru, melibatkan diri dengan pihak berkepentingan, menangani rintangan untuk berubah, dan mengukur keberkesanan perubahan yang dilaksanakan untuk mencapai matlamat strategic. Kajian ini juga mendedahkan bahawa adanya pensyarah terlatih yang mahir dan merupakan individu untuk pensyarah-pensyarah lain berbincang tentang permasalahan mereka tentang e-pembelajaran di setiap institusi adalah penting untuk kejayaan keseluruhan pengurusan perubahan dalam pelaksanaan e-pembelajaran di institusi pendidikan tinggi swasta. Kajian mendapati bahawa kekurangan pensyarah inovasi yang berperanan membuat keputusan untuk e-pembelajaran dan pensyarah takut serta merasa tidak selamat dengan perubahan adalah antara sebab kualiti dan standard dalam mengendalikan pengurusan perubahan kurang memuaskan. Sebagai kesimpulan, pengurusan perubahan yang berjaya di kalangan pensyarah memerlukan usaha bersepadu daripada semua pihak.

CHAPTER 1: INTRODUCTION

1.1 Overview

E-learning is a teaching and learning method that switches educators' responsibilities from instructors to facilitators (Frye, 2002). This is important because an e-learning based pedagogy requires educators to not only extend their teaching potential, but also to adjust their attitudes (Center of Educational Technology, 2005). This is in line with the National Accreditation Board (NAB), an accreditation agency which supports the uppermost of educational values and the authorisation of courses by private higher education institutions (Ministry of Education, 2010).

Education values with ancient methods of teaching and learning are inadequate and should be substituted or reappraised (Rogers, 2002). Well ahead of its time, Khan's eight dimensional e-learning framework proclaimed that learning is basically formed through a combination of eight elements, namely pedagogical, technological, evaluation, management, resources, interface, ethical and institutional (Khan, 2001). Of the eight, the two most vital are pedagogy and technology which are of primary importance in an e-learning setting.

E-Learning uses network technology to design, deliver, select, administer, and extend learning (Ali, 2003). With e-learning, the art of learning and teaching is about gathering, delivering and transforming information into knowledge. This is important in this millennium because knowledge acquisition doubles with the increase in internet usage, globalisation and information communication technology (ICT) (Bajunid, 2002).

Information & Communication Technology (ICT) is key to safeguarding the value of education in higher education institutions globally (National Information Technology Council, 2008). In the 6th Malaysia Plan, ICT was broadly emphasised as

an enabler in Malaysia's education system. In the 7th Malaysia Plan, the National Institute for Trial Advocacy (NITA) aimed of developing the education industry as a profitable industry in Malaysia (National Information Technology Council, 2008).

In order to develop the education industry, Malaysia has invested heavily by incorporating ICT in its educational plans, resources, infrastructure and administrative processes (Ministry of Education, 2012). The government is intent on developing education continuously by offering a Constant Learning Networking Method (Ministry of Education, 2012). In 2010, the Ministry of Education found that about 80 percent of educators spent less than an hour per week of ICT to enhance learning and teaching pedagogy (Ministry of Education, 2012). The ministry has put up around RM6 billion on ICT on higher education initiatives (Ministry of Education, 2012). Yet, the prospect of ICT as an instructional instrument has yet to be fully attained by the educators in Malaysia (Ministry of Education, 2012). This means that the educators are not viewing ICT as a valuable approach to hasten the extending of students' range of knowledge and thinking proficiency, as emphasised by shift seven of the Malaysian Educational Blueprint (2013-2025). This shift essentially stresses on using the influence of ICT to balance the value of learning in Malaysia (Ministry of Education, 2012). An analysis by UNESCO in 2012, found that ICT usage has not moved further than the use of word processing applications as an instructional instrument (Ministry of Education, 2012).

The purpose of incorporating ICT into the education system is not to stop at word processing, but to teach one how to think and develop thoughts so that it allowed one to deliberate for themselves and share viewpoints with others. Prime Minister Datuk Seri Najib Tun Razak (2012), in a dialogue conference at the University of Science Malaysia, mentioned that education consists mainly of what is not learned. When one thinks that they know things, they stop learning. This concept also applies in an e-

learning setting where it is important for learners to gain knowledge and skills, as well as develop learning resources that allow them to keep up with the knowledge economy (Ali, 2008).

Ravet and Layte (2008) in their research concluded that educators in higher education institutions that were managing educational transformations, and making it as good as the old pedagogical way, needed to monitor the efficacy of the learning resources. They also stated that there were many courses conducted through e-learning, like Problem Based Learning (PBL), Self-Directed Learning (SDL), Process Oriented Guided Inquiry Learning (POGIL), Distance Learning or even through traditional classrooms which required students to offer ideas on how they could use e-learning as a tool to find information. The Centre of Educational Technology (2005) stated that students preferred the usage of e-learning, by their educators in higher education institutions, as the core approach to learning. “Three decades from the present moment only the large university campuses would be left, universities would not endure” (Clayton, 2000).

The main point managing an online digital archive is to create and utilise the instructional technology in various ways accommodating student preferences (Ravet & Layte, 2008). In researchers’ view, the important issue to integrating instructional technology was how to accommodate learners with different learning abilities. Clearly, there is a need to look at the educators’ strategies and their attitude to adapting the changes produced by implementing e-learning in learning and teaching. In private higher education institutions, the quality of e-learning is deeply linked to the educators’ mindset about their roles (Ridzuan, 2010). They should be able to adjust according to the changes they encounter in diverse teaching environments (Ridzuan, 2010). The Sixth International Conference on adult education, held in Brazil in December 2009

found that many private higher education institutions still rely on professional programmers to set a syllabus that included e-learning, instead of the educators who are the subject experts (Oral report of the Rapporteur General, 2009).

In order for educators as subject experts, to set the syllabus, the top management of private higher education institutions needs to develop suitable vision and set the mission of the institution. According to Gene and Weibelzahl (2007), the indicator for an institution that desires such change, is the development of a vision and a mission. Institutions that start with these have already determined the direction of their educational goals (Gene & Weibelzahl, 2007).

Vision statement needs a wide discussion to get an agreement on the way a university needs to be (Dagger et al., 2007). The moment a vision statement is conceived, it will aid learners evaluate the aims the institute hopes to attain and how they are going to attain it (Zhang & Nunamaker, 2003). Private universities in Malaysia started strategic planning in 2000 by revamping their vision and mission (Ridzuan, 2010). In that year, there were eight private universities in Kuala Lumpur, and of these only two had vision and mission statements related to e-learning (Ministry of Higher Education, 2012).

Comparably, in 2012, there were fourteen universities in Kuala Lumpur and five of them had their vision or mission related to e-learning (Ministry of Higher Education, 2012). During the 16th Malaysian Education Summit at the Asian Strategy and Leadership Institute (ASLI), the Education Minister of Malaysia, Tan Sri Muhyiddin Yassin in his keynote address said, that in spite of the huge number of private teaching institutions in Malaysia, there was still a severe deficiency in terms of educators that fully utilised ICT (Ridzuan, 2010). This showed that the majority of educators were

very much lacking in adapting to emerging trends in learning and teaching. Adaptation in technologies, processes, people, ideas, and methods requires change management, which needs educators to adapt constantly to the changing technological milieu.

Adaptation using change management is an approach taken to make a smoother transition of individuals, teams, and organizations to the desired future state (Bresnahan, Brynjolfsson & Hitt, 2002). It is a structured approach to ensure that the achievement would be a lasting one to benefit the education industry (Brusilovsky, & Millan, 2007). The fourth Prime Minister of Malaysia, Tun Dr. Mahathir emphasised that people are our ultimate resource (Mahathir, 2007). With that said, Malaysia needs to contribute to the improvement of human resources programmes to support the changes needed to achieve vision 2020, especially in core areas such as education, training and managerial skills (Mahathir, 2007).

The survey of Zakaria and Iksan (2007) stated that with good professional development programmes, the majority of Malaysians believed that to turn our country into a Knowledge-Based economy, we need to incorporate technology for educational advancement. According to the Malaysia Education Blueprint (2013-2025), the Ministry of Education has identified shift four to convert lecturers' career as the most preferred job (Ministry of Education, 2012). Educators' qualities influence students' outcomes (Zakaria & Iksan, 2007). The quality of the education system is only as good as its educators (Ministry of Education, 2012). In short, educators' ability to adapt to change is becoming an issue of dependence in the education system.

1.2 Purposes of the Study

Identifying the components in managing strategies, processes, people and changes in the higher education system is necessary (Noraini & Nor, 2010). Managing change is a continuous and ongoing combination of art and science that assures alignment of an institution (Worley, Dyrud & Flatley, 2005). Change will require successful translation of the long range National Higher Education Strategic Plan (2007-2020) into closely coordinated actions (Noraini & Nor 2010). Several mechanisms drive e-learning and make it sustainable for public universities, such as the Critical Agenda Projects (CAPs), MOHE's National Key Result Areas, the Public University e-learning Consortium, the National Higher Education Strategic Plan (PSPTN), and the Council of the Malaysian Public HEIs e-learning Coordinators (MEIPTA). Actions and strategic plans were initiated by the various committees such as, targets set for e-learning Critical Agenda Projects (CAPs) which require public institutions to make available an e-learning platform by 2010. Public universities have been set thirteen Key Performance Indicators (KPI) they need to achieve in phases, by 2015. The year 2015 is the targeted year when e-learning is supposed to be fully optimised in Malaysia, with a MEIPTA as a platform for cooperation in the field of e-learning among Malaysian public universities.

Nevertheless, most of these mechanisms to drive e-learning focused mostly on public universities and very little on private universities. Furthermore, in terms of policy compliance there was no National e-learning Policy to provide guidance for implementing e-learning in private higher education institutions (Embi, 2011). The study by Embi (2011), conducted in public higher education institutions found that 80 percent of the sample indicated that any existing e-learning policy was created by the institution. The success of e-learning depends very much on its acceptance by lecturers, and their willingness educators adapting to changes as a culture. Without a mechanism

to drive e-learning, private higher education institutions need to manage every change at the institutional level itself. Hence, focusing on changes in private higher education institutions to initiate and implement e-learning is a sensible starting point for the aim of this research. It is surprising that little research has been conducted to justify the claims of an increased interest in the use of e-learning by academic staff (Embi, 2011).

In order to support lecturers in the thrust for transformation, there is a need to emphasise relevant professional development programmes appropriate to the educators' expertise (Embi, 2011). In an interview the researcher conducted last year, the Human Resources Development (HRD) manager from a private higher education institution said that it was always a question whether academic staff should be hired according to their passion for teaching, or for their willingness to learn how to teach effectively online. He added that many lecturers considered reading notes in a digital setup enough to achieve the e-learning based vision and mission. It is difficult, and will take even longer, to change the attitude of those lecturers to scholarly teaching that incorporate with technology when it is not seen as rewarding as publishing in high tiered journals (Maznah & Harland, 2012).

A recent study conducted by the National Defense University of Malaysia in public universities found that the lecturers failed to appreciate e-learning because their understanding of e-pedagogy is limited, due to lack of experience either in their own education or in their training (Jowati, 2011). This shows that even for those public higher education institutions that were given a lot of funding for training, and strategic planning projects and courses, e-learning implementation is still considered as a challenging procedure.

This research focused on educators in private higher education institutions in Malaysia, in the context of developing skills, ability and identifying the measures to improve the quality of adapting changes in e-learning implementation. The seriousness of this problem, if not identified and solved, can ruin the education system for both private and public higher education institutions. This study can contribute as a reference in the education system and be part of the PSPTN from the perspective of private higher education institutions in Malaysia.

In addition, this study was also to analyse the possibility of a relationship between e-learning implementation and change management, change management variables that most influence e-learning implementation, and the ways to adapt fit towards implementing e-learning from the perspective of educators in private higher education institutions within Malaysia. Learning methods have advanced and utilised with changing grades of achievement and recognition (Jowati, 2011). Many of the private institutions have developed, and progressively frustrated by the gap between the ability of technology facilitated teaching and learning and the actual current reality experiences to reach the success point (Bhatti & Kaur, 2010). The National Education Blueprint (2013-2025), documented that Malaysia was looking to change the education system to be at par with developed countries. The Malaysian government's vision was to build a higher education milieu that raised the progress of academic excellence in order for the country to protect its position as a global education hub (Ministry of Education, 2013). Therefore it is necessary to create an e-learning environment that caters for learner diversity that at the same time accommodates sound pedagogy where students can enhance their learning process for better results. Today's education requires organisations to respond to change as quickly as possible.

Likewise, various studies and articles have quoted that educators who could not adapt fast to transformation proved to be the significant obstacle to victory in e-

learning implementation (Maznah, Hamsiah & Mohd Dahalan, 2011). The educational transformation is not fully realised in higher education institutions in Malaysia (Maznah & Sze-yeng, 2011). This, despite the fact that the government has identified a few changes as vital (Maznah & Sze-yeng 2011). Those changes were, to increase Information Technology educated graduates, and a labour force that is highly educated, inventive, expert in using information, knowledge, and current technologies to enable fresh economic opportunities and manufacturing (Maznah & Sze-Yeng, 2011). Change management is at the core of this research because there is much interest in analysing how an higher education institutions manages change, thereby increasing their competitive advantage and innovativeness of its people. This research aim to fill the gap in the literature on educators' perspectives on outcomes in adapting changes of e-learning implementation, and hopefully contribute to policy makers, academicians and professional development organising committee members.

1.3 Statement of the Problem

In the National Higher Education Strategic Plan (2010) e-learning has been identified as one of the Critical Agenda Projects (CAPs) and is a National Key Result Area (NKRA) for MOHE (Ministry of Education, 2011). Embi (2011) identified the main aspects of e-learning to be e-learning policies, governance, Learning Management Systems (LMS), training, the development of e-content and the integration of e-learning in teaching and learning. These aspects exposed a gap in the practice of e-learning that has proved the difficulty of implementing and sustaining e-learning in the Malaysian education system (Embi, 2011). E-learning was not an application that was readily available with the birth of the internet. It came about only almost two decades after the internet was introduced (Alhabshi, 2006). Hence, implementing e-learning is not as easy as it was first thought (Alhabshi, 2006).

Supyan (2011) stated that the main problem with education today is that many people do not understand, nor come to a consensus on why changes are needed and how to proceed with the change. This causes many difficulties and failures in the change management process (Jeremi, Jovanovi & Gasevi, 2012). Most studies in the field of change management have only focused on who plays the major role and what roles were involved in change management. Therefore, this research analyses and provides a clear picture of how it needs to be done, and who is going to face the implications.

Noraini and Nor (2010) found little definitive evidence of the overall effectiveness of change management in the implementation of e-learning in universities within Malaysia. Adding to that, the findings of Embi (2011) and Alhabshi (2006) showed that there were gaps in practicing e-learning implementation. Based on a real life example, a private higher education institution in Malaysia that had a vision and mission on the implementation of e-learning, found the adoption part of e-learning was not a smooth and pleasant process. A majority of educators in this institution were unable to adapt to the new e-learning environment, which led to several resignations. Communication with the human resource manager from a private institution described the challenges faced included lack of know-how, inadequate time for implementation and self-imposed barriers.

Furthermore, the challenges faced by institutions of higher learning in relation to e-learning utilisation (88.9%) was that the academic staff was complacent about the current teaching practices, due to lack of training on how to adapt to the changes in the education system in Malaysia (Afendi Hamat & Sulaiman, 2011). Most lecturers are unfamiliar with e-learning and training is often considered the fastest way to deliver instructions (Embi, 2011). "One finds that the diverse array of theoretical perspectives and overwhelming latest application without proper concepts are the reasons for lacking

in change management due to e-learning implementation” (Conole, 2007). These findings indicated that change is crucial for e-learning implementation in higher learning institutions however there is a gap in identifying the significant of concepts and theories of e-learning and change management for educators.

In order to encourage change in people to include ICT in the educational and administrative processes, Malaysia has heavily invested in its education plan, resources and infrastructure (Ministry Education, 2012). The future economy and social well-being of the nation depends critically on the success of adapt to the educational transformation (National Higher Education, 2007). Universities are being equipped with the latest ICT infrastructures, and educators are being trained to use ICT for education and also in administrative purposes (Gene & Weibelzahl, 2007). Since ICT has yet to be seen to be fully embraced by educators, an analysis of how private higher education institutions implement e-learning is deemed necessary (Maznah & Harland, 2012). Therefore this research has only focus on educators from private higher education institutions with an e-learning based vision and mission, as the focus group. Change management was the main area of interest within the field of e-learning implementation. However there was no study conducted to analyse the relationship between change management and e-learning focus on educator that emphasizing methodological triangulation by using qualitative and quantitative method concurrently. To identify this gap in methodology, there is a need to conduct a comprehensive study on managing change in status, trends, challenges, and ways to adapt change management and to explore the journey that educators experience during the change process of e-learning implementation in private higher learning institutions.

Implementation of e-learning in private higher education is facing difficulties and challenges that can affect the efficiency of learning and teaching (Jowati, 2011).

The aim of this research is to focus on the educators' perspective on change management and bridge the identified gaps in the concepts, theories, methodology and practices. This research will focus on the educators in institutions that have vision or mission towards e-learning implementation. Apart from the higher learning institutions achieving their vision and mission as early as the year 2000, there has been no comprehensive study involving educators group on the implementation of e-learning within private higher education institutions in Malaysia (Jowati, 2011). Therefore, a comprehensive study also needs to be conducted to analyse the relationship between e-learning and change management and identify which change management variables that can be a factor for e-learning implementation in private higher learning institutions that have vision and mission towards e-learning implementation.

1.4 Objectives of the Research

The objectives for this research are to achieve the following:

1. To analyse significant relationship between e-learning implementation and change management in private higher education institutions within Malaysia from the perspectives of educators.
2. To identify which change management variables most influence e-learning implementation in private higher education institutions within Malaysia from the perspective of educators.
3. To analyse the status and the trend of change management in e-learning implementation in private higher education institutions within Malaysia focusing on educators' perspective.
4. To explore the adaptation of e-learning implementation in private higher

education institutions within Malaysia focusing on educators' perspective.

5. To explore the problems and challenges of change management in e-learning implementation in private higher education institutions within Malaysia focusing on educators' perspective.
6. To explore ways for educators to adapt to change management due to e-learning implementation in private higher education institutions within Malaysia.

1.5 Research Questions

Following are the research questions for this study:

1. Is there a significant relationship between e-learning implementation and change management in private higher education institutions within Malaysia from the perspective of educators?
2. Which change management variables that most influential e-learning implementation in private higher education institutions within Malaysia the perspective of educators?
3. What are the status and trends of e-learning implementation in private higher education institutions within Malaysia from the perspective of educators?
4. What changes occurred in private higher education institutions within Malaysia in e-learning implementation focusing on educators' perspective?
5. What are the problems and challenges faced by educators in adopting the changes due to e-learning implementation in private higher education institutions within Malaysia?

6. What are the ways to initiate change management for e-learning implementation by educators in private higher education institutions within Malaysia?

1.6 Research Hypothesis

Following are the research hypothesis:

H₀₁: E-learning implementation has no significant effect on change management in private higher education institutions within Malaysia from the perspective of educators.

H₀₂: All change management variables have the same degree of influence in e-learning implementation in private higher education institutions within Malaysia from the perspective of educators.

1.7 Justification of the Study

Firstly, the research analyses the relationship between e-learning implementation and change management, which change management variables influence e-learning implementation, status and trend of change management in implementing e-learning in Malaysian private higher education institutions. Status and trend in this research means state of direction with respect to the changes that happened currently and previously. Educators' unwillingness for ICT suggests that there is still a long way to advance education to be capable of earning complete technological advancement by the 21st century (Yaacob & Paula, 2006). Barak (2006) tells that tutors' usage of ICT for their personal learning had forestalled the need to extend the changes into the higher education institutions. This was followed by Tells (2007), who indicated that it was found that educators lacked information on the functions of ICT in learning and teaching, and an ability to adapt to the changes brought about by ICT.

Secondly, this research analysed responses from selected private higher education institutions with e-learning based vision and mission, to find out the problems and challenges they faced in implementing e-learning. Problems and challenges in this research mean dealing with choices of actions either for the educators themselves or for the society that demands an explanation and justification. It is tough for any higher education institutes to accept e-learning as a practice for educators in authoritative functions. A fresh initiative needs to be started on how to manage the changes that of most significance to educators (Hiltz & Turoff, 2002). Attempts have been made to fill the gaps identified in previous studies conducted in Malaysia. For example, Balakrishnan (2011) recommended further study on adapting changes for professionals such as lecturers and tutors, through training that is able to continually refine the standards that characterise its work from the customers' perspective.

A research by Ghavifekr (2012) on systemic change management in an e-learning system involved a case study of an open university in Malaysia. It explored the systematic implication of e-learning implementation in an educational organisation system. The research was related to the ability of the management to identify a long-term vision, mission and strategies that could be delivered effectively and the best practice strategic management techniques to deal with the new changes. The research concentrated only on universities in Kuala Lumpur. Another similar research by Ahmad (2011) looked into ICT use among selected university and college lecturers in Pakistan. There was also another research by Dewitt (2010) to develop a collaborative mobile learning module on the topic of nutrition in Form 2 Science. It was a developmental research in selected schools in the Klang Valley with three phases of needs analysis, design and development and evaluation. However, there has been no research that used quantitative or qualitative methods to survey the gap in practice,

methodology and knowledge in the private higher institutions from an educators perspective to change management towards e-learning implementation in Malaysia.

Thirdly, the findings of this study intends to lead other researchers to further research on change that occur upon implementation of e-learning in private higher education institutions. At hand, is a rich and rising body of literature of the three main elements and six subelements that make up this research's conceptual framework. This research also explored how these elements are interconnected and mutually supporting, through the consequences of change management towards e-learning implementation. Educators required opinions on improving the learning atmosphere that would aid them to monitor the technology (Hara & Kling, 2000).

Fourthly, this research expects to be a reference for policy makers, academicians and researchers to aid the discovery of significant correlation between change management and e-learning implementation from educators' perspective in the future. The reasons are because the instruments and conceptual framework reference to this study are based on a thorough study of theoretical frameworks of instructional and change management theories. A pilot study was also conducted making the findings of this research more appropriate as a draft of reference for policy makers, academicians and future researchers. In addition, a number of the common change management models (Miller & Parry, 1998) were established for more stable education environment than the fast changing environment of educational transformation. This directed the researcher to include a modified conceptual framework in order to reflect e-learning implementation, and derive a set of essential variables for change strategists and change agents in particular, to be able to positively proceed with change management processes. The conceptual framework can turn into a tool for educators and policy makers in the future. Searching the literature and conducting interviews help conclude a thorough analysis on the body of knowledge in this research.

1.8 Theoretical frameworks

The goal of this topic is to lay the groundwork for an integrated approach that covers in two parts, which are the theories of e-learning and the theories of change management.

1.8.1 Theoretical model of change management

Educational institutions today are facing a dynamic change in environment because of computer networking (Grossman & Salas, 2011). This required educational institutions to adapt to the changes by rewriting job descriptions and redefining key performance indicators for educators (Mohammed Sani Ibrahim & Mohd Izham Hamzah, 2012). Higher education requires a workforce that is equally flexible and responsive which is able to adapt rapidly in radically changing conditions. The goals of change are various (Bal et al., 2010). Mainly it strives to expand the capability of the institutions to get used to change in its milieu, and then it will seek to change employees' behavior (Mehanna, 2004). For survival of an institution, it must respond to changes as a goal oriented activity (Mehanna, 2004). In responding to changes, the determination to inspire innovation that empowers employees is essential for scheduled change activities (Oliver & De Freitas, 2004). Managing change activities is the responsibility of change agents (Oliver & De Freitas, 2004).

Kotter's eight step plan, action research and organisational development are the three main approaches for change managements (Kotter, 2010). Lewin (1946) described change as a three stage process when he developed an early model of change (Forsyth, 2010). According to Lewin, all changes that happen depend on two major reasons, and they are the pressure to maintain status, and to make the changes possible (Burnes, 2004). Lewin also pointed out that the strength that support change will increase the

strength that rejects change, decreases (Burnes, 2004). Unfreeze, change and refreeze was commonly referred to as the three stage theory of change (Lewin, 1946).

Overcoming the existing mindset is the first stage that will continue until individuals in the status quo found it uncomfortable (Lewin, 1946). Unfreezing can be achieved by the use of three methods, which are increasing the driving forces through behaviour of the existing situation, decreasing the restrictive forces that negatively affect movement from the existing equilibrium, and finally, find a combination of both methods (Lewin, 1946). The total number of people who are against the changes will decrease when the number people who support the changes increase (Forsyth, 2010). The 'refreeze' stage also helps people and the organisation to institutionalise the changes (Forsyth, 2010). The outward signs of the refreeze are a stable organization chart and consistent job descriptions (Lewin, 1946). This means that the changes are used all the time with a new sense of stability, confidence and comfort especially in the education industry. In the absence of this state, it is very difficult to tackle the next change initiative effectively (Forsyth, 2010).

Thus, planning for change, especially in the education industry, is vital. A planned change model was introduced by Kolb (1970) and modified by Lippit, Witson and Westley (1985). This model was designed based on change agent to share knowledge openly and be implemented with a clear status (Lippit et al., 1985). The Kolb (1970) model was used as a management tool to guide the implementation process of a system that supports the budget (Ginzberg, 1981). The model was able to identify issues requiring attention from the users of the conventional systems (Lippit et al., 1985). The seven stages in this model are:

1. Scouting as the phase to determine the changes
2. Entry as the phase to construct agreement and mutual understanding

3. Diagnosis as the phase to discover the depth of improvement goals
4. Planning as the phase to plan improvement in the changes
5. Stabilisation as the phase to evaluate the changes
6. Evaluation as the phase to determine the need to terminate the changes
7. Termination as the phase to terminate the changes and introduce new ones.

The Eight Step Change Model by Kotter was another popular model for planning, implementing and sustaining change (Kotter, 2010). Kotter's eight step model breaks down the organisational change process, which identified a sense of urgency, created a guiding coalition, developed and communicated a vision and strategy for the specific change, empowered the employees for action, generated short term wins, consolidated gains, produced more change and anchored the new changes in the culture (Kotter, 2010).

Besides Kotter's view, Miner (2005) earlier stated that establishing the urgency in order to get the attention and commitment of the change leaders, is critical first step in any change effort (Miner, 2005). In 1990 onward, various other change management theories were brought into the education system (Miner, 2005). According to Miner (2005), the magnitude of forces that reinforce complacency helps to maintain the status quo. A change leader should actively elicit participation from all coalition members (Elaine, Tatiana & David, 2014). The leaders' participation provides association in the sense of ownership of the changes.

Change needs to be led and managed for the intervention of change management cycle to be effective (Forsyth, 2010). However, many institutions focused on the management aspects of change rather than development of it. The major agent in the change management cycle in education will be the educators (Forsyth, 2010).

Educators are the most important and critical factor. It is about balancing the management and development, of change or both at the same time as revealed by the change management cycle (Forsyth, 2010). Usually the reason for change failure is that the impact of change on individuals from all perspectives was not taken into consideration (Price et al., 2010).

Besides that, every educator in the system will react in their unique way towards change (Price et al., 2010). Some would reject, others would accept while some would embrace changes (Price et al., 2010). Every activity of the change management cycle will be according to the change framework (Price et al., 2010). According to Banathy (1996), communal acceptance of a structure is needed for systemic educational restructuring efforts. Through systems' perspective and the redefinition of education as a system, it is likely that educational systems can be designed to inspire and sustain learning, as well as complete the expansion of human potential (Banathy, 1996). The facilitator for systemic change progression must aid the community to improve their vision of the ideal educational system. Stakeholders should generate and take ownership of a common vision comprising an innovative educational system, and the desire to progress towards (Jenlink et al., 1996). In achieving such consent, educators must have the capabilities to achieve the desired progress to attain the vision (Jenlink et al., 1996). They also need to have a sense of ownership, nurtured by mutual consent. In other words, the group must have the skills to start the change required by the members (Jenlink et al., 1996).

Research conducted by Berrett, (2001) showed that educational institutions were more likely to embark on transformational change when headed by leaders. Change can produce what seems to be only a minimal feedback at the time it is initiated but the resistance prolongs until the process of managing the change takes place. Robbins and Judge (2006) have seven strategies for the use of change agents in dealing with

resistance. The strategies are communication, participation, building support, building commitment, negotiation, selection of people open to changes and coercion. Systemic change should be portrayed as a democratic decision oriented methodology, with fundamental beliefs for the education system surrounded by the changing atmosphere of gradually complex interrelated society (Afendi Hamat, Embi & Sulaiman, 2011).

Systemic change is a recurrent progression that considers the impact of change on the whole. Systemic change suggested that a change in the system is surrounded by the system itself. Inner and outer learning are equally necessary for the systemic change process to follow. In consequence, learning to change is obligatory for the process of change in complex systems to happen (Hattie & Timperley, 2007). This method of learning to change is allied with the systems higher levels of conscious responsiveness, and the expansion of evolutionary perspectives (Banathy et al., 2000). Recombining stakeholders and the educational systems, in which they are tangled, will inspire and generate learning processes for all involved in the educational system (Banathy, 1992).

1.8.2 Theoretical model of instruction

Gagne and Dick (1983) in their theory of coaching delivered treasured thoughts to instructors and educators. They classified five major types of learning, namely verbal data, intellectual skills, perceptive strategies, motor skills and approaches. Their thoughts of instruction were divided into internal and external circumstances. Internal circumstances deal with the educated proficiencies of the learner. External circumstances deal with the motivation available externally to the learner. The theories compose and formulate nine measures of guidelines planned to encourage the transfer of knowledge or information. The system appeals most to novice educators who need structure for their lesson plans and holistic view in teaching. Thus, the Dick and Carey model as in figure 1.1 with its nine concepts are used to classify instructional aim,

instructional study, analyse students and contexts, presentation aims, valuation tools, instructional plan, instructional media, assessment and study instruction (Dick & Carey 2001).

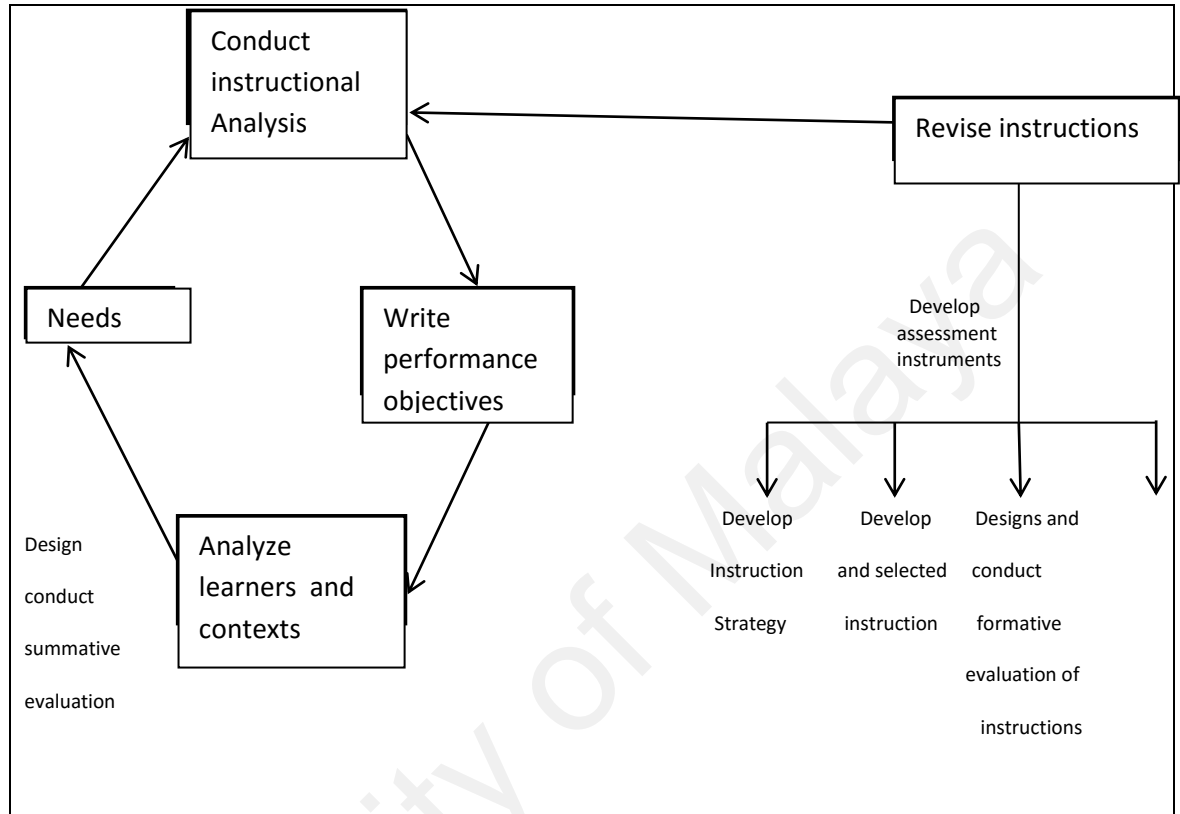


Figure 1.1: Dick and Carey system approach model adapted from Dick and Carey, 2001

Kemp, Marrison and Ross (2001) presented in figure 1.2 is an instructional model that focused on curriculum and planning. They identified nine elements that should receive attention in a comprehensive instructional development plan which are:

1. Classify instructional planning program.
2. Test student's features that would obtain consideration in preparation.
3. Theme content and analyze assignment works linked to specified aims and determinations.

4. Stated instructional ideas for the student.
5. Order content within all instructional parts for rational learning.
6. Plan instructional plans so that all students have major goals.
7. Design the instructional note and distribution.
8. Progress assessment tools to evaluate aims.
9. Designated incomes to sustain teaching and learning works.

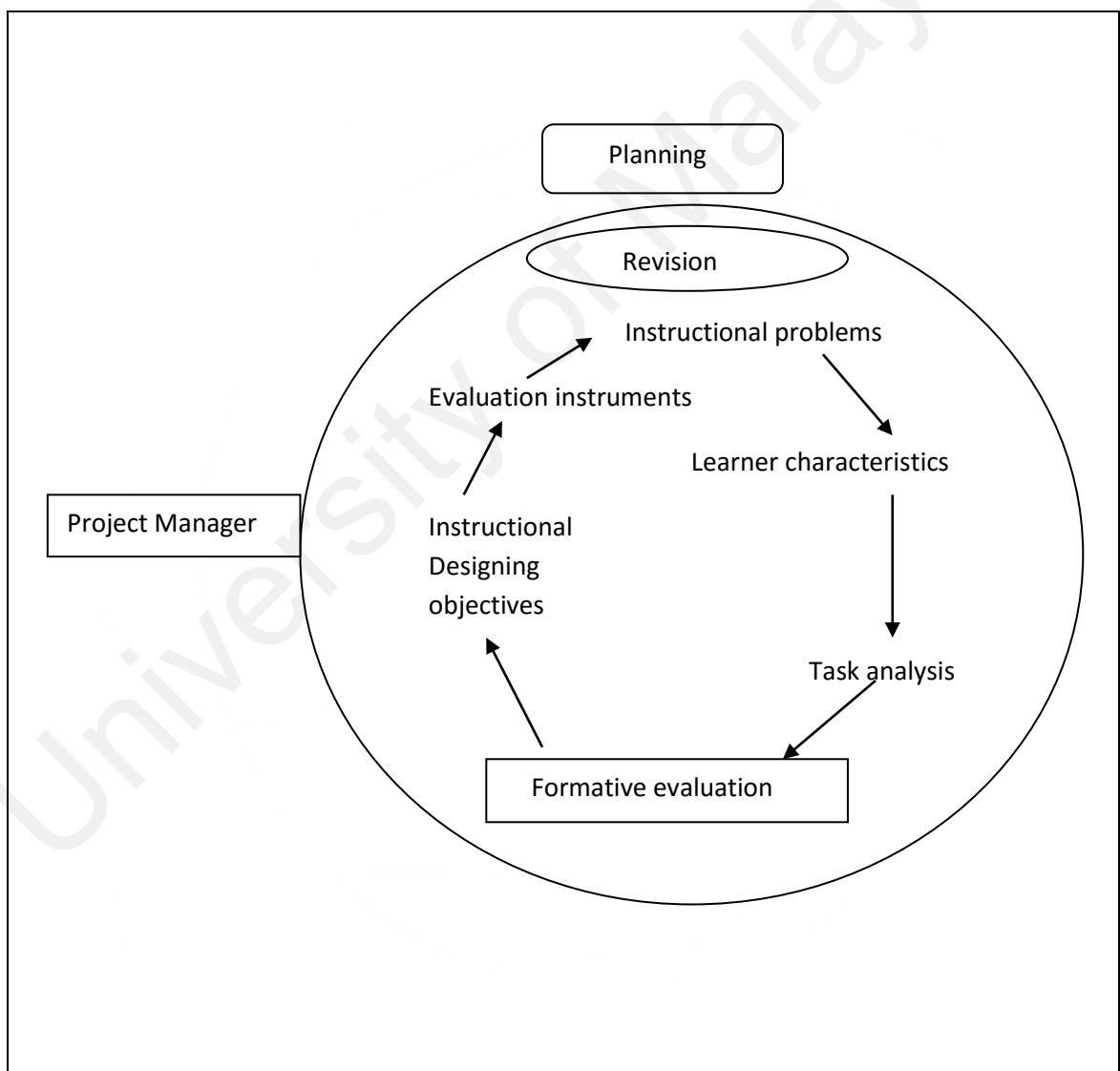


Figure 1.2: Kemp, Marrison and Ross model, 2001

Alternatively, there were also three other main features in the grouping, namely instructional plan, utilise study, and decisive assessment (attempt out and review) encompassed in models. Item oriented and system oriented from high to very high level of skill is needed in terms of instructional plan ability (Kemp, Marrison & Ross, 2001).

Although the Dick and Carey Systems Approach Model (2010) are similar to the Kemp, Morrison and Ross Model (2001), they vary in basic components. This approach model guides educators in completing their data analysis and teaching requirement, before choosing the correct medium. In summary, the Dick and Carey System Tactic Model, was innovative in their approach that lay in developing a multiplicity of instructional strategies. It is based on sound pedagogy to accommodate e-learning which is related to the main emphasis of this research that catered for students with diverse learning styles (Finnegan, 2014). In short, the Kemp, Marrison and Ross, (2001) model shared common ground with this study as it also planned to emphasis the content and demand of educators.

Molnar (1997) was of the opinion that technology and education were greatly inter-connected and that it urged output. It also needs staff well experienced in using computers. Within the education sector, educators possess skills to address what Kress (2005) called the “new illiteracies”. The tools of global networking learning can be extended in a wider scale. The flow of information can spread to other networks where learning took place. To sum up, Molnar (1997) felt that educational technology, when correctly used, could produce active resources for learning, and was a way to expand human capacity and reasoning to compensate for human limitations. Educators’ main area of debate was the issue of motivation. Nanda and Sorensen (2010) concluded that e-learning portrays that educators have different personalities. With e-learning, it is

possible to guide the student to learn outside the classroom through designed courseware, group assessments or group project (Nanda & Sorensen, 2010).

As educational innovations became more attuned to the needs of the students, various software were developed to act as the tools necessary to guide and monitor online learning activities. Thus, the concept of collaborative learning (CL) was introduced in 2001 (Nobel, 2010). Collaborative learning envisions supporting active student involvement through e-learning (Nobel, 2010). In collaborative learning, students were able to work together in small groups towards a shared learning goal. Collaborative learning emphasised collaborative efforts among students with the educators' guidance (Nobel, 2010). Students were accountable for their own learning. Hence the achievement of one aided by other learners is positive (Gokhale, 1995).

Though specific attitudes, skills and practices vary by domain, the method of promoting multidimensional development by targeting these variables is applicable to all domains of expertise (Nobel, 2010). Most educators, who were reluctant to incorporate computers in their teaching, were also those who were unfamiliar with computers and were unsure of using them (Egbert et al., 2002). Egbert et al., (2002) held the view that every educator needs to develop certain attitudes with regards to their role in the class, the types of classroom activities that should be undertaken and their personal views on education. ICT integration varies according to individual teaching beliefs, perspectives, attitudes towards ICT, prior experience and how the educators incorporate it into their practices (Ascari, 1995; Asan, 2003; Busch, 1995; Bal et al., 2010).

In order for educators to implement e-learning in their teaching practices, they are not only required to make use of ICT, but also to exhibit positive attitudes and beliefs towards ICT (Asan, 2005). Webber and Robertson (2000) confirmed that

‘successful learning manifests are alterations to belief and practices.’ Studies have revealed that the educators exhibit a wide range of obstructive behaviors and resistance to ICT use (Jimoyiannis & Komis, 2007; Leask, 2001; Elmarie, 2004; Montesano, Micheal & Onn, 2012). Educators’ attitudes towards ICT have an influence on the uptake, integration and sustainability of their learning and teaching practices (Leask, 2001). The attitude and beliefs of educators to ICT will influence the usage of ICT in classrooms (Asan, 2003). Some educators may not want to use computers for teaching even when it is available (Nawawi et al., 2005). Educators should have a positive attitude towards ICT for effective implementation and integration of ICT in the education industry (Asan, 2003). Educator’s knowledge or experience in computers would have an influence on their attitude towards ICT. Educators who have confidence in their ICT skills would exhibit a positive attitude toward computers (Busch, 1995). Further, educators should be comfortable when ICT and education are successfully integrated (Chen & Chang, 2005).

Therefore, training should be flexible to suit all educators and should also be comprehensive enough to provide skills and knowledge for all levels and categories (Tenbusch, 1998). Davis et al., (1989) investigated the causes of individuals’ failure to use computers. Davis et al., (1989) stated that computer usage was expected to connect with the aim of its usage. Glathorn, Jones, and Bullock (2006) indicated that the key to success in technology is experience. Educators believed there were significant factors when integrating ICT successfully which determined how they were expected handle tasks and problems, and this was a strong predictor of behavior (Albion, Asan & Bajares, 1999). Educators are more willing to change when their beliefs were aligned with new, innovated learning and teaching (Ehman, Bonk & Yamagata, 2005).

1.9 Conceptual framework

This topic covers the background for developing the framework the researcher is proposing. Theoretical viewpoints are reiterated in this section to provide a more coherent flow of discussion. This conceptual framework was constructed according to the information on the various theoretical frameworks that the researcher has gathered. Structuralisms, system theorists and functionalists, viewed institutions as being governed by static social relations which analyzed and changed to maintain the status quo (Giddens, 1982). The action theory stated that human beings were “knowledgeable and capable agents” whose creative actions were both bounded and enabled by the rules, resources and structures of the institutions (Giddens, 1982). Marx (1951) argued that human agents both constructed their social world and was conditioned by it.

This opinion that social transformations are an ongoing process has certain implications for higher education. It implied the importance of human responsibility in the non-functionalist, dialectical interaction between human factors and social constraints (Grossman & Salas, 2011). It meant a relative autonomy from institutional structures. A relative dependence on those structures also implied the active participation of staff in the learning and teaching process (Grossman & Salas, 2011). Therefore action approaches of change management toward higher education on educational transformation should be recognized.

Thus, in this interaction between human factors and the restraints of social structure the human agents are seen as automatons regulated by the system in a mechanistic way, but also having personal knowledge, values and attitudes and being able to transform the educators (Grossman & Salas, 2011) This means that educators not totally subordinated to the rules and structures of their institution, but able to bring about changes (Grossman & Salas, 2011). However, as Watkins (1985) pointed out,

they must first develop a suitable conceptual vision of the change as well as possess a sound knowledge of the existing conditions.

Moreover, educational administrators should not only be aware of the dialectic interaction between actors and social structures, but should also be prepared to critique and reflect on the theoretical assumptions upon which the present organisational structures are based (Watkins, 1985). Theory plays a crucial role in producing solid empirical research outcomes, regardless of the discipline (Carr & Nelson, 1996). By placing theories and practice together as a total of critique and reflection, educational administrators can avoid a one dimensional stance resulting from a solely technical view of education. The relationship of theory to practice is of essential importance in understanding educational or any other organisations (Frank, 2014). Theory and practice along the lines of Carr and Nelson (1996) meaning “.....the idea of ‘theoretical theory’ could be utilized in numerous means. For instance, utilized to state the goods of hypothetical enquire. It was also obtainable the method of common rules, causative clarifications, and the alike.”

Considering models and recognizing several features in learning is only a portion of the theory. Interpreting them to consider their significance and efficient performance is the dare to change (Dalziel, 2005). It was not always apparent how instruction could best be created to confront the change in requirements and learner anxieties (Dalziel, 2005). In combination with the two major elements of my research, which are change management and e-learning, a conceptual framework was built based on the theoretical framework of Systemic Change Model by Roberto (2010) and for E-learning Cycle Model by Philip and Laird (2004) as presented in figure 1.3.

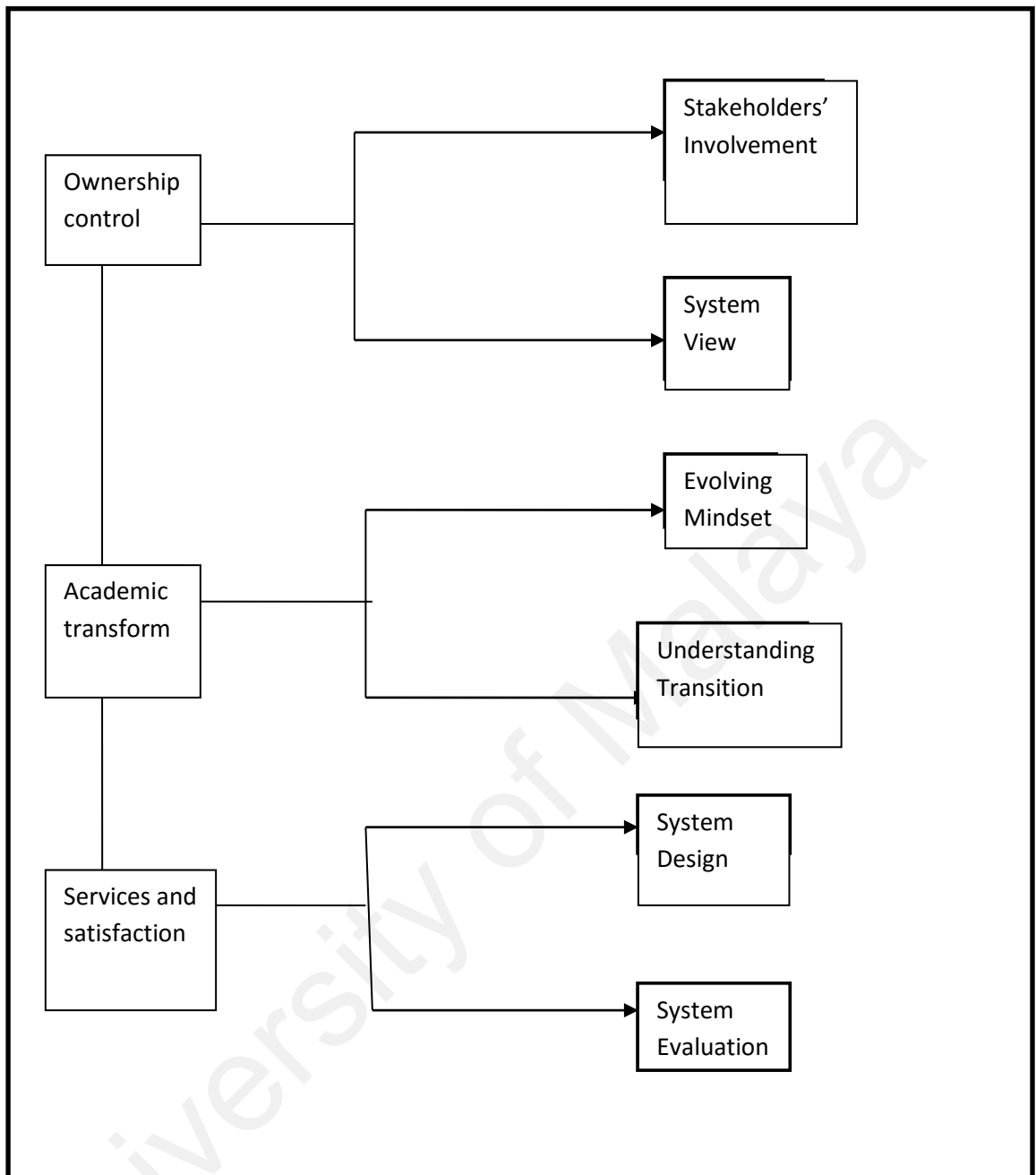


Figure 1.3: Conceptual framework model of the research. Adapted from Systemic Change Model by Roberto, (2010) ; Philip and Laird (2004) E-learning Cycle

Instructional Model.

Both models were adapted for the conceptual framework of this research because they both concentrated on the best practices for e-learning implementation. They offer simulations, outlines, tools and cases to assist this research in managing change for implementing e-learning more effectively. The systemic change model had

been referred by 191 research articles over the period 2010-2012 and of that a total of 176 were for e-learning implementations (MS Academia, 2013). On the other hand, the e-learning cycle instructional model had been referred by 189 from 2005-2012 and of that total 183 was for e-learning implementation (MS Academia, 2013). The two major domains of this research, e-learning and change management, are dependent on each other.

The earlier systemic change model have five variables namely broad stakeholders ownership, systems view of education, evolving mindset about education, understanding the systemic change process, system design in a domain of learning community. The adapted systemic change model for this research includes six major variables, and they are, stakeholders' involvement, systems view, evolving mindset, understanding transition, systems design and system evaluation. As for earlier e-learning cycle instructional model includes three variables which are ownership, transformation, interest motivation and reward. However for this research e-learning cycle instruction model was adapted and have three variables includes ownership control, academic transform and services and satisfaction.

Both the e-learning and change management domains are shown as being dependent on each other due to adaptation in the conceptual framework. The adaptation in conceptual framework for this research is based on systemic change because the implementation of e-learning is a total transformation of the current educational paradigm. While systemic change has different meanings for different people, in this research it is defined as a paradigm change. The similarity and differences from the earlier model and proposed conceptual framework after the adaptation works as a lens through which the method to manage educational change efforts in private higher education institutions can be evaluated. It also serves as a tool to inspect educational change efforts and literature.

Change management is a multidisciplinary method (Goetsch & Davis, 2014). The models' integrated outcomes are from the disciplines of organisational behaviour, business practice reengineering, total quality management, project management, motivational and cognitive psychology, educational change leadership, problem solving, decision making and diffusion theory. The most common of the change management models usually comprised on the subsequent four sets. The first models offered prescriptive phases of what should and should not be done (Canterucci & P.W, 1995; Carr & Nelson, 1996, Canterucci, et al., 1998). The second group of models sketched out the entire change process by working from problem solving and traditional project administration approaches (Connor, Lake & Stackman, 1988; Bennis & Mische, 1995, Clark, 2005). The third group recognised that change literature specifically deliberated on IT implementation based change management (Benjamin, Brundage, & Morone, 1994). The fourth group offered detailed analysis tools and methods to maintain key change management issues such as resistance to change (Jellison, 1993, Jacobs & Kotter, 1998) rates of adoption of change by individuals (Jick, 1993), project management from PA Consulting Group (Randolph & Posner, 1988), change audits , communications (Barrett & Luedecke, 1996), stakeholder analysis (Grundy & Bowling, 1997), organizational culture (Schneider, 1998) and organizational justice (Beugre, 1998). The conceptual framework developed in this research is based on the third group, developed from various change management and e-learning literatures. Educational change has two basic categories, piecemeal change, which requires constructing adjustments to the existing standard of education, and systemic change which demands progression (Reigeluth, 1994).

The e-learning cycle instructional model includes three variables. The first variable is the development phase of ownership and control, the second variable is academic transformation, and the third is the system strategy and analysis of the

progress in the private higher education institutions. These variables lead to campus wide incorporation of online education in a learning community. The variables of change management and e-learning are the variables employed in this research analysis to deliver comprehensive understandings of the skills and proficiencies required to maintain the core which is the learning organisation.

The first major independent variable used in this research is the ownership control, which served as a starting point for implementing e-learning in private higher education. The difference between the earlier model and the adapted model for this research are for the adapted model the variable of ownership was modified to ownership control. It consists of two dependent variables which are the stakeholders' involvement and systems view. In the earlier model those variables are broad stakeholder ownership and system view of education. This is because in this phase, key stakeholders who are to be involved identified and the impact of the new desired state of a successful e-learning implementation will be accurately accessed. This helped reduce the chance of failure by gaining support from power groups who had already implemented e-learning and had gained almost 100 percent usage by educators for the purposes of learning and teaching (Luckner & Nadler 1997). The range of the change should be established convincingly and intelligently and be submerged into the planned perspective of the institutions (Canterucci, et al., 1998). Otherwise, the chance of failure is also amplified (Hopper, Want & Needham, 1995).

In order to lower the extent of failure, online education sometimes characterised as a disruptive knowledge in education, has the capability of adjusting the distribution and observation. Implementing online education surrounded by a sustaining enterprise, presents an exceptional set of encounters (Jaworski & Coupland, 2014). Leading these challenges is the support for the stakeholders to have a system view of the boundary between the current and future institutional practice. Rowley and Sherman (2004)

decided that these challenges were overwhelming, and deprived of a clear planned route for the respective institution. With regard to stakeholders' involvement, similar to the earlier model and proposed systemic change framework the significance was very important in education. The benefit to each stakeholder is governed by the range of welfare that depends on other members in the community. Consequently, they should be concerned in confirming that each educators goes through all the educational projections in line for educational transformation in order to carry on the growth for improving the community (Clinton et al., 1996). Furthermore, education transformation towards e-learning has a direct effect of enhancing the quality of students generated by private higher education institutions. These are a few of the reasons why all members of the community involved in this research, invested in the Malaysia education system.

In summary, the members were defined as stakeholders had equal voice. Stakeholders composed of various backgrounds, skills and thoughts reinforce the change process. If stakeholders' thoughts are left out, and only the opinions of marginalised individuals taken, then the change process is weakened and will be more susceptible to adverse reactions from these same stakeholders. Therefore stakeholder's involvement is being utilised in this research compared to broad stakeholder ownership in the earlier model.

Placement of the stakeholders at the core of academic administrative processes ensures the setting of high standards for quality, with minimal dismissal and cost, and allows systemic review of the e-learning system (Kong & Jamil, 2014). Their involvement in an online course is in the form of the learner who contributes to online discussions and also assists on learning, the instructor and the department which subsidises the learning material. They also provide personal and skilled insights, course credit or articulation principles, and act as media developer who develop and preserve the learning infrastructure, and supports the online educational practice, for both

learners and instructors. Their system view is an educational resources improvement contract which identifies them as course content experts, assigns institutional roles and practices for the online distribution of designated educational materials.

The second dependent variable in the conceptual framework of this research is the system view. Capra (1999) described it as the elements of the internal system that needed to progress in order to complete the cycle of the internal structure. Besides viewing structures, educational stakeholders are also required to improve on the system view of educational systems, besides acting seriously on systemic change determinations in education. This variable has the similar rational to the earlier model which is systems view of education. According to Capra (1999), the activity of systems involved a process known as transaction and simultaneous which mutually interdependent (Capra (1999). Raising a systems view needs “the world in terms of relationships and integration” (Capra, 1999). Banathy (1992) offered three dissimilar explanations to explain the thought of a systems view and its importance to the systemic change process. “The systems view helps to understand the true nature of education as a complex, open, dynamic human activity system that operates in changing multiple environments and interacts with a variety of systems” (Banathy, 1992). That is to say, the systems view is a certain way of looking at e-learning implementation at the private higher education institutions.

The lack of a systems view can lead to unforeseen events especially when educational stakeholders are not aware of the interrelationships that exist within educational systems. It is likely that developing a systems view helps educators to change their mindsets about e-learning as an educational transformation. According to Banathy (1992), “Systems view in the setting of any human structure, is an upcoming creating activity” (Banathy, 1992).

The second independent variable studied in this research is academic transformation. This major variable branches out to two dependent variables, evolving mindset and understanding transition. A powerful guided coalition that offers the essential properties (Kliem, 1996), believed in change process (Canterucci et al., 1998) preparation (Jacobs & Kotter 1998; Nadler & Tushman, 1997) and upheld or constructed reiterative, 'top down, bottom up' figures, and communication flows through the implementation is vital (Canterucci et al., 1998; Clinton et al., 1996; Clark, et al., 1998). Kliem (1996) stated that the conceptual framework based on an e-learning implementation approach should be implemented flexibly throughout the process and be capable to handle the unexpected (Canterucci, et al., 1998; P.W & Kliem, 1996).

This strategy should also offer appropriate short term or long term gain throughout the project (Jacobs & Kotter, 1998). These gains celebrated victory points and sustained momentum during the implementation process (Canterucci et al., 1998). Most private higher education institutions required a number of major changes unfolding at any one time, so it is required to recognise all these change programs, measure their impact and integrate them wherever possible and remains to display this condition during the implementing process (P.W & Kliem, 1996; Canterucci, et al., 1998). The variables of evolving mindset and understanding the change process is developed to provide a baseline for educators to ensure learner transformation. The transformation variable from the original model was adapted as academic transformation. This is because the transformation is towards changing the mindset and the level of involvement, and also to inculcate the degree of self-reliance in faculty members, both for their individual capability as well as to create effective learning for the online setting in this study. Learning prospects in the online environment must emphasise in-depth handling of information, multi-modal learning elements, problem-solving involvements, and learning through individual research and investigation (Philip

& Laird, 2004). Teaching in an online setting is repetitive, hierarchically structured, and constructive (Philip & Laird, 2004).

Moreover, there is a socio-cultural and ideological vision that profoundly impresses in the face to face mode of teaching. When thinking of university, we think of lecture hall, with a lecturer and a group of students, we think of standardised exams, grade levels, courses and subject areas, we think of grades and credits (Caine & Jenlink, 1997).. Some educators have been acculturated to look at e-learning in a certain process, and until they progress from the conceptual models of what they believe is “real university” (Tyack & Cuban, 1995), we will not attain essential changes in education (Senge & Scharmer, 2000). This is the reason

In order to attain these essential changes, the usage of the terms mind set, worldview, and paradigm are all synonymous with the change in the model. Senge and Scharmer (2000) expounded that models has intensely embedded potentials, simplifications or even pictures or images that affect how the value of the world is raised and how action is taken. Very often we are not consciously aware of the effect they have on behaviour (Littlejohn & Pegler, 2014). The term mindset is used here as the term itself describes the key problem that educators experience in education today. With appropriate training, facilities provided and motivation given, e-learning implementation in private higher education is slow usage by educators. When one’s mind is set, it is almost impossible to change the disposition. Yet it is this nearly unmanageable task of evolving mindsets or recapturing (Fullan & Hargreaves 2002; Fullan & Stiegelbauer, 1991) that is vital to effectively change an educational system to the novel paradigm of e-learning. This is similar to the earlier model which is evolving mindset on the systemic change. However different terms used between the earlier variables and the adapted variables is only referring to the process of systemic change

that is based on helping educators to change and evolve their mindsets about educational transformation.

To summarise, academic transformation is the strategy, planning, adapting and customising of the methods to particular unambiguous context, values, vision, politics, structure, shared knowledge and standards. It is also essential to generate a powerful divergence for the change. This should contain the communal vision and metaphor of the change, the sense of urgency to attain it and to communicate dissatisfaction with the current state. To recapitulate, this stage includes the continuous assisting of stakeholders with the new system and the new e-learning implementation approach designed to help them comprehend the changes (Markus et al., 1996).

The third and final independent variable in this conceptual framework is service and satisfaction. This variable is different from the earlier model which stated as interest, motivation and rewards. The dependent variables for this stage are system design and system evaluation. The difference between the earlier model and the adapted conceptual framework for this study is the adding of one variable which is system evaluation. Communicating continuously, (Clinton et al., 1996) formally and informally, (Barrett & Luedecke, 1996) is vital for implementing educational transformation. Online education is ineffective if it is not useful for students and for the faculty to change from the traditional learning to the online learning environment (Philip & Laird, 2004). One of the critical errors usually made when venturing into the online learning domain is to presume that the support structures linked to the campus, the traditional learning access, transfer, and maintenance can all be applied to online setting (Canterucci et al., 1998).

Another significant point in this phase is the acceptance of resistance (Barrett & Luedecke, 1996). It is compulsory to comprehend resistance, to influence anxiety

(Nadler & Tushman 1997), to be able to evaluate an idea in order to handle it, and include unambiguous departures from the previous experience (Kanter, 2003). Continual cooperation from stakeholders, educators and other team members is necessary for supporting online implementation (Marcus et al., 2000). Most of the literature on change management stressed that organisations do not change people doing. (Philip & Laird, 2004). The difference is that the change leads into consequences that affect each person. The change agents employ an open and sincere approach which helps form expectation and allows for resistance to the implementation to be overcome (Markus et al., 1996). Banathy (1996) placed long assessment on systems design, and he relied on the fact that “systems design is most effective, it is most feasible and creative, and obligations to implementing the design are most required, when it is focussed by the consumers of the future system”. Therefore it was adapted as services and satisfaction which also incorporate the interest, motivation and reward in the adapted model.

In directing the design of systems, one needs to consider broad systems view of education, and a more specific view of system dynamics. Both Ackoff (1981) and Banathy (1996) endorsed an “ideal design” method for systems design. According to Banathy (1996), the ideal systems design method, the aim need to be consistence. Jenlink et al., (1996) posited that “systems design is an attached portion of systemic change and the progression of creating”. For any systemic change process to succeed, it should foresee and generate an ultimate educational system by a systems design method. In the reviewing and learning phase of a change project, the change strategists, change agents and change recipients practice their analysis and consideration in skills to ponder the victories and failures of the project and to prearrange any additional rewards (Connor, Lake & Stackman 1988).

The change strategists likewise, practise the coverage of their human resource abilities to reintegrate the change agents that are keen on their innovative positions, when the project team ceases to exist (Meeker, Kleiner & Byers, 2014). In conclusion, the change strategists and change recipients used their understanding of the present state to set challenging performance criteria, and to create ongoing enhancement assessments and response procedures. Emerging as a learning organisation is an imperative feature for pursuing the change management model (Darling, French & Garcia, 2002). Senge and Scharmer (2000) suggested that the learning organisation has a structure-level perspective with individual appearances for the ideal organization. Conversely, organisational learning is used in certain categories of actions or methods that may transpire at any single or multiple levels of analysis, such as management level, web designers' level or educators' level, as part of an organizational change process (Bal et al., 2010). In this research, the organisational learning perspective will only focus on the educators' level since this research's primary objective is to look at the perspectives of educators in managing change.

Further, this research also emphasises system evaluation on learning organisations. For this research, system evaluation was added in the adapted conceptual framework because as a learning organisation, which is the ideal vision which is the most vital for the nature of this research. The researcher also suggests that the private higher education community is essential to progress, and to implement activities, plans, and procedures to develop an educated learning organisation. According to Clark et al., (1998) a learning organisation needs to largely focus on emerging mutual considerations, aids, and proficiency over professional development activities, involvement, and handling the inevitable changes. These system evaluations are needed to engage and associate with the external, to inspect present practices critically, to advance common standards as well as to create a vision for the private higher education

institutions (Micheal, 2014). The processes, content changes and common principles are engaged essentially to make the changes that have been identified. This aided by an obligation and the aptitude to revisit the phases and constantly learn and develop the e-learning implementation in private higher education institutions in e-learning implementation (Alhabshi & Hakim, 2006).

To sum up, during the ownership and control stage, the change strategists play a role in pursuing the vision, by offering the use of their theoretical skills, innovative resourcefulness, and widespread information congregation skills, with the help of stakeholders and the system viewing process. The patterns and trends of the system are identified, diagnosed, and used as tools to generate change and to indicate alternate possibilities when making decisions. These are reinforced by prompting skills, coalition and team building skills. During the academic transform phase of a change project, the change strategists and change agents are the dynamic team. The change strategists practice their recruiting and team expansion skills to form a consistent project team, and start task allocation once the change leader is recruited. This is where professional development plays a significant role in managing the change while implementing e-learning (Richard & Rodger, 2014). It is uncommon that one person would have the reach, complexity, knowledge and proficiencies essential to visualise the crucial changes that is to be implemented. So, equally of importance is the skill to construct and encourage teams of individuals with corresponding strengths, to victory (Clark et al., 1998; P.W & Kliem, 1996).

In addition, change leaders need to be aggressive in the recruitment of more change agents to the team, and to start moulding them into an inspired, experienced and consistent team. Change leader will initiate preparation services (Canterucci et al., 1998) for teams and projects, coalition building skills (Canterucci & P.W, 1995), prompting and communication skills (Barrett & Luedecke, 1996). In summary,

throughout the service and learners satisfaction phase, the change strategists use their influencing powers, negotiating skills, communication, listening services to support their change agent activities, to monitor and control the skills for the change management.

Hence, educators have an essential role to play, particularly devising strategies for managing resistance with an understanding of system design and system evaluation. Some of the abilities and skills required by change agents for the implementing phase are flexibility (Buchanan et.al.,1997) information gathering techniques, the capability to familiarise and adapt the implementation to suit the company's personal framework, culture, vision, structure, politics, history and communal knowledge (Buchanan et al., 1997), custom of technology, project, time and meeting management (Canterucci, et al., 1998; P.W & Kliem, 1996), transparency in entire procedures of communication (Buchanan & Boddy, 1992; Canterucci, 1998; P.W & Kliem, 1996), skills (Buchanan & Boddy, 1992; Canterucci 1998; P.W & Kliem, 1996; Marcus et al., 2000), widespread understanding of any approaches supporting the changes of implementing e-learning extensive technical, purposeful and operative knowledge of all progress in the institutions (Canterucci & P.W 1995).

In conclusion, the strategists of project management methodologies confirm that their method permits adequate flexibility for change agents to function within adequate stages of risk. The similarity and differences from earlier model and adapted conceptual framework elaborate the fact that e-learning implementation begin to be utilized in education institutions with completely different function depends on the acceptance and execution . It required change in the thoughts and actions of the developers and users of institutions. It also revealed that changing in behaviors and lifestyles of users in the educational institutions are very tough. Some of the difference such as adding the system evaluation variable could explain in depth how educators that

used to traditional pedagogy continuously reporting that many e-learning projects are falling short of their objectives because to numerous reasons. However the user resistance to change according to the digital requirements of innovative era in education was highly reported. The similarity of both earlier model and adapted model argued at the same point that appropriate way for change management in e-learning environment is convince of users with a view to enhancing their digital literacy and thus gradually changing the educators' attitude in positive direction. The e-learning implementation cannot be comprehensive without information gathering and inquiring methods reinforced with the higher education institutions (Canterucci & P.W, 1995).

1.10 Significance of the Study

This research, first, is an exploratory study intended to promote an in depth understanding of change management, and its influence on educators' from private higher education institutions who have integrated and e-learning vision or mission into their program delivery. If e-learning is to become the preferred result of cultivating teaching and cumulative student achievement, it is obligatory to appreciate the key components of the change process that organisations undergo during their positive implementations of e-learning. A comprehensive review of 'Malaysian Studies: Present Knowledge and Trends' (Shahir et al., 2012) showed that there have only been a few studies in the field of change management and e-learning in higher education. This research supports professional development for educators in higher education institutions, it can act as a channel to excel, by improving staff performance. Peter and Carstedt (1990) believed that creating value practices would encourage excellence.

Secondly, the central question of this research is how to deal with change management for educators to help them handle technological changes in the education system. A rising body of empirical evidence illustrates that appropriate reworking of

this technological change has a positive influence on education institution competence (Dedrick, Gurbaxani, & Kraemer, 2003). However, heterogeneity in educators' changing agents can enlighten the transformations and the consequences of this adaptation process (Bresnahan, Brynjolfsson, & Hitt, 2002). Research conducted by Milgrom and Roberts (1990) shows that a huge body of literature that supported by the knowledge and expertise essential for technological transition (Nielsen & Lassen, 2012).

Sandulli (2013), in his investigation, recognised the key hypothesis of his research was technology adaptation, and the ability arrangement of the workforce of education institutions. Thus, change management would create a better understanding of how to expand the measurement of educators' performance. At the same time, change management would also reveal what were the direct and indirect influences that would inhibit their better performance. To close this gap in the literature, this research proposes to contribute by focusing on exploring the interactions between change management adopted by educators, and IT led technological change in private higher education institutions. Key literature deals with managing change for educators to adapt to e-learning, with a special focus on private higher education institutions.

Thirdly, the reports will concentrate on the current condition, capturing a reflection of the gaps, which will be the basis for future progression. The product of this research will be a part of reference for strategic planning on change management of academic staff, to support e-learning in private higher education in Malaysia as well as worldwide. This is because after a general literature search, the researcher found that there was little if any research relating change management and e-learning implementation from the perspective of educators in the private higher education system in Malaysia. There was only one study on change management and learning

technology titled 'Backup staff improvement through alteration in learning technologies in higher education' by Robert (2007). However, it is not in the Malaysian context.

The closest dissertation the researcher came across was titled 'Change needs of instructors of the Louisiana technical college system' by Sharon (2010). In the Malaysian context there were a few Ph.D. dissertations done separately on either change management or e-learning. For example, on for change management 'Contextual factors and practices associated with the development of continuing change in professional education among selected professional providers in Malaysia', and 'Perception of teachers on the implementation of change management.' There were none on managing technological change that focused on educators in private higher education institutions.

The gap to be filled by this research will be a contribution to the body of knowledge, especially for policy makers, academicians and management of higher education institutions, to develop change management programs for transformation in teaching and learning. This research also will contribute to the body of knowledge in providing a conceptual framework and questionnaires based on the theoretical framework that the researcher analysed and synthesised. In an education industry, information technology led technological change will lead to organisational innovation (Bertschek et al., 2006). Empowered educators may be more inspired and therefore be more productive in the e-learning environment (Bresnahan, Caroli & Van Reenen, 2002; Ibrahim & Izham, 2012).

Husmann and Miller (2001) report that pedagogical changes for learners who registered for e-learning courses, will also be affected by the course plan. Educators need to alter their ways and techniques, to better suit the current setting (Rockwell et al., 2000). The greater the technological change for the education institutions, the stronger

the impact of the educator's cognitive abilities on the productivity and outcomes (Ibrahim & Jamalul, 2012). Educators with improved technical skills may raise their involvement in technological change to performance better (Armstrong, Bartel & Hempell, 1999; Hempell, 2003; Moshiri & Simpson, 2011). Higher education institutions could encourage the expansion of the e-learning through formal training (Baldwin et al., 2002).

Hempell (2003) delivers uncertain evidence on the collaboration among change management and e-learning implementors, while Moshiri and Simpson (2011) offer empirical findings of a positive interaction in training and technological change in universities. Moshiri and Simpson (2011) recommended that higher education institutions progress through training and staff development practices, according to their particular level of technological change. This is reinforced by Galloway and Fenster (2000) who said that in the latest education atmosphere in England, four years of a degree education has changed into a forty year degree in a life-spanning bond connecting education and humans. For many adults, e-learning allowed them to study anytime and anywhere that suited them. Access to learning over the internet has lessened physical or bodily constraints (Galloway & Fenster, 2000).

Fourthly, the result of this study would have implications which are related to both change management and e-learning implementation. From a theoretical perspective, the findings would provide a valuable base for change management in the e-learning implementation framework. The empirical information of this study would provide greater insight into ways and approaches of change management for educators to adapt to e-learning integrated courses. In future, the educational framework would be more sensitive to the complexity associated with the implementation of e-learning in higher education institutes in Malaysia.

In spite of all the benefits of e-learning for learning and teaching, the biggest issue noted at present is that most higher education institution instructors are content in their traditional methods even with the advent of newer technology requirements, such as e-learning on iPods and m-learning (Muriel, Caroli & Behaghel, 2013). Instructors are facing a new kind of "how," "what," "where," and "why?" (Berggren et al., 2005). Therefore, this research will directly address the needs of change management approach based on the conceptual framework.

1.11 Limitations of the Study

There were some limitations to the findings. The first is the scope of the study. This study was limited to a number of academicians in private higher education institutions across Malaysia. Since there are higher education institutions across states, there will be major differences in the programs each offered. However, the researcher's scope of study only extended to private higher education institutions that had vision and mission e-learning as a mode of learning and teaching. The researcher's other main constraints were the limited availability of literature, documents and research conducted on similar topics in Malaysia and, as such, the researcher needed to rely on foreign literature and studies to undertake this research.

Additionally, since this seemingly being the first time a research of this nature was conducted, providers selected for this study were represented by a limited number of professional respondents and providers of education, namely the lecturers and tutors in private higher education institutions in Malaysia. Another limitation was that the study used a quantitative method in which questionnaires were distributed to the educators. The opinions and comments obtained were limited to the options given. Due to time and resource constraints, follow-up was done only with selected individuals, using qualitative methods.

The researcher did obtain opinions outside the given options, but they were few, The conclusions or recommendations each individual towards change management for educators, were formed, based on the set of given options.

1.12 Organizational plan of the Research

Chapter 1 consists of the background, objectives and limitations of the study. In chapter 2, the literature evaluation covers the definition of change management, educators and e-learning, the history and features of change management and e-learning, the link between educators and change management, the roles of educators, followed by examples of change management and e-learning in higher education, and their benefits and shortcomings. These are discussed thoroughly with some relevant examples. Chapter 3, the discussion in methodology section focuses on data collection methods and data analysis. In chapter 4, the findings and analysis section, is where the results from the questionnaires are reported and discussed.

The information collected from the respondents is presented in chart and table format. In addition, findings from the questionnaires are discussed using analyses followed by explanations. Chapter 5 delivers the conclusion of the study, with the discussion on the overall results of the research, future developments and on an approach on how to smoothen the change management process for academic staff in order for them to support e-learning in the private higher education system.

1.13 Operational Definitions

The following definition of terms is as applied in this research. The purpose of this section is to provide clarity and conciseness to terms used according to the context of this research:

Change management:

In this study, it means to enable individuals or groups make the transition from a current state to a future state by application of a structured process, such that a desired outcome is achieved. This is carried out with planned approaches in dealing with systematic changes that entails thoughtful planning and sensitive implementation and consulting with the stakeholders (Philips, 2000; Burns & Cinczak, 2007).

Competency:

In this study, competency refers to the educators' ability to carry out their job properly. Abilities consist of practical and theoretical knowledge, cognitive skills, behaviour that provides a structured guide enabling the identification, evaluation and development.

E-Learning:

As used in this study, learning is a tool through electronic information and communication technologies, used as an approach for facilitating and enhancing learning which anyone can access from anywhere, and at any time. This emphasises a particular digitisation approach, component or delivery method.

mLearning:

This refers to any form of learning and administration of the learning process at any time and from any location. For mLearning, with the availability of mobile communication technology, learners use mobile phones and computers with access to internet at homes, libraries, access centers or cyber cafes to acquire knowledge anywhere and anytime.

Educators:

In this study, this refers to a lecturer or tutor or anyone who is trained in teaching. They facilitate formal education for students that takes place in a higher education institution.

Information & Communication Technology (ICT):

In this study, ICT refers to the technology that is being used for interaction such as computers, mobile phones, software and networks, to facilitate e-learning.

Mission:

In this study, mission refers to a statement which dictates the purpose and reason for a university's existence. This statement provides the overall framework, goal, provides a path and guides the actions and decision-making of the university.

Professional development:

For this study, professional development serves as the main education aid, and in this context it refers to a series of training, courses, conferences, talks and seminars that provides knowledge through mentors and experiences.

Vision:

In this study, the vision is a description of an aspiration which a private higher education institutions is striving to achieve or accomplish in the long term future. It acts as a clear guide to show a university's desired end result.

CHAPTER 2: REVIEW OF LITERATURE

2.1 Overview

Transformations over the earlier period showed that educators had yet to comprehend the standards that were just budding. They were expected to incorporate new learning methodologies and modify their teaching practices. Not only were they supposed to be immersed in the teaching, they were also obliged to serve up fundamental knowledge, and inculcate advanced thinking and problem solving abilities. Due to this transformation, educators need to handle innovative curriculum frameworks and new assessment approaches, as well as prospects for better student performance. The education system had a breakthrough with the introduction of computers. More organised, and efficient ways of handling and integrating all areas were developed, using technology, and the different types of learning system meant for the purposes of education. "Teaching is a convoluted task and substantial time will be necessary for lecturers and other educators' to view new thoughts, assess their effects, regulate their strategies and approaches to construct meaningful learning" (Darling, French & Gracia 2002).

There is solid evidence of change in educational organisations (Reload, 2006). Much of the change fast and revolutionary because of the widespread usage of computers. In order to respond successfully to the rapidly changing environment, educational organisations need to develop their human resources at the same rate as the change. The following statements from the Malaysia Outline Perspective Plan 1991-2000, perhaps best sums up the importance of human resource development in the introduction of change. The most vital aspects in e-learning are the employment of proper learning theory and paradigms, organisation of content based on sound pedagogy, along with methods and techniques of delivery. The scope of this research was limited to this domain for optimum characterisation and modeling of an e-learning

environment. The assumptions underlying this research are that the general and software oriented e-learning approaches lack a comprehensive view. These were basically about learning theories and the most efficient learning and teaching principles that govern e-learning pedagogy. The existing e-learning frameworks defined principles of best practices for effective learning and teaching.

2.2 E-learning background

Electronic learning or known as e-learning is a term used to refer to computer aided education. It is typically associated with the field of progressive learning technology (Floriana et al., 2004). It deals with related approaches in learning by network and multimedia technologies, phases (Floriana et al., 2004). An e-learning environment provides the user with a high degree of freedom as opposed to traditional educational paths, plus the control to explore and discover effective paths. This freedom proves advantageous for students and has resulted in a deeper understanding of the instructional materials.

Furthermore, the need for e-learning came about when educators began to share their knowledge with students. For centuries, students traveled great distances, from all around the world, to enhance their knowledge. During periods of war, correspondence courses allowed many students to continue their education while away from home (Lamoreux & Morrison, 2001). After World War II, and the economic growth of the 1950s and 1960s, many scholars began to question the educational qualities of the delivery format. Scholars believed synchronous (real time) interaction between students and educators to be a key part of the educational process, and should not be omitted if positive educational outcomes were to be achieved (Lamoreux & Morrison, 2001).

Currently, the correlation between the expectations and the results vary, in learning settings that differ from the olden classrooms, where it was derived from only

one learning method. In order then to compensate for students' extended knowledge, measures of learning have to be restructured in all higher education systems in Malaysia. Assessment programmes in Malaysian universities today, tend to only evaluate the basic, rather than the extended, knowledge. Basic knowledge merely comprises the memory of measures, facts, and information which can definitely be categorised. This is identical to a robot leading with the information, in the form of "data." Any learning that makes sense and logic to the learners is meaningful knowledge that will get brains to link or make "patterns that connects".

Besides that, early computer-mediated communication (CMC) technologies, such as e-mail and computer conferencing, were active to maintain the online education, starting from the 1970s. Online education provided the potential for growth and achievements that can be measured. (Harasim, 1999). Regardless of the systems constraints due to the initial networking tools, communication, collaboration, and support amongst peers and lecturers were encouraged and reinforced (Lamoreux & Morrison, 2001). Starting in the early 1980s, efforts centred on enhancing learning at any place, any time (asynchronous approaches), via computer mediated learning systems (Kaur, Zoraini & Wati, 2004). Often, these educational methods play a role as network-mediated and two-way learning (Harasim, 1999). Students dynamically develop and gain knowledge through a highly interactive group process.

In the early twentieth century, the most popular and accepted approach of learning and teaching had been related to constructivist theories. The foremost of these is the contemporary theory created through work done by Vygotsky, Seymour Papert and Piaget. Knowledge was viewed, analysed and learnt through constructivism. The learner exclusively constructs knowledge for and by them, in order to understand their interactions with the environment. In the constructivist's eye, the learners are an energetic and dynamic organism within the environment (Van & Koper, 2006). They

were not just reacting to stimuli, but they were also engaging in the quest of developing knowledge.

There are three basic constructivist principles and they are, first, understanding appears from interactions with the environment (but not in the behaviorist stimulus-response fashion), second, cognitive conflicts encourage learning and last, knowledge develops through social discourse and evaluation of the feasibility of individual understanding. Besides constructivist principles, the theory of “Multiple Intelligence” was first introduced in 1983 by Howard Gardner, a Harvard University professor. Education was not the only discipline interested in the interaction between learning and teaching styles. Addressing different learning styles through hypermedia courseware found to enhance student learning. Carver et al., (1999) developed a selection of World Wide Web (WWW) based tools designed to enhance learning and to address a variety of learning that incorporates technology. Felder’s model of learning styles was incorporated into hypermedia courses. King and Montgomery (2002) asserted that multimedia could be used to address varied learning styles more efficiently than traditional teaching methods.

2.2.1 Nature of e-learning

“No matter how it is done, good teaching remains good teaching” (Jimmy, 2001)

E-learning typically requires a concentrated choice of resources and technologies (Jimmy, 2001). There were dissimilar types of e-learning, for instance, Online E-Learning, Computer Based E-Learning, Web Based E-Learning, Self Study, Asynchronous and Synchronous E-Learning, Instructor Led, Group E-Learning, Blended E-Learning, and others. However, the most common E-Learning that were being used in higher education are Web Based E-Learning, Computer Based E-Learning, Self-Study E-Learning (Asynchronous “Directed Study”), and Instructor Led

Group (Synchronous “live, real time” Learning)

(<http://tecknowledgelearning.supersites.ca/elllearning/>). Some of the learning approaches are Collaborative Learning, Problem Based Learning, Procedural Learning, Game Based Learning, Simulations, Project Learning, Discovery Based Learning and Self Directed Learning (Smith, 2001).

Besides that, in general, e-learning lessons were created to lead students through facts to contribute to students' accomplishment in specific areas. E-learning content links information with the students. E-learning keeps on bringing new dimensions in education. Universities were also implementing e-learning, some by using different tools and applications to improve education, others by constructing complete e-learning environments as platforms for their entire education practice. The use of an e-learning environment enables the separation of the learning processes from the facilitating processes. It also saves time and money and offers flexibility in choosing different teaching methods. It also reduces the administrative burden on educators, which gave them more time to focus on the individual student's educational needs (Teir, 2002). Harasim (1999) illustrated seven models or learning approaches used as educational networks, including an e-lecture which offered instructional resources online, ask an expert model, mentor-apprentice communication online, tutor support, access to network resources, informal peer interaction and structured cluster online learning (Molly, 2005).

These learning approaches were methods introduced to act as a teaching style and to highlight how to present information in the e-learning environment. According to Smith, 2001 methods that can be implemented in e-learning systems were:

1. Holistic methods that presents information first as a big picture.
2. Sequential methods which provides a logical presentation of information.
3. Mind maps that offer a method to represent information visually.

4. Flowcharts that refer to a graphical symbol that reveals the series of decision points.

Prototypes based on web-based application technology were developed to formatively evaluate the approach of using sound pedagogy, and to accommodate e-learning. It was important that we consider the learning systems that have come about due to the advances in e-learning. The majority of e-learning structures used a regular web browser as an educational resource. Some systems created a practice from the combination in telecommunications technologies, that is, an audio conferencing facility over ordinary telephone lines, together with information delivery system via a web browser (Smith, 2001).

The e-learning systems provided either synchronous or asynchronous capabilities, or a mixture of both as the major difference among them. Synchronous facilities offer a practical classroom setting, making use of technology to shift the whole classroom into a web based classroom. There is interaction from educators through whiteboard in the classroom and localised support for lecture facilities. The idea of synchronous system was to keep up with the communications that took place in lecture theater with the students. The educator conveys information as the lesson, to the entire group of students at the same time, through the lecture. Synchronous online learning systems attempt to duplicate this experience through the internet. Smith (2001) stated that:

1. Course Management Systems (CMS) emphasised the expansion and distribution of self-directed or self-paced education. This is achieved by providing administrative maintenance to track student acceptance and advancement, to completing courses, along with evaluation. Through student administration as

well as the required tools, CMS commonly had lower cost arrangements as used by educational institutions.

2. Learning Management Systems (LMS), placed importance on the managing of the learning progression, and was intended, for large scale corporate, enterprise consumers. Sustained by third-party courseware, LMS' commonly do not comprise content expansion tools. Content was generally kept separately in an SQL database, with cumulative scalability and equally cumulative charges of such solutions.
3. Online learning systems that were measured to be complete e-learning solutions came in e-learning packages, learning environments supported by vendors. The content is generated with the help of subject matter experts from consumer organisations, adapted to desired requirements for individual organisations.

Moodle is a unique e-learning software platform. It also is recognised as a Course Management System, Learning Management System (CMS), or Virtual Learning Environment (Katz & Yablon, 2010). It was created using sound pedagogical principles, to assist educators in designing efficient online learning communities with opportunities for interaction (Moodle.Organisation, 2010). Moodle is open source and has a segmental strategy which means that each individual can extend the functions. Progress is initiated by a globally diffused network of commercial and non-commercial customers, overseen by the Moodle Company (Moodle.Organisation, 2010).

Besides Moodle, Sakai also gets a mention in the community of academic institutions, marketing administrations, as well as individuals who work to improve Collaboration and Learning Environment (CLE). The Sakai Collaboration and Learning Environments work on a community basis, an educational software platform circulated on an Educational Community License (a type of open source license). It is used for education, research and collaboration. This type of system can be a Content

Management System (CMS), Learning Management System or Virtual Learning Environment (VLE). Sakai remained a Java-based inter operable, and scalable service. It illustrated the type of software tools available to support instructors, researchers as well as students, in collaborating online and maintaining their efforts as course instructors, researcher or project team worker.

Synchronous communications enables the users to exchange information at the same time (Kaur, Zoraini & Wati, 2004). Users are online during this communication exchange which can be likened to a conversation. The main features of asynchronous communication are chat, shared whiteboard, audio and video conferencing and application sharing (Kaur, Zoraini & Wati, 2004). Chat is a specific feature where users communicate using real time text exchanges (Kaur, Zoraini & Wati, 2004). The exchanged texts can be archived. In some cases, a moderator may either choose the topic to discuss, or share a whiteboard through a shared text window which may include graphics, pictures and drawings (Kaur, Zoraini & Wati, 2004).

Application sharing enables the user to run an application in a computer window which is transmitted across the Web (Kaur, Zoraini & Wati, 2004). Virtual space is like a physical place consisting of virtual meeting rooms, for more than one discussion group, using real time text exchanges (Kaur, Zoraini & Wati, 2004). In this space, the time and topic are not always predetermined. A moderator is optional, and sometimes guests may share the space. Voice chat, or audio conferencing, is an audio communication tool that uses real-time audio exchanges involving two or more persons (Kaur, Zoraini & Wati, 2004). Video conferencing is a facility that broadcasts video with real time user interaction for immediate feedback. According to Kaur and Zoraini Wati (2004), the available authoring tools can be conveniently categorised as follows:

- *Single Purpose Tools* designed for one basic purpose, for example, to capture the screen, record sound, and so forth.

- *Conversion Tools* which were designed to convert one file format into another format.
- *Activity Creation Tools* are tools used to construct small, individual, interactive activities, like quizzes, that could be included into courses.
- *Simulation Tools* are programmes that can capture screenshots, and replay them imitating the behaviours of the recorded software. These tools allow us to replicate the software usage, for learners to practice, with feedback. They are used for software training (such as those obtainable from Lynda.com, Total Training, LearnKey, etc.).
- *Course Development and Presentation Tools* which are for creating and enhancing e-courses.
- *General Presentation Tools* are used to present multimedia content
- *Testing and Assessment Tools* help to construct tests, quizzes, and other assessments for Web-based delivery.

A simpler system for handling e-learning is a portal that is a general place for distribution of e-learning courses (Kaur, Zoraini & Wati, 2004). Communication might be possible in this type of e-learning, but not the functionality of a Learning Management System ((Kaur, Zoraini & Wati, 2004). Many organisations prefer to purchase the platform for their e-learning concept, in the form of a portal or a Learning Management System, as well as the entire range of e-learning courses, from content providers. Meanwhile, others preferred to follow the style of tools that allows one to form their own content (Smith, 2001).

2.3 Change management background

Change management is a discipline that saw its rise in the 1980s, resolute by leading organizations called Fortune Company (Ahmad, 2011). Initial adopters, such as Ford, were huge corporations that derived substantial gains through efficient implementing of innovative programs, and who was familiar with governance roles. The 1990s saw the development of the initial change management models, such as Change Acceleration Process (CAP) and John Kotter's Eight Step Process for Leading Change (Ahmad, 2011). During this period, change management help was generally obtainable through referring facilities, and through available books (Ahmad, 2011). Industries experienced much change in the 1990s. To the extent that human resources began using the assistances of change management programmes on a wider measure (Ahmad, 2011).

Moreover, the assessments of change management were more recognized by business companies such as Prosci, IBM and McKinsey. Involvements, consequences and costs for the change to happen deprive by method that assisted the organizations. In 1992, change management concepts expanded to include the education system. Nevertheless the practice of change management stagnated, mainly because it proved inadequate for large institutions that commonly utilised professional consulting. However, change management seem to be receiving more visibility and credibility in education.

In 2000, there was a wide reception of change management concepts for education proficiency (Lo, Ramayah, & Run, 2010). This change amplified the trustworthiness of change management in the education industry (Lo, Ramayah & Run, 2010). Benchmark data on the use of methodology, demonstrated growth from 34 percent in 2003, to 72 percent in 2011 (Lo, Ramayah & Run, 2010). The market for change management tools and training grew in this period, with as many as 320

consulting firms having been recognised as proposing change management services by 2011 (Lo, Ramayah & Run, 2010). Some were established with their own change management methodologies, while others who previously offered only consulting services, also began to provide training and some products as well.

In summary, some highlights of the important features of managing change are identifying, exploring, necessary challenging, processing facilitated by perception, insightful planning and analysis, well crafted and sensitive implementation (Lo, Ramayah & Run, 2010). In conclusion, change management is currently a huge and rapidly rising discipline that is also very comprehensive.

2.3.1 Nature of change management

The nature of change was significant in influencing the framing of proper strategist (Molly, 2005). Change territory track direct disadvantage from the initiated phase. The first phase was to recognize the type of change. There were number of ways in which change can be categorised. Most were linked to the scope of change, and whether it was perceived as being top- down in character (Molly, 2005). Rolfhus and Ackerman (1997) distinguished three kinds of change developments. They may be either planned or emergent, transitional which seeks to achieve a known desired state and transformational which involves radical changes.

At times change was consider as an advance in awareness, perception and engagements that was called planned change. In its dissimilarity, change occasionally revealed an apparently unstructured and unexpected technique (Ahmad, 2011). This type of change is known as emergent change (Ahmad, 2011). Change can evolve rather than be a prearranged association of internal and external factors. Internal factors involved managers apparently isolated to the change that arises (Mohammed Sani Ibrahim & Jamalul Lail Abdul Wahab, 2012). The change therefore was not deliberate.

The choices though were grounded on sometimes, undeclared expectations about the organization and consequently, not as disparate as they first seemed (Mintzberg, 1989).

External factors like the economy, competitors' behaviour, or the political climate, or internal features such as dissemination of understanding, and uncertainty affect the change in guidelines of external control, for managers. Even the most strategic and accomplished change programmes would have some impact. Dissimilarity among episodic and continuous change, according to Weick and Quinn (1999), remains 'occasional, irregular and intentional'. Radical or second order change, or episodic change, commonly included replacement of exclusive programmes. Continuous change, in contrast, was continual, developing and cumulating. Also referred to as 'incremental' change, continuous change is categorised by individuals' continuously familiarising and editing ideas they obtain from diverse bases. At a cooperative level, these continuous modifications completed concurrently through components produced substantial changes.

Continuous change helped in clarifying an organization's future development and its evolution for long-term goals. Many organisations are at a point to individually decide on an entirely continuous change method. Advantages of continuous change are in creating the flexibility to be able to accommodate contingencies, interruptions, exemptions, occasions and unplanned implications (Orlikowski, 1996).

Hence, with these features projected changes can be engaged along with radical to incremental (Pennington, 2003). The character of a planned change, beside the measures, offers a sense of urgency to review certain advantages that might be disruptive to the status quo. Radical changes to an institution or department, typically created high levels of disturbance; but incremental changes to sub activities were frequently measured to be undistinguished and can be accommodated at progressive stages exclusively, if the group involved has positive continuous enhancement.

2.4 E-learning in the perspective of Malaysian private higher education system

The period 1990-2000 saw an increase in privately funded higher education (Alhabshi, 2006). Private universities in Malaysia referred in appendix B are recognised. They are engaged by private corporations regulated by Chief Executive Officers (CEOs) (Molly, 2005). All private universities are profit-making corporations (Molly, 2005). These institutions were given approved university status by the Malaysian Minister of Higher Education, authorised under the Private Higher Educational Institutions Act 1996. MAPCU (Malaysian Association of Private Colleges and Universities) registered 18 March 1997. They form Malaysia's most prominent group of private higher education institutions with involvement from well established private colleges and universities in Malaysia (Molly, 2005). The Malaysian Association of Private Colleges and Universities is acknowledged by the Ministry of Education, the National Accreditation Board, the Multimedia Development Corporation, the Ministry of Finance, and the Economic Planning Unit of the Prime Minister's Department (Molly, 2005).

Initially, after independence, private education institutions in Malaysia catered to “dropouts”, or delivering language and religious education for smaller groups (Alhabshi, 2006). Education transformation was then appreciated as a main concern in Malaysia (Molly, 2005). In 1992, the private sector began to play a more enthusiastic role in the expansion of the educational system (Molly, 2005). Since then, private educational institutions offers many courses, and professional, technical and administrative programs (Wilkinson & Yussoff, 2006). In 2013, 414 private institutions, 20 private university colleges, 7 foreign branch campuses and 37 private universities were registered by the Ministry of Education with an annual enrolment of more than 184,581 students, with 70509 international students (Ministry of Education, 2014).

Malaysia became the world's 11th leading exporter of educational services (Ministry of Education, 2014).

In Malaysia there are twenty public universities, five branches of foreign universities, eleven private universities six university colleges, one virtual university and an Open University (Ministry of Education, 2012). The planned Information Communication Technology Roadmap for Malaysia was rearticulated in the 10th Malaysia Plan and projected by the National Information Technology Council (NITC) (<http://www.epu.gov.my/>). Malaysia would promote knowledge based economy (K-Based) economy as the government has approved ICT as base to aid. Malaysia's aspires to reach a position of a wholly advanced country in 2020, besides transpiring as a proficient competitor in the global economy. This has changed information and communication technologies dynamically change from an invention to a Knowledge-Based Economy (NITC annual report, 2008). The Private Higher Education Act (1996) represented a shift in policy, permitting local private institutions to launch branch campuses locally (Molly, 2005). Two sets of private higher education institutions were established under the 1996 Act in Malaysia (Molly, 2005).

First, there were private colleges, with or without, university or university college status, commonly known as private colleges (Molly, 2005). Second, there were those with university status, which were referred as private universities. Under this act, only institutions with university or university college status were endorsed to offer degrees (Molly, 2005). Although these colleges were allowed to conduct courses independently, it was essential to accomplish the guidelines made compulsory by the Ministry of Higher Education approval and accreditation (Ministry of Education, 2012). Students can also enrol in a campus, or do distance learning at the private higher education institution (Ministry of Education, 2012). In 2012, 25 foreign universities applied to establish campuses in Malaysia (Ministry of Education, 2012). Extensive

fields of study were offered. Certain courses were approved based on the validity and reliability of the appointed overseas institutions.

In order to become an education hub, the private sector demonstrated that it can accommodate the cumulative demand for higher education. The development of private higher education institutions also helped to moderate not only the public subsidy for higher education, but also to protect foreign exchange by regulating the outflow of students for overseas education. Throughout the Sixth Malaysia Plan in 1991-1995, the government implemented a policy whereby the private sector's role as a higher education provider was increased, to satisfy the massive demand for higher education and to limit the outflow of foreign exchange (Government of Malaysia, 1991). Blaugh (1969) stated that, education is the key that unlocks the door to modernisation. Once unlocked, it will benefit everyone who is taking part in education. A concept by Supyan (2011) theorized that , democracy in education is defined as equal and fair rights for all to participate with fair attention given, in education. Everyone has the right to obtain an education and succeed without any obstacles (Supyan, 2011).

In addition, in The Star, July 11, 1999 Tun Dr. Mahathir the Former Prime Minister of Malaysia, mentioned “....the government was prepared to make the necessary adjustments and changes in education policy. They will have to enter the information age whether they like it or not,” at the Multimedia Super Corridor International Advisory Panel meeting in Cyberjaya. Malaysians must have a total change in culture, and acquire in-depth knowledge of information technology to effect the transition to a Knowledge-Based Economy. In order to counter future changes lecturers need to develop the proper knowledge, skills and attitudes.

Currently e-learning offers the quickest distance learning, at a lower cost, with access to a huge quantity of learning resources in universities. It comprises content delivery in several formats, management of the learning processes in a networked

community of learners, educators, content experts and professionals. E-learning goes well with distance learning. An increasing number of universities have introduced online courses. University Tun Abdul Razak (UNITAR) and Asia e-University (AeU) provide academic degrees and certificate programmes through the internet at many levels and disciplines. Many universities also provide online student support services. In addition, they also provide online counseling, textbook purchase, as well as student newsletters (Husaina et al., 2013). E-learning, sometimes referred to as the educational web, providing learning scenarios, handouts and collaborative exercises for students.

A case study was conducted learn about e-learning practices at three different private universities in Malaysia, that is Multimedia University (MMU), University Tun Abdul Razak (UNITAR), and Open University Malaysia (OUM). This qualitative study used the results of the analysis from the case study to formulate the present practices in e-learning in Malaysian private universities. Data was collected in the normal working environment in which the universities staffs work, as recommended by Merriam (1998). The findings showed that e-learning practices varied and was conducted in different styles and manner, in different institutions. There was no standardisation of an e-learning based pedagogy (Merriam, 1998).

Educational organisations are expected mold and educate the younger generation for a better future. Thus, they ought to have a long term vision and planning goals, to move towards in a particular direction. There are numerous technologies, used in e-learning, like blogs, classroom response systems, computer aided assessments, collaborative software, discussion boards, e-mail and educational management systems (Alhabshi, 2006). In our country, most of the e-learning pedagogy is based on a mixture of methods, used in private higher education institutions from year 2000 onwards (Alhabshi, 2006).

Wawasan Open University (WOU) uses board threading discussion, real time textual chat and course materials. They also stressed using video, audio, text documents, and scanned images or links to other web sites. Web-based training (WBT) is the mode of delivery for training via a web browser over the internet, a private intranet, or an extranet. Web-based training typically offered links to other education resources such as bulletin boards, discussion groups, references and even mail.

Recently, "rapid e-learning" gained popularity. Rapid e-learning is an exciting, new solution facilitated by powerful, effective e-learning programmes (Cryle, 2010). The principle of rapid e-learning remains "time to build" and "time to learn", which is a vital instructional quality hitherto not been well-known (Cryle, 2010). Learning Management System (LMS) on the other hand, instigated a paradigm change in the private education system in Malaysia. E-learning is described as an internet facilitated learning which involved knowledge delivery via the internet (Goi & Ng, 2009). The rapid development of internet facilitated the explosive growth in e-learning.

Goi and Ng (2009) had prepared plans on high quality associations with e-learning. They found that diversity of human experiences played an important role. In view of these recommendations, it was clear that the current study needed to cover a wide range of private universities in case studies in order to capture the diversity of Malaysian private higher education institutions (Shahir et al., 2012). E-Learning is no longer only a connection to distance or remote learning, but is now shaped by having a choice of the finest and most appropriate approaches to inspiring actual learning. E-learning is interactive, or rather, it provides instructional interactivity. Knowledge in this world can be learned, and it is the interactivity that differentiates the one way of learning from another.

Changes in learning styles not only gets students to realise they have an impact in the real world, it also helps them gain additional knowledge. Educators must take

note that e-learning is not just a machine constructed technique for teaching. They need engage the participants at several levels. Nevertheless, e-learning earned popularity due to the clear benefits it offered, as can be observed in private higher education institutions in the Klang Valley (Rahimah, 2006).

According to Kypreos, Bahn, and Zahran (2003) the major risks or challenges involved with e-learning were the effectiveness of the web as a learning delivery channel, lack of accessibility to the required robust technology, learners' inertia in addressing the need to use the internet, lack of appropriate pedagogy for developing well designed programmes, matching technology to learning style, and ensuring the quality of learning.

In University Tun Abdul Razak (UNITAR), e-learning courses were cheaper by 26% compared to traditional courses (Rahimah, 2006). E-Learning also enhances the learner's computer and internet skills (Carroll & Tosi, 1968). Nowadays, e-learning has captured the attention of most major universities in the world, with them offering customised online degrees, certificates, and individually designed courses.

Then in 2002 an established private university in Malaysia, the Asia e-University (AeU), took the extraordinary step of offering distance education through 'off campus academic programmes for students who were unable to get involved in full time study at a university despite of being qualified to do so' (Mazanah, 2001). AeU's School of Distance Education has been providing in-service programmes for working women and educators since 1970, and seventy percent of its graduates are women (Mazanah, 2001).

In conclusion, it is a challenge to develop and assess new ways of e-learning. Basically, e-learning means education that uses the advantages of electronic media, which can offer new educational dimensions and possibilities. Personal computers and

the internet have established a sound basis for e-learning because of their low cost, and a standardised system which allows their extensive applications.

2.5 Dynamic education system that incorporate technology

2.5.1 Learning and teaching

The best ensemble of education in Malaysia can be maintained through learning and teaching, through essential facilitation and efficient direction to create experienced and dynamic manpower (Ministry of Education, 2010). The Malaysia government recognises that adaptation that includes people who are Information Technology literate, raised a labour force that is expert, creative, and skilled in accessing information, knowledge, and creating innovative visions (Ministry of Education, 2010). Investments were allotted to improve expertise mechanical care and content to further expand the profits of teaching and learning in Malaysia (Asirvatham & Abas, 2005). The majority of new investigations and assessment lessons prove that university initiated programmes included technology for learning and teaching (Asirvatham & Abas, 2005). According to Ministry of Education Malaysia, Information Communication Technology responds to the main idea to be included in progressive learning and teaching, to develop educational management and service efficiency, staffs practice and improvement, and tools for delivery and dissemination at the instructive phases (Suktrisul, 2004).

The majority of the universities in Malaysia described e-learning as growth from higher education. They have responded strongly to these challenges, as it was led by the Ministry of Education to encourage adequate planning in advance of the implementation of infrastructure and apparatus, to improve the curriculum and assessments, (Hassan, 2002). In a survey of e-learning applications in numerous higher education institutions in Singapore and Malaysia, concluded that critical issue in private

higher education institutions were strategic arrangement. This is to incorporate ICT in learning and teaching, support the transformation of strategies, manage plans for e-learning and help academic staff adapt to the technology, to prepare staff to accept of ICT (Maznah, 2004).

2.5.2 Professional development

Staff professional development was a major concern in supporting learning and teaching processes for educational transformation. More than eighty percent of the educators said that the internet was marvelous achievement for education systems (Sirinaruemitr, 2004). However, we need to bear in mind that the lecturer is a donor of knowledge (Sirinaruemitr, 2004). The change must be initiated by the educators' (Sirinaruemitr, 2004).

The majority of public and private universities in Malaysia sketched out their plan in 2000, for a tutoring scheme to improve particular responsibility and a specific strategy that interconnected to e-learning. The 9th Malaysia Plan (2006-2010), as the second phase of vision 2020, stresses universal human assets, which was one of the seven tactics for the improvement of Malaysia (9th Malaysia Plan). The rapid growth of technologies and web-based advancement were included as part of the education system. Several higher education institutions have established initial attempts suggesting an e-learning environment to assist instruction. This is to maintain the conservative method of coaching or as an intermediate for long-distance or off-campus courses (Khalid, et al., 2006). Maznah (2004) also noted an upsurge in the request for advanced learning and teaching. Most higher education institutions in Malaysia have the intention to encompass e-learning in their syllabus.

In general, it is observed that the educators' involved in change are usually active in professional self-development (Khalid et al., 2006). Development implies

change for the better (Khalid et al., 2006). It might be interesting to find out why some people resist change when it could improve their situation, and the factors which determine the success or failure of an innovation in an institution. This study highlights some of the theories of innovation and change which are pertinent to higher education generally, and e-learning implementations, particularly. Other issues that discussed in this study are the role of educators, students, e-learning experts, and the focus on change management involving technology and education.

There are some effects that the government needs to be aware of, with regards to the nations' educational system and using ICT as a key to modernisation (Chan & Mae, 2002). For certain nations, ICT is an important element for improving abilities and breadth of knowledge. In keeping with maintaining ICT as a major strategy and the nations 'get-up-and-go' attitude to accomplish Vision 2020, changes in the educational scheme was anticipated. This change would cultivate e-learning students (Chan & Mae, 2002). '...Malaysian National Philosophy in education for the purpose of increasing the talent of persons inclusively and combined ways to create an individual who is intelligent and expressive' (Chan & Mae, 2002).

2.5.3 ICT as instrument to transform

Ministry of Education understands ICT to be an instrument to transform learning by improving pedagogies, rather than just operative administrative arrangements in advanced educational institutes (Ministry of Education, 2010). The idea of ICT in education, as perceived by the Ministry of Education, consists of three core strategies comprising utilisation of e-learning as an enabler to increase the digital division, role and purpose of ICT in higher education institutions.

Educators often used internet as a tool for searching information on related activities, were able to utilise it in learning and teaching (Ministry of Education, 2010). Previous research by Zhao (2002) stated that such technological issues may affect the

educators' prospection of the feasibility of adopting a new technology. However, it is important in the Malaysian context, that the educators change to master technological skills, and advance themselves as technologically proficient educators, able to use the most recent technologies to successfully implement online teaching.

The Malaysian Ministry of Education noted that higher institutions were equipping with computer labs with the goal of increasing computer learning and improving its familiarity (Ministry of Education, 2010). This can create confidence and a belief in the ability to integrate web tools in facilitating learning (Ministry of Education, 2010). Educators and learners need to interact, on the change in their learning and teaching processes, so as to reach the aim of ministry. Other studies have revealed that new tutors have imperfect understanding of academic content resources (Carpenter, et.al., 1999).

Furthermore, the exclusive part of the educational progress is that it requires educators to "transform" their awareness. This change arises as educators starts discover different techniques to adapt in developing capabilities to the needs of the learners (Shulman, Wilson & Hutchings, 2004). Many researchers investigated the addition of technology, content and pedagogy, similar to the method described by Shulman, Wilson and Hutchings (2004) to improve on the requirement for teaching (Margerum et al., 2001).

It is necessary to honour e-learning for the substantial gathering of information that has accumulated in short period of time (Ministry of Education, 2010). This is extremely notable. In real time, data increasing so quickly (Khalid, et al., 2006). Universities in Malaysia have replied vigorously to the trial, directed by the Ministry of Education's strategies, to advance the course of Information Communication Technology in e-learning by 2020 (Hassan & Hussain, 2004) in planning qualified and verified ICT organisation, ICT syllabus and evaluation.

2.6 Change management structure

A literature survey on change management from the perspective of university lectures on the East Coast of Malaysia (1983) concluded that to advance the standard of excellence of university teaching, the management should raise the value of the universities' method to development curriculum, features of academics, approaches within the universities and the 'force of change' to improve teaching and adjustment among the staffs (Nurahimah, 2007). Higher education institutions in Malaysia are still at a preparation phase, including the aspect of institutional support, evaluation and assessment (Ministry of Higher Education, 2012). A (SWOT) analysis (Strengths, Weaknesses, Opportunities and Threats of an Organization) and a benchmark using the Kaufman's Organizational Elements Model (OEM) was conducted in 2004, on three private higher education institutions in Malaysia recognised that the development and implementation of learning and teaching component of e-learning were based on an adequate e-learning structure. Nevertheless, numerous other weaknesses were identified, such as lack of a strategic plan to support e-learning, sporadic professional development for academic staff, change in the support mode of e-learning leadership, absence of abilities on the part of the faculty participants to develop e-learning, and the lack of a faculty culture of change to support e-learning.

According to Cane (1969), professional development is reserved to embrace courses and educators who are involved in continual gaining of professional knowledge, attentiveness or ability. Certificates are another advantage of being skilled in professional development courses. The educator professional development is usually work-related education, like talks and workshops, to deliver information and experience. Professional development is also very supportive in adding new skills such as computer skills (Diaz Maggioli, 2004).

Most of the professors relied on their respective institute for improving their talents (Diaz Maggioli, 2004). However, in some higher education institution scenario, many educators conveyed displeasure regarding the value of professional development that does not contribute towards the change management process. Since, educators were not naturally involved in the preparation procedures, they were normally directed to in service courses (Fullan & Hargreaves, 2002). According to Dhamotharan (2002), every syllabus alterations in higher education institutions follow a top-down method. Zakaria and Iksan (2007) recommended that educators be focused to achieve the goals as required in the syllabus, because those credentials are vital for educators.

Additionally, the Ministry of Education has prepared a sequence of programme to drill the suitable talent with the purpose of creating change in computer literate (Zakaria et al., 2010). Through this programme, it is hoped that nearly 12,000 educators would be skilled by December of 2015 (Zakaria et al., 2010). The drills aim to show the applicants that information technology abilities are essential for the facilitation of the real learning and teaching in education and resource development (Garet et al., 2001). Usage of ICT is a vital responsibility in the quest to develop educational research and manage educators change for effective teaching.

2.6.1 Learning tools

Educators vary in learning outlines, plans and formations of learning. Such variations that excel may be used together with the learning tools to improve the design and bring effectiveness into students' learning style for them to absorb knowledge (Rasmussen, Riding & Grimley, 1999). It is not known if the programme has an impact on educators as there is no evaluation or assessment given to analyse the systematic change. A needs analysis should be performed for all educators to pinpoint what in the educators' career serves as a pathway towards change processes. The lecturers should not just fit themselves in the package of change processes instead the package should fit

them. In addition, there should be a feedback so that the content can be evaluated from time to time.

The central argument of this research is that in order to develop a successful learning and teaching environment based on e-learning, educators' should be empowered as comprehensively as possible with a consideration towards the change management (Ghavifekr et al., 2013). This holistic view has to take into account the requirements as well as the constraints imposed by all parties, including student, instructor and subject matter expert. In other words, the decision regarding designing and planning of any targeted e-learning environment has to take into consideration the diverse of learning styles, technical capabilities and organisational needs. Human resource development assumed importance of productivity, competitiveness, innovativeness and capability in management technologies in Malaysia as early as in the year of nineties. Productive and efficient academic staff evolved with the development of change management strategies that was an obligation to excellence (Mahathir, 2007).

Change management in higher education should take into consideration the challenges that impacted the nation and the world. Mahathir said, "... if our nation is going to have strategic change to overcome on our way towards the year 2020, we first have to modernise and become technologically advanced in our personal mould. Subsequently, the nation is required to progress economically, socially, spiritually, psychologically and culturally" (Mahathir, 2007). Bertalanffy and Rappoport (1956) highlighted that an exposed education system interrelates with its surroundings and variations in the milieu effects a transformation in its structure.

2.7 Strengths and weakness of systemic change model

The systemic change model of Roberto (2010) was criticised as it appears to be of both soft and hard ideas. Checkland and Holwell (1993) initiated a hard systems

thinking method to solve complex problems that are factual, while the soft system thinking approach is to solve random structured problems. A complementary combination of the two contrives to achieve systemic change. The systemic change model has a deep commitment to human liberation by detecting unbiased exemplification, involvement and capability of stakeholders in all characteristics of the change. This is important because the major problem of e-learning implementation in higher education institutions, as identified by Embi, (2011) in the Ministry of Higher Education, is the lack of effective adaptation to change in the form of e-learning training and staff development (Embi, 2011).

2.7.1 Stakeholders' involvement

Engaging educators and other stakeholders in systemic change procedures, Banathy (1996) develops Sarason's view that mentioned that designing social and societal systems should involve the experts. She also added that the outcome group, where educators should get involved (Banathy, 1996). Banathy (1996) transcends standards grounded on decision making, need to take hold of ownership of the planning and the e-learning implementation system. In order for a comprehensive ownership in an educational transformation progression, stakeholders' roles require essential change (Zakaria et al., 2010).

As Ministry of Higher Education reported, there is serious consent in the literature, on the need to implement positive change management in e-learning implementation in private higher education institutions (Ghavifekr, Hussin & Shah, 2013). Stakeholders are required to change their mind sets, improve their systems view, understand the change process to familiarise themselves with the changes, and initiate the procedure of designing innovative educational structures every year such as the blueprint of Malaysian Education System, 2011. Hence, innovative types of

relationships and opportunities need to be formed, to compel stakeholders to come together to foresee strategies and implement their ideal educational system. The stakeholder ownership is a crucial constituent of the systemic change process in education. Systemic properties are demolished when a system is separated, either physically or theoretically, into inaccessible components. Although it can be distinguished by its individual parts, the nature of the whole is different from the sum of its parts (Banathy, 1996). Adapting to e-learning changes in the educational system is an approach that involves a transformation, not only in teaching progression through a new medium, but also in the system itself (Banathy, 1996).

2.7.2 Systems theorists

According to systems theorists such as Banathy (1996), to change any part of educational system, knowledge and understanding of how the educational system is needed. Adapting e-learning and the changes in the teaching and learning process to a learner-centered model, formed fundamental changes in the educational system. These changes begin through specific goals, values, and beliefs about the foundations of learning that supports the learning progression, such as the curriculum, instruction, assessment, and policy (Fullan & Hargreaves, 2002). Involvement in change efforts in educational organisations have not resulted in the preferred outcomes of increasing the demand for systemic change (Banathy, 1996).

Besides, most of the educators were not inclined to adapt to the changes in implementing e-learning practice prior to attending courses or workshops (Norhayati, 2002). Only some educators who were young and motivated took their own initiative to learn. Alexander (1998) stated that e-learning is facing changes due to causes such as:

1. Excessive emphasis on the desired results in terms of skilled human incomes, budget and accessibility.

2. Using specific information technologies for personal use only, and lacking adequate concern for the learning project.
3. No alteration in the evaluation of learning for the tutor to refit based on altered learning results.
4. Unsuccessful getting learners to familiarise themselves to new methods, like functioning in teams.

According to Alexander (1998), most reasons of failure were related to the degree of the educators' capabilities in accepting the changes in learning and teaching. In order to adopt and apply the e-learning in an organisation, it was important for the institutions to know how educators understand and perceive e-learning, as a tool to improve the skills and knowledge. This study takes the perspective from the change management process that is integral to implementing e-learning. Banathy (1992) proposed two phases in aiding individuals to cultivate a systems view of the educational revolution.

The first stage is to study the various systems and behaviour, in order to recognise the mutual notions (Banathy, 1992). The first stage also deals with ordering thoughts in order to establish principles (Banathy, 1992). Banathy (1992) indicated that, "a system principle arises commencing an interface of correlated concepts" (Banathy, 1992). Private higher education institutions in Malaysia have been engaged in providing innovative learning to students for more than ten years through e-learning. Private higher education institutions work with partners in making e-learning implementation successful. At the end of the first stage, the connections between the systems and the models must be interdepending.

2.7.3 Adopting system models

The second stage involved adopting systems models that applied to a real life state, by practicing them to initiate the evaluation of a particular system (Banathy, 1992). Banathy (1992) has established three educational change systems models, referred to as a lens, “that can be used to look at an educational system that need to be appreciated, described, and analysed as an exposed, forceful, and complex system”. The Systems Environment Model, also called the “bird’s eye view” lens, permits the description of an educational system within a larger setting such as higher education system’s community. It also allows the existing interactions and patterns in educational system to be viewed against the bigger setting.

The Structure Model, also called the “still picture” lens, captures the state of the educational system at a particular point in time. The education system in Malaysia is constantly changing. Private higher education need to take a closer look at their objectives and their initiatives to incorporate e-learning in their system. The Process Model also named the “motion picture” lens that inspects the role model the society’s point of view. The lens supports private higher education system in obtaining, assessing and practicing the input. It also supports the education system in transforming feedback, system progressions and conveying the output. Banathy’s process model needed a comprehensive and thoughtful dynamic system (Banathy, 1992). Forrester, Potts, and Rosen (1999), held that system dynamics deals with how change, which involved most of the community members, can be effective. Change can be applied in innovation, teamwork and in an organisation where it involves effort.

Similarly, Banathy et al., (2000) stressed that the importance of using all three models for a comprehensive change management for a complex higher education system. It is anticipated that educators acquire a systems view of educational transformation through observing other higher education systems and recognising

associated principles. In addition to the system models, metaphors were central tools in aiding educators to appreciate complex systems of education transformations.

According to Morgan (1998), a “metaphor” is used to recognise involvement. Metaphors can facilitate educators to further their thinking about educational transformation. In the book titled “The Conditions of Learning” Gagne and Dick, 1983 admitted that some issues could create change, help evolve learning and models as tools. His models also offered a state of learning and teaching that, affected the entire procedure of learning and teaching. Hence, it is rational that educators be prepared from all the angles (Dick & Carey, 2001). Morgan (1998) put forward eight metaphors that described organisations as machines, cultures, political systems, and as models for viewing, describing, analysing and accepting organisations systemically.

Hence, Morgan suggested that a main and secondary metaphor to provide specific objectives for the education system. In examining the benefits for stakeholders in private higher education, it was significant that the aims, principles, wishes, and prospects be structured (Morgan, 1998). Morgan (1998) mentioned that stakeholder benefits could be a backup metaphor. Changing educators’ expectations of e-learning implementation, elicited useful communication between stakeholders. It is supposed to move web designers, educators and students to collaborate and work towards a shared vision. As an alternative, existing system benefits the vision, and thoughts shared by the whole private higher education community. Stakeholders have many diverse demands to allow for an innovation.

Roger Kaufman is a dominant character in the history of educational technology and performance enhancement, as well as strategic planning and development for private higher education sector. Roger Kaufman’s Organizational Elements Model (1992) appreciated the disparate fundamentals created by an organization. In addition, the Organization Element Model (Kaufman, et al., 1992) proposed hypothetical outline

exercises for matters related to administration (Kaufman, et al., 1992). It has been used in forming and studying in groups (Kaufman et al., 1992). As a defined structure, a person's attitude was at the core of all. It was individuals that articulated plans and controlled schemes and procedures. It was individuals who need to advance with the technologies and retain administration's values (Nickols, 2008). "Administrations don't do everything, individuals do" (Kaufman et al., 1992). Skilled educators are the vital factor that contributes to ethics and principles (Kaufman et al., 1992). To sum up Kaufman's and Nickols's views, educators develop to reach their aims. Morgan (1998) stated that in identifying theory as metaphor, there is no particular theory that is a perfect opinion. The researcher comprehends that the challenge is to develop the skill to appreciate metaphors, and influence the circumstances that need to be shaped and managed.

Likewise, Banathy (1996) recommended that the proposal began by engaging in a discussion on the need for educators' to be involved in the designing phase. For example, when designing an e-learning implementation, with a framework of five major design processes, followed by the emergence of a design from the current system. This will provide structure and planned for the system (Banathy, 1996).

2.7.4 Organisational change

Professional organisations have highlighted the significance of organisational change procedures that offers a baseline for the implementation of e-learning. Educators and researchers need appropriate training and development to achieve e-learning implementation (Kolbo & Turnage, 2002). Kolbo and Turnage (2002) also claimed that for institutions to lead the faculty's progress, many initiatives in different sectors are needed. To improve academic excellence in higher education, Kolbo and Turnage (2002) felt that the faculty growth should involve expanding their focus, employing wider delivery formats, add focus on learner centred instruction, and while considering

cultural impact from technology. Prior to this, Banathy (1996) said, stakeholders initiate the process to that needed comprehend capability, organizational capacity, and strategies for systems design.

A project manager should be able to combine technical abilities, problem solving, team building, communication, decision making and people skills to attain the goals of an e-learning implementation (Canterucci & P.W, 1995). It is suggested a project team of multiple disciplines are the best individuals (Hopper et al., 1995), and it is key to have a good balance in the team (Canterucci & P.W, 1995). It is equally critical that educators have the generosity to permit others to attain the vision (Jacobs & Kotter, 1998; Nadler & Tushman, 1997).

This can be enhanced through professional development that further empowers educators. Professional development is a continually progressing process of forecasting, activities, assessment and analysis, or responding to the plan (Shahir et al., 2012). When human resource developments manages staff professional development, it was not tailored as individual programmes (Shahir et al., 2012), being more of a 'one set fits all' type. Human resource manager should encourage staff to include their employers in the change management procedures. This could lead partnerships that would promote the employee and the employers in the institution.

Any new innovative approach presents potential threats. According to Louis and Miles (1990), the invention may expose the insignificant, or be marginalised by the instructors' as it has no instant effect and the implementation may fail (Fullan & Hargreaves, 2002). Often there were extra initiatives executed as in educational institutions with lesser admission numbers on the accessibility of internet (Shahir et al., 2012).

Roles, accountabilities, and incomes need to be well-defined (Kliem 1996). A change approach should be established, and the strategy should be developed,

recognising all responsibilities. It is also suggested that the influence of changes on the educators, institutions and stakeholders in terms of approaches, compensation, accountabilities, procedures, measures, training, and so on, should also be considered (P.W & Kliem, 1996). One of the toughest lessons learnt in the literature arising from the failure of change platforms, was that it was because of people (Kliem, 1996). Sincere involvements (P.W. & Kliem, 1996) in promoting change are vital (Barrett & Luedecke, 1996) in the change preparation process. 'People' in this research refers to the educators in private higher education.

2.7.5 Entrepreneurship for change recipients

It was also suggested that creating an atmosphere of entrepreneurship among change recipients and end consumers (Kliem, 1996) is technology advance. Currently educators' that expand in these educational institutions to include all methods of technology that facilitated electronically enabled teaching and learning methods (National Information Technology Council, 2008). The National Information Technology Council (2008), has e-learning as comprehensive learning improved by technological resources that maintain the progress required for cultivating teaching and aggregate student attainment".

Additionally achievement needs that educator to individually participate and be involved in the change (Kliem, 1996). Incentive systems should be reshaped to inspire and strengthen performance as early as possible, and rewards should be on an on-going basis (Barrett & Luedecke, 1996). Change needs to be strengthened and established (Barrett & Luedecke, 1996). This is achieved by ensuring all procedures are consistent and reinforces the e-learning implementation process.

Time should be assigned for reviewing and reflecting on the implementing methods, and celebrating achievements (Connor, Lake, & Stackman, 1988). Reflections on the learning points should be used to enhance methods for newer projects. Once the

main change programme has been implemented effectively, later change programmes can expand knowledge and interactions further (Kotter, Nadler & Tushman 1996; Canterucci et al., 1998). This would make the forthcoming changes more familiar, and thus easier and faster. Lastly, it is essential to monitor procedures to sustain on-going change and to identify new requirements and trends on implementing e-learning.

2.7.6 Learning organisation

The basic meaning of a learning organisation, Senge and Scharmer (2000) said, is to grow its ability and build up its prospects. For such organisations, it is not sufficient to just 'survive' (Senge & Scharmer, 2000). "Survival learning" or "adaptive learning" is essential in e-learning implementation. The researcher, though, is of the opinion that "adaptive learning" should be combined with generative learning to boost capability and construct meaningful learning. Argyris (1978) claimed that organisational learning was the main factor in an organisation's survival because of its ability to continue changing, and its capability to appreciate learning systems (Argyris, 1978). Argyris (1978) defined an organisation's theory of achievement to be its norms, approaches, and expectations. Indeed, formal corporate documents such as organisational charts, policy statements, and job descriptions often revealed action that conflicts with the organisation's practice constructed from actual behaviour.

Additionally, Argyris (1978) recommended that for systems theorists, organisational learning involved a self-regulating process of inaccuracy detection, and consequent improvement. While certain organisations have been positive in institutionalising systems that evaluate and challenge basic standards and operating norms, many others have not been as successful (Muriel, Caroli & Behaghel, 2013).

This failure was mainly because organisations often controlled the learning approaches the educators wanted to use (Muriel, Caroli & Behaghel, 2013). Senge and Scharmer (2000) stated that this failure is what hindered educators from forming a

learning organization. Summing up, an educator needs to have a sense of responsibility, an innate ability to solve problems by thinking out of the box.

Thus, Senge and Scharmer (2000) were certain that the five disciplines of a learning organisation, which individual mastery, common vision, group learning, intellectual model, and rational systems, could prove to be the antidote to learning disabilities. They stated that organisational learning was a procedure facilitated by collective inquiries from their members. In their capacities as mediators of organisational learning, individuals constantly change needs. Educators work as learning agents incomplete until the outcomes of inquiry, and assessments are documented as per the organisational norms (Argyris 1978). Developing a learning organisation is part of the conceptual framework that binds all the fundamentals together. It is the most critical component of the change process, which will ensure healthy learning organisations.

Using emerging technologies such as blogs, wikis, and podcasts to aid communication, interchange ideas, and share resources can facilitate e-learning implementation (Muriel, Caroli & Behaghel, 2013). In order to build stakeholder ownership and contribute to a learning organisation, educator should have a deep understanding of the systemic change process. This understanding is associates the change to educational transformation. Communication is a big part of systemic change. They are vehicles for conveying a diverse group of stakeholders on a journey for appreciation of stakeholders' values, beliefs and ideas (Jenlink et al., 1996).

Stakeholders raise the appreciation of system relationships in society through communication and dialogue. This journey also needs to consider definite objectives for the systemic change process that was to aid educators. It was imperative to appreciate the discovery of different educational systems that involved people to help develop their mind-sets in terms of education (Caine & Jenlink, 1997). In summary, mind-set change

is at the core of the change process. Implementation requires understanding of each element in the change management process, as outlined in the conceptual framework of this research.

2.8 Strengths and weakness of instructional models

Emerging trends in education have steadily leaned towards e-learning. Aided by information technology, e-learning is now a means of delivering and facilitating learning, for a large number of users and learners. These changes in learning encompass a scope that bridges the traditional and the modern of learning processes. Experts believe that Information Technology (IT) provides an environment to achieve realistic expectations of e-learning. In an article titled ‘successful implementation of e-learning pedagogical conversations’ Govinda and Diwan, (2002) argued the need to offer a pedagogical foundation as a requirement for successful e-learning, from a corporate practitioner’s point of view.

According to the Govinda and Diwan (2002), a successful execution of e-learning in the corporate scene is measured via its Return on Investment (ROI) (Govinda & Diwan, 2002). A justifiable Return on Investment would be the ability to prepare people to achieve the exact skills or knowledge in the specified time. Getting suitable employees for accurate information at the right time is possible only if pedagogical principles were implemented in the e-learning. However, they found that in practice, this was the least considered feature in any e-learning implementation (Govinda & Diwan, 2002). In most corporations, management with no training simply gauged results based on cost savings, rather than the actual goals of the e-learning implementation. The authors’ arguments were also echoed by Bixler and Spotts (2000) who also claimed that pedagogical principles were not included in most e-learning implementations.

2.8.1 Pedagogical principles

In addition Govinda and Diwan (2002) pointed out that not including pedagogical principles will cause educators or trainers to reject changes that arose from e-learning courses, that learners would not perform to standard, and also poor content quality. These observations reflect intention to include pedagogical elements in e-learning. Non-threatening methods are suggested, based primarily on questionnaires and literature reviews. Such a method is discussed in Chapter 3. Govinda and Diwan (2002) did also recommend including an organization, when developing e-learning content to ensure the use of a systematic instructional approach. Consistent use of such an approach to content is needed for quality learning materials. Govinda and Diwan (2002) also suggested that minimum standards should be established for this content.

Burniske and Monke (2001) pointed out that technology access must be led by knowledgeable educators, using effective practices to improve and serve the purposes. Educators' responsibilities are to protect the interests of the students. Burniske and Monke (2001) claimed that technology was an area where creativity remains, and "there is still room for educators' development in cyberspace". Is it possible that an educator who has been a part of an online collaborative learning community, to be more inclined to think about technology as an effective tool for instruction?

As the result of advances in information and communications technology, the pattern of learning has changed. Students do not solely rely on what was being taught in the classrooms. They tend to seek other resources through the internet such as videos, articles and diagrammes for a better understanding of what is being studied. Education institutions have this trend as opportunities to develop a new learning and teaching method, by introducing e-learning to the student. E-learning influence on information and communications technology to initiative knowledge in , distance learning (Grimsey & Lewis, 2005). It provides learners with the opportunity to enhance their learning

experience through greater interaction with course material, and the ability to control their learning environment.

2.8.2 Strategies for continuous learning

Over the past few years, many education institutions have introduced e-learning, or at least formulated an e-learning strategy in the effort to keep up with the continual changes in the education world. In fact, a great number of Fortune 500 companies have applied some form of e-learning to deliver nonstop professional development trainings to their staff. For example, International Business Machines (IBM)'s Chief Learning Officer, Hoff, has been quoted as saying that IBM conducted forty-eight percent of its employee training via electronic means as they found it to be the most efficient way to train more than 320,000 employees scattered over 76 countries (Hoff, 2004). On top of that IBM was also able to trim training costs by USD 400 million a year (Mullich, 2004).

Employees ought to be able to process new information quickly, since new products and services arrive all the time. This speed shortens the product's lifespan, rendering the 'new' product information and training obsolete in a very short time. So, product knowledge and skills has to be delivered even quicker and more competently when required. A fast dissemination of knowledge was a significant aspect organisational success. E-learning provides this ease of deploying training on demand as course materials can be accessed via the internet. Based on this trend (Eid, 2004) it was predicted that the e-learning industry would develop 26.7% per annum worldwide from 2012 through 2015, and by that time, the industry will be generating an estimated USD719.4 million in revenue.

There are difficulties to overcome, for instance, a lack in interactivity, content availability, technology standards, and bandwidth were brought forward. However, the technological barriers that once hindered the successful deployment of e-learning were

beginning to diminish, especially with the continued adoption of broadband by the Government. This helped the higher use of media rich e-learning products.

2.8.3 Coursewares

Besides that, courseware was commercially available in the open market as off the shelf products. However, most corporations preferred to develop their own in order to correspond to the corporations' unique culture or values. According to the International Data Corporation (IDC), in 2008, large corporations' spend on e-learning rose by twenty-seven percent as compared to the previous year. This proves that the need for custom content was increasing over than the need for off the shelf content products. Big corporations particularly, place high value on high quality content tailored to the requirements, as they observed it to be a key differentiator against their competition (Maznah & Sufean Hussin, 2007). The core ingredient of any courseware is content. Content need to be structured in a manner that can utilise the media elements to enhance learning experiences. A well-designed and developed content can guarantee the effectiveness of the learning outcomes. Therefore, it was essential that content design should conform to some form of pedagogical elements to ensure that it is relevant and able to achieve its objective. E-learning has long been introduced in the education field to cater to the growing needs of students. Many students wished to obtain their desired qualification without being physically present in the campus. There is a saying "whenever there is a demand, it will be fulfilled." The advances of the internet have made it a perfect match for e-learning. Pashler et al. (2004) in his book 'What the best College Teachers Do,' explained three themes that made teaching still the noblest profession, in the midst of globalisation and technological advancement. The first theme explained that as educators, they themselves should be aware that teaching was a profession and entails pedagogical background. One can be educators with proper training, but not everybody can be a good and effective educator.

2.8.4 Roles and responsibilities

The second theme pointed to the traditional role of the lecturer who was supposed to act second parents to their students. The lecturer should know their students not just as learners, but also as individuals with different needs and aspirations. The last theme related to the first two themes. If a lecturer has internalised the reason why they were called to teach and how to make their multifarious roles effective, learning becomes participative and engaging. This idea was supported by Altstaedter (2007) who stressed the impact of instruction and learning beyond the classroom. Focus on the effective use of computers in education placed considerable pedagogical demands on educators, because they now have to clarify how a particular application meets learning objectives (Thomas, 2001). With the increasing demand of computer-assisted lessons, educators should also be aware of its implications (Obserne & Hennessy, 2003). Thus, challenges are widespread among educators, and consequently pose shifts in pedagogy or the art of teaching.

As a discipline focusing on how to structure material to promote human values to the youth, Reiser and Dempsey (2006) pointed out that in the context of e-learning, instructional theory puts structure and content on equal footing. The pedagogy of teaching in all cultures and societies has always been dynamic. For every change, however, it was the educator who remains instrumental as bearers and disseminators of knowledge. Their role in the learning process remains indispensable. Benedikt, Freire and Godefroid (2002) claimed that educators have been conditioned to be narrators of knowledge, and students as listeners. He further gave an apt analogy of students being containers and receptacles, and that learning was best described as “spoon feeding”. Therefore, this pedagogy demonstrates educators as having the monopoly on knowledge, who fills the containers that are the students who seek knowledge. The

result is an educator centred learning. With the advent of technology, such pedagogy has been gradually changing into a much more student-centered instruction.

2.8.5 Learning models

‘In an industry setting, e-learning was discussed as an informal, on the spot learning where the emphasis was on mutual productivity. At the same time, in higher education settings, best practices in online learning stresses the development of meta-cognitive skills, where emphasis is placed on reflective and collaborative learning’ (Campbell & Burgess, 2001). With the convergence of communication technologies multimodal information flow, and learner-centred pedagogies, learners have become more interactive (Harel, Medougall & Beijem, 1997). Gillham, Reivich, and Freres (2002) raised concerns on the ability of e-learning in delivering meaningful pedagogically structured learning experiences. They questioned whether such a paradigm had clear, identifiable learning methods. Since face- to-face interaction is replaced by computer mediated communication, (CMC), McGorry, Yung & Philips, (2003) was concerned with the level of quality assurance in these models. While the structure can be uniform, King and Montgomery (2002) expressed doubts on the marketing strategies pointed out by Higgins, Friedman, and Harlow (1999) in relation to e-learning.

Recently, there has been a move to expanding the concept to social learning models and learner engagement (Mortera, 2006). As e-learning advances with technology, websites that facilitate the demands of learners commensurately need to be advance. Consequently, new educational theories are put forward and accommodated to enhance functionality. Alavi (1994) conducted an experimental pilot study on collaborative learning using the Group Decision Support System (GDSS). They hypothesised that collaborative learning could be measured through Group Decision Support Systems (GDSS) which offered an empirical way to assess levels of learners,

self-reported learning and comparative classroom experiences. Their findings showed that the final test grades of students who were exposed to GDSS were significantly higher than those groups who were not treated to the GDSS.

In addition, it has inclusive structures of knowledge and widely adaptive patterns. In e-learning content, therefore, researchers need to define the concept of employee information systems skills, in order to enhance their learning and perform better. Educators' satisfaction was impacted significantly by the type of e-learning technologies selected, integrated and supported by the higher education institutions. For every effort in e-learning adoption, the existence of the appropriate information technology infrastructure seems to be one of the critical components (Borotis & Poulymenakou, 2004). Three basic issues, reviewed to determine depth of employees' information technology skills and knowledge, are the degree of accessibility to the internet, the need for suitable IT infrastructure, and the existence of additional information technology systems that support e-learning functions.

The organisation may need to obtain an e-learning portal or a Learning Management System (LMS), or a Learning Content Management System (LCMS) (Madhukar, 2002). Enhancing employees' information technology skills and knowledge, additional technology systems should be provided. Systems like, collaborative learning tools, learning assessment tools, Decision Support Systems (DSS), Knowledge Management Systems (KMS) and Electronic Performance Support Systems (EPSS). From the lectures' perspective, professional development is to help them decide whether they will take the action necessary to learn the new web tools, how to relate the technology to their content, and to design lessons effectively integrating the new methods. An integral, yet often unnoticed rationale for using technology resources is to help educators to cope with their mounting loads of paperwork. Educators and organisations have acknowledged that if educators spend less time on record keeping

and preparation, they would be able to spend more time examining students' requirements and desires with regards to e-learning. Educators can become more productive through training in technology based on methods and fast access to accurate information. Besides that, Bella et al., (2007) found that lack in knowledge to assess the Information Communication Technology in learning and teaching had caused a lacking of confidence in consuming ICT tools.

Constructing education with tools could be viewed as enculturation into the society in which the learning takes place. This is considered a two fold process whereby society also changes, and the ideas of the new society has largely to do with the introduction of ICT in education. ICT turns out to be vital tools for professional training. The quicker learners know how to use ICT, the easier they find the ways to use the latest techniques of data acquisition and conversion to knowledge.

2.9 Summary

This chapter began with a definition of the term change management and e-learning as used in the research, and provides justification their usage. Literature on the functions and roles of change management and e-learning is then reviewed. The final section of this chapter dealt with some aspects of change management for e-learning implementation in private higher education institutions in Malaysia. The chapter offered some theoretical concepts that affected the research methodology, and the conclusion and recommendations of the study. The next chapter discusses in detail, the sampling procedure, the construction of the research instrument, data collection and data analysis of the study.

The literature reviewed provided various approaches, strategies, techniques and challenges in integrating technology in private higher education institutions, both in the Malaysian context and in other countries. It seems obvious that conscious effort is necessary on the part of educators to incorporate different strategies and techniques to

introduce ICT skills into education. These have shown positive results and a conducive learning and teaching environment. Evidence also suggests that it is important to change the perception of both educators and students in order to successfully implement ICT in education, Literature reviews also seem to state that there has been a substantial growth of ICT in education in recent times. Malaysia's Ministry of Education also preparing its educators to grow computer literacy and improve the learning experience for both students and educators (Ridzuan, 2010). To conclude, educators need to embrace new learning experiences with the use of ICT.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Overview

This chapter discusses the methodology that was used in this research. It has three main sections, which begins with research design, followed by a description of the data collection method and statistical techniques. Choosing appropriate methodology was important in developing the research questions. In another word, a good report is highly dependent on the methodology used in the research (Glaser, 1978). According to Lashakkon and Reddlie (2003) on the quantitative study that supported with interviews have progressed with methodological direction through its procedures that were leading in social behavior, in 21st century. The works of Creswell, 2008; Morgan, 1998; Tashakkori and Teddlie, 1998 revealed various approaches in using both qualitative and quantitative data. The triangulation method for this study as illustrated in Figure 3.1 was selected based on the answers to the following four questions as guided by Creswell, 2008 in choosing qualitative and quantitative research method:

- i) Priority of facts should be given equal attention.
- ii) The arrangement of gathering should be collected concurrently.
- iii) Data should be analysed separately.
- iv) Data should be mixed by integrating or linking both forms of interpretation stage to regulate similarity of the results.

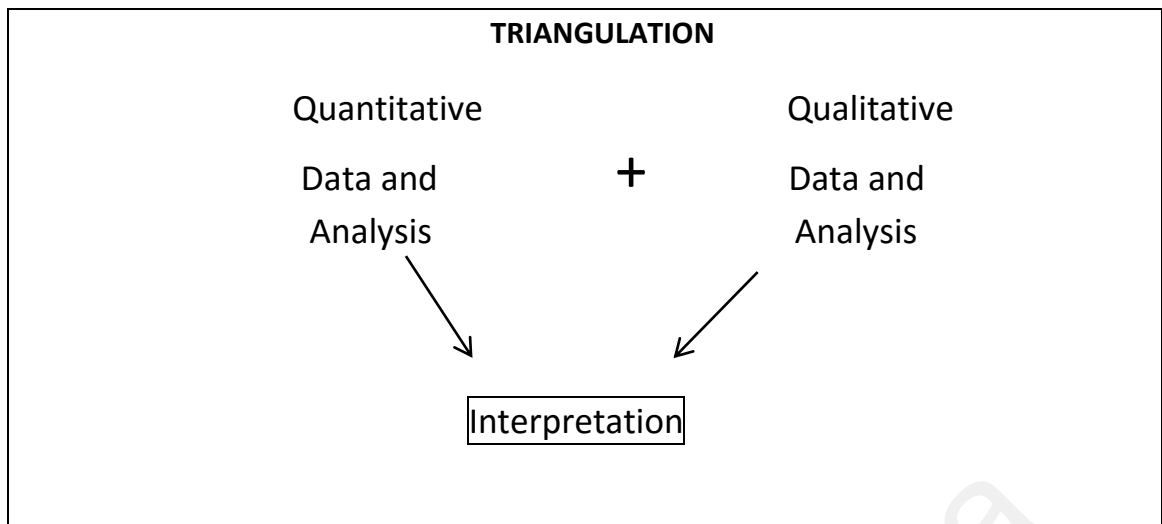


Figure 3.1: Triangulation method used for this study. Adapted from Creswell (2008)

Recently many researchers have employed quantitative methods supported by the qualitative method and this is going much popular (Martin, 2012). Malhotra and Birks (2007) stated that interviews communicate thoughts to draw background whereas questionnaire would utilize statistical analysis (Malhotra, Kim & Agarwal, 2004). Basic rationale for the use of both qualitative and quantitative data is to give force to counterbalance the weakness in between quantitative scores on an instrument and equalize the weaknesses of qualitative answers. On the other hand, in this study, comprehensive outcomes after the interviews of a few respondents offered strength to quantitative data that provide detailed information about the framework of this study. Both data sets were analyzed separately and an interpretation made to reveal whether the outcomes support or challenge each other. The direct evaluation of both data sets as ‘triangulation’ of data sources were used (Creswell, 2008).

Before the researcher began the journey to decide on epistemological and methodological direction of this research, the researcher read, synthesised several articles, journals, and theses to analyze the research questions in appropriate ways. After synthesising the information, suitable research approach, data collection methods and analysis formed in order to conduct research smoothly. Analysing conceptual

framework and the instruments as prescribed in the literature was all the research was about. The results of this study are to provide some information for the need of change management practices among educators especially in private higher education institutions in Malaysia. In the previous chapter, the researcher examined several theories of this research as they exist in the literature on e-learning and change management. In this chapter, the researcher focused on the research instrument that shaped the researcher approach to design the research. The development of knowledge and belief in research is important factor in carrying out the research project (Creswell, 1998). The philosophies and belief are the factors that affected the methods that were employed in gathering data (Saunders & Thornhill, 2003).

Moreover, triangulation method was intended to collect both quantitative and qualitative data concurrently on the outcomes of change management in the implementation of e-learning in private higher education institutions. The study sought to change management due to e-learning implementation in private higher education institutions that have vision and mission related to e-learning implementation. To study this process, interviews which were using semi structured questions conducted with government officials, lecturers and deans of private higher education institutions.

Besides that, the purpose of using the triangulation mixed methods was to provide a comprehensive depiction or picture of the change management due to e-learning implementation. It was anticipated that triangulated data could show convergence, inconsistency, and complementary results. The quantitative study was good at establishing 'state' (Gay, Mills & Airasian, 2006), qualitative studies helped to understand 'how' change management due to e-learning implementation (Gay, Mills & Airasian, 2006). With qualitative and quantitative research many scholars recognized and appreciated. The combination of both approaches has become more popular in developing research methods. It is not simply collecting two sets of quantitative and

qualitative data respectively, but it involved merging, linking, integrating or embedding the two different sets of data (Creswell, 2008).

Combination of both qualitative and quantitative approaches was chosen for this study for two reasons. First, it can shape combined effect and strength that occurs among quantitative and qualitative study methods in order to appreciate the topic better (Gay, Mills & Airasian, 2006). It is a “genuine inquiry method” (Steenkamp & Van, 1991, p. 28). Quantitative data yielded from the scores on the instrument that can be analyzed statistically. The results used to assess dominant perspective and trends on the perspectives of educators in change management due to e-learning implementations.

On the other hand, qualitative data, such as open-ended interviews can offer actual arguments of the respondents in the study. Furthermore, these also can reveal diverse view points offer indepth of the condition. Miles and Huberman (2002) confirmed that when combined quantitative and qualitative data, “we have a very potent mix”. Green & Tull (1978); Zikmund (2003) made similar statements saying that by assessing to both consequences of a study “a complex” picture of social occurrence can be developed. Second, inquiries into the study could be improved by collecting and integrating databases to appreciate the occurrence of the research problem (Grossman & Salas, 2011).

In justifying the use of both qualitative and quantitative approaches, Creswell, 2008 defends that “the quantitative offers the prospect to collect data from a huge number of individuals and generalized the outcomes, while qualitative permits an in depth exploration of the research problem” (Creswell, 2008). According to Creswell (2008), most researchers recognized that limitations exist in all methods and biases in any single method could be neutralized. Guion, Diehl and McDonald, (2011)

substantiates that the use of both approaches helps in triangulating data sources, with the means for seeking convergence across qualitative and quantitative methods.

In summary, e-learning is obliging for change and change management is obliging for e-learning. E-learning could initiate change to both the people and the organization on certain extent. There is not a particular approach implemented. Consequently, higher education institutions change management must be as dynamic as the changes in the subject matters and domains of comprehensive understanding. The acceptance of standards for e-learning content can be a crucial step in allowing the content to be transferred among the organizations. An approach for e-learning should be assessed for the appropriateness of the process and the program for the organization. Introducing e-learning hold a shift in habits and require a change in management resistance to e-learning technology and method that originates mostly from a fear of risk. Despite the theoretical benefits that e-learning systems can offer, difficulties can often occur when systems are not developed according to the learner characteristics. Therefore, collection method requires the researcher to have a comprehensive understanding in both quantitative and qualitative research approaches. The mixed methods approach was chosen for this study because it can be used to build on the findings of the qualitative study by pursuing quantitative phase of the research or vice versa.

3.2 Research Design

This chapter discusses the design of the study consist of methods of data that was collected, analyzed and reported. The extensive area of analyzing both quantitative and qualitative method of data collection in this research covered certain depth procedures. According to Creswell (2003), a mixed method approach is based on pragmatic grounds in establishing knowledge. It draws substantially from both

quantitative and qualitative assumptions to provide the best understanding to the research problems. A number of social science researchers (Neuman, 2006; Sekaran, 2003; Sullivan, 2001) believe that triangulation of research methods such as this is likely to produce stronger confidence in the goodness of the data. There are three general strategies to follow in mixed method approach, sequential, concurrent and transformative procedures (Creswell, 2003; Neuman, 2006). In sequential procedures, the findings from one method are expanded with the findings from another method to provide an in depth understanding to the research problem. Concurrent procedures, on the other hand, combine data from both approaches concurrently to provide a comprehensive analysis of the research problem. Finally, in transformative procedures, the findings from one approach provide the conceptual framework for the subsequent process in the study. The subsequent processes involve data collection method that follows either sequential or concurrent procedures (Creswell, 2003).

A concurrent triangulation mixed method approach was adopted in which data was collected through the quantitative survey as well as qualitative techniques. The reasons being were because this research was to look in depth the interrelationship between status, trend, problems, challenges and ways to adapt the change management due to e-learning implementation among the educators in Malaysian private higher education institutions. Other than that concurrent mixed method used because large number of sample with wider population of similar characteristics the data obtained can be generalized. Independent variable is a variable that presumes toward influence of additional variables (Kerlinger, 1979). The dependent variable is a category that is influenced by another category or that is the consequent (Kerlinger, 1979). In this research, the independent variables were ownership control, academic transform, service and satisfaction attainments in e-learning implementation. Dependent variables were the stakeholders involvement, system view, evolving mindset, understanding

transition, system design and system evaluation that were change management variables to enhance e-learning implementation towards educators' perspectives in private higher education institutions.

Furthermore, using the research methodology to develop a framework or model as described by Glaser (1978), sighted by Bogdan and Biklen (1998), included steps such as gathering information to support the key matters, persistent procedures in the statistics to facilitate the development, illustrate challenge, description intended for all the incidents and finally connecting all of the information during sampling and writing depends on the analysis concentrate on the interior categories (Glaser, 1978). Besides that, survey method aims to collect data which support the meaning of the research (Brown & Cudeek, 1993). The survey method also makes it possible to connect more subjects in limited time than other methods would have permitted (Churchill & Iacobucci, 2005). The advantages of standardization will enhance reliability (Kvale, Eisenhauer & Wynaden, 1996). With the variety of respondents among an unvarying stimulus, surveys can be more reliable (Kvale, Eisenhauer & Wynaden, 1996).

According to Churchill and Iacobucci (2005), survey methods attempt to represent the terms of cases included in the manner of their selection (Phillips, 2000). It emphasizes the concept of random sampling that is the procedure of selecting samples (Phillips, 2000). By using statistical techniques, characteristics of the population that can be estimated from a small representative sample group drawn at random (Stake, 2000). In addition, the survey technique is practical since it does not need to have control over proceedings and mostly concentrates on existing measures (Yin, 1994). By means of the survey technique, it was possible for the researcher to compute the statistical reliability of consequences to achieve the objectives from the sample.

Additionally, this study was conducted in four phases. The overview of the four phases was illustrated in table 3.1. Phase 1 was the planning phase where research design was formulated and the direction of the study was determined. Phase 2 required the researcher to analyze documents that stated vision and mission of the private higher education institutions. The researcher is currently working as lecturer in Faculty of Health Sciences and manager of Quality Assurance and Enhancement department in a private higher institution. Wang (2011) used his experience as data to increase understanding of the phenomenon he studied. He stressed that “the researcher’s own experience of life, which technically stands outside the realm of ‘data’, in that it has not been systematically collected within the research setting, can also be used as evidence” (p. 23). Therefore, the researchers experience data was treated as another piece of data as description of behavior or event.

In phase 3, data was collected using different forms such as interviews, discussions, and survey. Questionnaires were used to nalyzes the perspectives of educators on change management due to e-learning implementation. The interviews involved educators, deans and representative from private higher education. Phase 4 consumed a lot of time. Phase 4 was analyzing data, synthesizing of findings and conclusion. The methods, instruments, and protocols, where appropriate and were included in the Table 3.2 to give a holistic guide for data collection.

Table 3.1: *Phases of the study.*

Phase	Description of Activities
Phase 1 (July 2010- July 2012)	Planning of research -Designing the research (inclusive of orienting decisions such as to set boundaries and constraints on the research) -Literature review -Preparing proposal for study
Phase 2 (July 2012-July 2013)	-Analysis documents to understand the vision and mission and underlying forces driving change management due to e-Learning implementation in private higher education.

	<ul style="list-style-type: none"> -Private higher education vision and mission policy -National Higher Education Strategic Plan: Beyond 2020 -National Higher Education Action Plan 2011-2015
Phase 3 (Feb 2014-Aug 2014)	<ul style="list-style-type: none"> -Data collection on participants' conception of change management and its implementation in private higher education. -Interviews -Questionnaire
Phase 4 (Sept 2014-April 2014) most changes	<ul style="list-style-type: none"> -Induction about possible relationship between e-learning implementation and change management, variables which influence e-learning implementation, status and trend, that happened in adapting e-learning implementation, problem and challenges, ways to adapt change management e-learning implementation focusing on educators' perspective -Analysis of data -Discussion between participants -Synthesis of findings and conclusion

Table 3.2: *Guiding questions and method of data collection for Phase 3.*

RQ1: Is there a significant relationship between e-learning implementation and change management in private higher education institutions within Malaysia from the perspective of educators?		
Guiding Questions collection	Participants	Methods of data
Is there a significant relationship between ownership control, academic transform and service and satisfaction as independent variables and stakeholders involvement, system view, evolving mindset, understanding transition, system design and system evaluation as dependent variables?	<ul style="list-style-type: none"> -Lecturers -Tutors -Teaching facilitator -Senior lecturer -Instructor 	-Questionnaire
RQ2: Which change management variables that most influential e-learning implementation in private higher education institutions within Malaysia the perspective of educators?		
Guiding Questions collection	Participants	Methods of data
Which address on independent variables (ownership control, academic transform and service and satisfaction) most influences the dependent variables of stakeholders involvement, system view, evolving mindset, understanding transition,	<ul style="list-style-type: none"> -Lecturer -Tutor -Teaching facilitator -Senior lecturer -Instructor 	-Questionnaire

system design, system evaluation?

RQ3 : What are the status and trends of e-learning implementation in private higher education institutions within Malaysia from the perspective of educators?

Guiding Questions	Participants	Methods of data collection
When e-learning implementation start to participant's institution?	-Lecturers	-Interview
Participant's years of experience handling analysis	-Tutors	-Questionnaire
e-learning classes?	-Teaching facilitator	-Document
Existing of e-learning policy in participants Institution?	-Deans	
How e-learning policy disseminated to the academic staff at participant's institution?	-Head of school/ programme	
Who are the stakeholders involved in developing e-learning policy?	-Deputy Vice Chancellor	
How familiar is participant in change management?	-MAPCU representative	
Does participant institution have central committee in charge of monitoring the change status, trend due to planning and implementation of e-learning?	-e-learning coordinator	
Who is the person in charge to monitor the status and trend of e-learning at participants institution?	-Senior lecturer	
Is participant's institution in line with the Institutional vision and mission that include e-learning implementation?		
Competency level due to e-learning implementation		
Participant's experience to adapt changes in handling e-learning pedagogy classes?		
How long participant took to adapt changes in handling e-learning pedagogy classes?		
Current percentage of courses offered online in participant's institution?		
Current governance structure of e-learning at participant's institution?		
Does participant's institution periodically measure the change impact of e-learning implementation		
Scale to describe change management due to e-learning implementation?		
Scale to describe the participant's capability to adapt change due to e-learning implementation?		
Statement best describe e-learning?		
Change management techniques used at participant's institution during the e-learning implementation influenced your adaptation of the system?		
How do participant's institution manage changes in the status and trend of e-learning implementation?		

RQ4: What changes occurred in private higher education institutions within Malaysia in e-learning implementation focusing on educators' perspective?

<u>Guiding Questions</u> <u>collection</u>	<u>Participants</u>	<u>Methods of data</u>
What do you understand on change management?	- Lecturers - Tutors	-Interview
What changes occurs in participants' when the management set forth on their journey to adapt e-learning implementation in your perspectives?	-Teaching facilitator - Deputy Vice Chancellor -MAPCU representative -Senior lecturer	

RQ5: What are the problems and challenges faced by educators in adopting the changes due to e-learning implementation in private higher education institutions within Malaysia?

<u>Guiding Questions</u> <u>collection</u>	<u>Participants</u>	<u>Methods of data</u>
Problem and challenges relate to change management of e-learning implementation at participant's institution?	- Lecturers -Tutors -Teaching facilitator	-Interview -Questionnaire
Problem and challenges faced by participant's institution in getting the educators to use the existing e-learning platform?	-Deans -Head of program/ school	
Problem and challenges faced by participant's institution in conducting effective training to adapt the changes due to e-learning implementation?	- E-learning coordinator - Deputy Vice Chancellor -MAPCU representative -Senior lecturer	
Describe any difficulties excluding system performance or operation that affect adaptation of e-learning implementation?		
Describe challenges concerning educators' towards change due to e-learning implementation that have mirrored with previous implementations?		
What are the problem and challenges face by participant in overcoming changes due to e-learning implementation?		
Is there any limitations in adaptation of change in e-learning implementation?		

RQ6: What are the ways to initiate change management for e-learning implementation by educators in private higher education institutions within Malaysia?

<u>Guiding Questions</u> <u>collection</u>	<u>Participants</u>	<u>Methods of data</u>
Tool that were used in e-learning	- Lecturers	-Interview
How change is managed at participant's institution?	-Tutors -Teaching facilitator	-Questionnaire
Change management facilitate participants' job role?	-Deans - Head of program/ school	
How participant feel the e-learning implementation is managed?	-E-learning coordinator	
Rank the requirements about change in	-Deputy Vice Chancellor	

order of importance for the participants?	- MAPCU representative
How to facilitate educators' on adaptation of change in e-learning implementation process in participant's institution?	-Senior lecturer
What is the best for future prospect on change management due to e-learning implementation?	

3.3 Research Approaches

The two streams of philosophies in educational management research are positivism and constructionism (Saunders & Thornhill, 2003). Each philosophy contains two assumptions from ontological and epistemological (Saunders & Thornhill, 2003). For this research, ontological assumption is that the objective of this research is to analyse the transition due to e-learning implementation and epistemology assumption that the knowledge is significant if it is based on observation and outcome of the analyses of transition of educators due to e-learning implementation. For this research, the philosophies were fulfilled with both criteria of positivism and some parts need in depth analysis which consist the social constructionism. The first criteria that determine the philosophy is the observer. In this research the majority observers are independent but some are dependent on the part of the analyses and nature of the research questions. The second criteria are the human interests as the main drivers for this research. The third criteria are the explanations of the analysis are demonstrated causality and depending of some research questions in this research that aims explanation of the analysis to increase general understanding of the situation. The fourth criteria are the hypotheses included to gather the rich data from which ideas are induced. The fifth criteria are the concepts are defined in order to be measurable and it is also incorporate of stakeholder perspectives. The sixth criteria are the unit of analysis in simplest terms and some parts are in complex analysis depending on the research questions. The seventh criteria are generalization was in both statistical probability and theoretical

abstraction and final criteria are the sample size is in large numbers selected randomly but small numbers of chosen as well for specific research questions. Therefore depending on the nature of the question the two philosophical streams were used in this research to explain in depth the understanding of change management to educators due to e-learning implementation.

“Research involved the use of theory” (Saunders & Thornhill, 2003). The research instruments were modified by conceptual framework based on theoretical framework. This determines whether the explore motivation utilizes on deductive approach or inductive approach. When the assumption was build as part of research approaches to investigation the research questions then it is categorised as deductive approach (Saunders & Thornhill, 2003). Otherwise, inductive approach would accumulate information and increase hypothesis as consequence of the data analysis (Saunders & Thornhill, 2003).

Futhermore, this research matter has assets of literature on e-learning and change management to identify a theoretical outline. This research also analyzes issues to facilitate, stimulate large amount deliberate, and accessible literature to gain information, investigate along with the conceptual framework and the instrument. Lastly, it was worth to consider the level of risk as another major subject in this research. The deductive approach can be a lower risk strategy because it was considered statistically inferences. Conversely, the inductive approach is always threatened by the importance and reliability of the useful data patterns and theory (Creswell, 1998). As a conclusion, this research was approached in deductive manner because of the following reasons:

a) Firstly, the topic of this research 'Change management in e-learning implementation in Malaysia'. In responding to this topic it was found that, deductive approaches were more suitable because e-learning has already been in education context for sometime and there were many literature and opinions of experts that have been published. From these reviews, a wider picture was framed which acted as a guide to overall e-learning system.

b) Secondly, the research time-span was appropriate that, the process of collecting, formulating, forming research strategies belonged to the deductive approach.

c) Finally, the current researches also provide for future researchers as to avoid the appearances of the narrative description of data except for some parts which added on with interview to support the data.

The results recommendations and conclusions were made after the analyses were accomplished from primary and secondary resources.

3.4 Research Strategy

In this research the survey method, cross sectional study and exploratory method were used as the research strategy to conduct this research in Malaysia's private higher education institutions. This section explained how this research collected and considered data, strategies sample within a reasonable approach. This survey method was used because the data obtained was standardized, facilitated comparison, analyzed using quantitative method and findings were strengthened with interviews.

Moreover, quantitative research aimed at collecting facts and figures using methods such as social surveys or statistical analysis. In this research, the quantitative method, in the form of a survey that was selected to measure the perceived impact of variables to analyze the research questions on change management toward e-learning

implementation. In addition to the traditional list of research questions and sub-questions, a number of related issues were proposed for investigation.

Besides that, the researcher recorded information about the research subjects without manipulating the environment in private higher education institutions. It also allowed the researcher to compare many different variables at the same time. Exploratory studies are “what is happening to seek new insights to questions and create a new light” (Adams & Schvaneveldt, 1991). Exploratory research can be linked to the activities of the explorer (Adams & Schvaneveldt, 1991). This technique remained constructive since it was variable. Moreover, it insists toward the literature, and interviewing people who are familiar with the topic. This research used exploratory study because it relied on secondary data collection besides the primary data collection. According to Saunders and Thornhill (2003) survey strategy also helps to collect small ranging of data to match with the period given in ensuring the focus and accomplish in timeline given.

3.5 Data Collection Methods

Self-administered questionnaire was chosen as the data collection instruments for quantitative method and interviews were conducted as qualitative method. The criteria samples were educators from private higher education institutions with vision or mission based on e-learning implementation in Malaysia. The researcher distributed the questionnaires stage by stage between March, April, May, June, July and August 2014. The questionnaire was adapted from Siebel 4.0-2 Survey Questionnaire (SSQ) by Hambling, 2010. The rationale of adapting the ideas of SSQ was because the research that Hambling, 2010 conducted used the Systemic Change Model on implementation of Siebel 4.0-2 an e-learning platform in the perspective of the ‘people’ who were the users. SSQ was cited by 14 research articles that used Systemic Change Model from the

year 2010-2012 (MS Academia, 2013). Some of the articles were ‘Customer relationship management system proposal with emphasis on simplicity and security using distributed system architecture’, 2014 by Vokorokos, et al., ‘Medical liaison survey 4: Assessing tools by medical liaisons, clinical trial involvement, and career strategies’ by Craig Klinger, Christopher Marrone, and Lynn Bass, 2010 and ‘Automated testing of graphical user interfaces’ by Babic, 2013.

Besides that, this research questionnaire used the ideas of SSQ with modified variables to suit the conceptual framework and answer the research questions. This survey questionnaire took approximately ten minutes to complete. Questions were sorted to be precised. Respondents were assured of their anonymity and with the purpose that the entire responses were kept strictly confidential. Briefing with clear instructions was conducted before the questionnaire was given to the participator.

This included the conveying of clear instructions to potential respondents regarding the answers and collection of the complete questionnaires. Questionnaires were collected on the spot. However for respondents, who wished to complete online version of the questionnaire, it was sent online to them. In designing the questionnaire the layout was important, answer choices arranged out attractively, neatly and the lengthy questions were kept short (Holland & Quinn, 1987). Besides questions related to similar areas were assembled together to keep the flow through out questionnaire logical and simple.

Interviews on the other hand, were conducted based on purposive sampling method where the respondents were chosen according to certain characteristics. The interviews were conducted concurrent with the questionnaire because the purpose of interview in this research was to support and strengthen the data gathered. Semi-structured interview was one of the main data collection methods employed in this

study. It was collected from a range of people presenting broad ideas. The target interviewees were the stakeholders of private higher education namely the institution's staff members from various organizational levels, educators and MAPCU representative. Interviews with participants were carried out on one to one basis. Individual interviews with participants were intended to explore what was the participant's perspective about the discussion and to draw the information from them.

The researcher included the four types of questions suggested by Strauss and Corbin (1990) to stimulate responses from the participants who included hypothetical, devil's advocate, ideal position and interpretive questions. A hypothetical question usually began with "what if" or "suppose" to relate to a scenario and required respondent reaction in such situation. A devil's advocate question challenged the respondent to consider an opposing view. This was particularly useful for the researcher who wanted to elicit information about the respondent's feelings on a controversial topic. An ideal question to ask the respondent would be describing an ideal situation. It helps to encourage the respondent to reveal the success factors and weaknesses. In this study, the ideal position questions were very useful. An interpretive question helped the researcher to check her current understanding on certain topic yet to provide more views, feelings and information. This type of question often helped the researcher to confirm the tentative interpretation of the interview findings.

Additionally, Merriam (1998) highly recommended that a review of the interview questions be carried out before the actual interview. The researcher has piloted all the semi structured interviews by trying out questions with fellow colleagues. Some of the initial questions have been reworded or rephrased as they were found to be confusing and misleading. Some questions which were found to yield unrelated data have been deleted whereas new useful questions suggested by the respondents were included. Furthermore, the sequence of the questions was rearranged to ensure better

probe during the interview. Each interview lasted no more than an hour except for those willingly extended by the participants. Vision and mission of the private higher education institutions were obtained by analyzing documents and observing the official website of those institutions that were analyzed.

Moreover, as mentioned the respondents of this research were from institutions that were directed by vision and mission towards e-learning implementation. Code of Practice for Institutional Audit stated that the vision and mission of an institution should be revealed on the official website of the institution as vision and mission statement (Code of Practice for Institutional Audit Manual Book, 2012). The data collection was completed in seven months. All interviews were conducted with the aid of the respective interview protocols listed in table 3.3 and the area of focused for each protocol shown in table 3.4.

Table 3.3: *List of Interview Protocols*

Participants appendix	Interview protocol	Attachment in
Deputy Vice Chancellor	INTI 1-1	Appendix E
Senior lecturer	INTI 2-1	Appendix F
E-learning coordinator	INTI 3-1	Appendix G
MAPCU committee Member	INTI 1-2	Appendix H

Table 3.4 : Area of Focus for Each Interview Protocol in this Study

Interview Protocol	Focus
INTI 1-1 on: learning	Deputy Vice Chancellor/ MAPCU representative opinion Status and trend of e-learning implementation Problem and challenges in overcoming changes due e- implementation Facilitate educators' on adaptation of change in e-learning implementation Limitations in adaptation of change Future prospect on change management.
INTI 1-2 change	Able to provide commitment of private higher education institutions towards e-learning implementation. Details on current issues and challenges and future directions on management due to e-learning.
INTI 2-1 learning	Educator's opinion on: Experience handling change management due to e- implementation Limitations in adaptation of change Future prospect on change management.
INTI 3-1 learning	E-learning coordinator's opinion on: Status and trend of e-learning implementation Problem and challenges in overcoming changes due e- implementation Facilitate educators' on adaptation of change in e-learning Implementation

3.6 Sampling design

Sampling technique was initiated on the data collection and together sufficient data from the relevant groups (Abdullah, 1996). As for the quantitative part of the research, sampling was based on probability sampling. The sample for this research was academic staffs in private higher education institutions with university status in Kuala Lumpur and with the vision or mission related with e-learning implementation. The combination of various private higher education institutions made it possible to produce

an unbiased population of academic staffs in Malaysia. In this research, equal probability of selection design was applied, where each element in the population had the same probability of selection. Probability sampling that was included in this research was one stage cluster sampling. The populations of academic staffs in private higher education institutions were grouped into subpopulation based on the academic staffs' position. All academic staffs from the subpopulation mentioned were included in the final sample.

Besides that, Creswell (2008) stressed that the use of qualitative research is to present multiple perspectives of individuals to represent the complexity of world and he suggested that in order to provide in-depth understanding interview were also required. He defined maximal variation sampling as a purposeful sampling strategy in which the researcher samples referred on some characteristics or trait (Creswell & Clark, 2001). For interview sample size was determined by purposive sampling. A group size of a minimum of two or maximum of twelve participants was recommended while the number of groups was dependent on the population segments (Stake, 2000). The sample was a homogeneous sample in which all of the respondents possessed the same criteria where they belong to the expert category level from the entire institutions. Under purposive sampling, the researcher chooses homogeneous sampling. This was because homogeneous sampling reduced variations, simplifies analysis and facilitates group interviewing (Wang, 2011). Private universities were the larger institutions in the total population of students compared to the private colleges.

Four private universities with vision and mission of e-learning implementation in Kuala Lumpur were selected. Since the respondents were also from the entire institutions, they were also different in their expertise. The selection criteria of the respondents for interview were the educators in private higher education institutions and experts in e-learning implementation in the selected private higher education

institutions. The most distinctive characteristic between the private university and private university college were that the private local university offered only home grown programs while private university college also offers twining or franchised programs from foreign universities. In this study, private university that have mostly homegrown programs has great influence in the Malaysian context toward educators on change management due to e-learning implementation. Hence, four private higher education institutions that have vision and mission on e-learning implementation were participated to provide rich information to this study.

3.7 Population

The aim of this research was to seek development of an in depth understanding of the change management due to e-learning implementation in private higher education institutions. For this study, the researcher selected participants from institutions with have university status that incorporate their vision and mission on e-learning implementation and situated in Kuala Lumpur. The population could best help the researcher to understand the central phenomenon. Private higher education institutions in Kuala Lumpur were selected as the sample because the majority of the university status private higher education institutions with vision and mission on e-learning were situated in Kuala Lumpur. Besides, technological advance private universities were also situated in Kuala Lumpur. In line with government ambition to make Malaysia a regional hub for education, higher education in Kuala Lumpur aimed at attracting top world institutions towards innovative teaching and learning (Ministry of Education Statistic, 2013).

Besides that higher education institutions in Kuala Lumpur are envisioned as a leader in teaching and learning facilities together with a major contribution to the education sector for the country. Therefore, private universities in Kuala Lumpur with

vision and mission on e-learning were chosen as the population that represents Malaysian private higher education institutions. If the sample size is too low, it lacks in the precision to provide reliable answers to research questions investigated (Maleske, 1995). If the sample size is too large, time and resources could be wasted often for minimal gain (Maleske, 1995). The bigger the samples are the advanced the consistency will be (Malhotra & Birks 2007). The minor the fault is, the better the belief on the findings of the population (Malhotra & Birks, 2007).

Therefore, the power of sample survey lies within the ability to obtain the necessary information from the respondents to describe characteristics of the entire population (Maleske, 1995). This self-administered method is more efficient for the research due to time and cost constraints (Davis et al., 1989). According to Patton (1990), the criteria in choosing participants and sites were depends on amount of information that required (p. 169). The total population of academic staff in higher education institutions in Malaysia was estimated based on statistic data from Ministry of Education, 2013. There were 37 private universities in Malaysia with total 282928 students studying in Malaysia (Ministry of Education, 2013).

Universities in Malaysia were shaped with conducive monitoring from Universities and University Colleges Act 1971 (Ministry of Higher Education, 2012). The number of students and educators were determined in the ratio of 1:13 which means that in total 21763 of educators in the year of 2014 (Ministry of Education, 2014). There were nine private higher education institutions with university status that were qualified to participate in this research after analyzing the vision and mission of the institutions. However, only private higher education institutions in Kuala Lumpur with have university status that included e-learning implementation in their institute's vision and mission statement were selected. Educators in this research consist of teachers, tutors, instructors and lecturers in the selected private higher education institutions based on

their qualifications. Krejcie and Morgan (1970) used the following formula to determine sampling size:

$$s = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

s= required sample size

X^2 = the table value of chi-square for one degree of freedom at the desired confidence level.

N= the population size

P= the population proportion

d= the degree of accuracy expressed as a proportion

Besides that, Krejcie and Morgan's (1970) model was used because it was an appropriate model to get the sample size and this model has been cited in 394 studies. From the total citations, 342 were ISI citation from the year 1970-2013 (MS Academia, 2014). From the total ISI citations, 192 citations were being used in determining sample from higher education institutions. Some of the researches were 'A study of happiness and joy in the status of primary schools in Tehran-Iran', (2011) by Talebzadeh. 'Level of Satisfaction among Postgraduate Health Science Students on the Cafeteria Facilities in National University Malaysia, (2014) by Kong and Jamil, (2014) and 'Comparing fear of success, loneliness, and identify styles in collegiate boys' and girls' by Yazdanpoor, Hassanzadeh and Doosti, (2013).

Table 3.5 : Academic staff based on level of education in private higher education institution in Malaysia

Criteria	Number of educators
Total population in private higher education institutions	21763
Total estimated population of educators private higher education institutions in Kuala Lumpur with vision and mission related to e-learning implementation	5294
Required sample size, N	381
Confidence level	95%
Margin of Error	5%

Instead, for the qualitative study, participants were who directly involved in change management due to e-learning implementation and their views and experiences contributed to the data collected for this study. In addition to the above participants, one participant from the Malaysian Association of Private Higher Education (MAPCU) was included to provide insights leading to answers for some part of this research study. Table 3.6 shows the participants and reasons for choosing them. The participant's position and the time spent on each interviewee are shown in table 3.7. The actual interview schedule is enclosed in Appendix D.

Table 3.6 : Participants and the Reasons for Choosing.

Participants	Reason for choosing participants
Senior level challenges, and	Able to provide insight the status, trend, problem, facilitate management limitations in adaptation of change for future prospect on change management.
Educator	Able to give detailed information on experience handling change management due to e-learning implementation and limitations in adaptation of change
E-learning challenges, coordinator change	Able to provide insight the status, trend, problem, facilitate and limitations in adaptation of
Malaysian Association institutions issues of Private Colleges and management Universities (MAPCU)	Able to provide commitment of private higher education towards e-learning implementation. Details on current and challenges and future directions on change due to e-learning.

A total of 6 semi-structured interviews were conducted with 6 participants from various stakeholder roles as shown in the following table 3.7. Furthermore as part of the questionnaire distributed to the educators, for the purpose of triangulation of data, interviews also gathered on change management due to e-learning implementation. In this way, while the responses from the interviews with participants provide the actual words of people in the process of change management due to e-learning implementation and the quantitative data yield specific numbers that were statistically analyzed to produce useful information to describe trends about a large number of educators.

Table 3.7 : Participants and Interview Duration

Participant of Code	Position as stakeholder	Institution	Number of interviews	Duration interview (average hours)
P11	Deputy Vice Chancellor	A	1	1.5
P12	Senior lecturer	C	1	1.25
P13	E-learning coordinator	E	1	2
P14	Committee Member	MAPCU	1	1.5
P15/P16	Lecturer	B / E	2	2
Total = 6				

In summary, participants had experienced in the e-learning implementation and processes of change management due to the nature of their work with knowledge about the central phenomenon of this study. They were good informants and contribute to the researcher's understanding on the research topic.

3.7.1 Profiles of interview participants

- a) Interviewees from four institutions and MAPCU participated in the interviews.

They included the deputy vice chancellor (P11), senior lecturer (P12), e-learning coordinator (P13), committee member of MAPCU (P14), lecturer (P15/P16).

Specific job titles were changed to protect the anonymity of the individuals, but the reassigned job titles reflected the nature of the work. The participants were selected purposively due to their nature of work, interviewers' position and their involvement in change management due to e-learning implementation. Hence, they were able to provide greater understandings into this study. All the interviews were handled face to face.

Table 3.8 : Profile and background of interview participants

Participant	Participant's profile and background
P11	<p>Current position held in Institution A: Deputy Vice Chancellor, 2012-present Gender: Male Background/experience: Having graduated with a bachelor's and Ph.D degree in Mechanical Engineering from the University of Birmingham England. He has career in academia is extensive and he has won numerous teaching awards from various academic institutions and the Australian Government. Equipped with more than 14 years of teaching and consultancy experience in the United Kingdom, China and Malaysia, he previously served in various leadership roles including member of South East Asian Ministers of Education Organisation Regional Center for Educational Innovation and Technology (SEAMEO INNOTECH).</p> <p>Researcher's view on participant: He is actively involved educator in transnational higher education and has a good understanding of operational requirements of all stakeholders. He believes that education plays pivotal role in nation building.</p>
P12	<p>Current position held at Institution C: Senior Lecturer Gender: Female Background/ experience She holds a Ph.D. (Biotechnology), MSc (Science Technology), BSc (Biotechnology). She teaches nine hours per week and supervises undergraduate and postgraduate students in their thesis. She was a Vice President of Life Sciences. She was holding the position for 5 years as a senior lecturer.</p> <p>Researcher's view on participant She is an educator who passionate about her work and committed in e-learning implementation to her faculty. She leads the lecturer in e-learning and initiates continually improvement of e-learning in the faculty.</p>
P13	<p>Current position held in institution E E-learning coordinator Gender: Male Background/experience: His first job was Application Programmer at an electronic industry and later promoted to Senior Software Consultant. He was head of department, Mass Communication in private higher education institutions in Malaysia for 4 years. He works as e-learning coordinator, in the current institution, doing consultation on e-learning implementation and teaching Mass Communication for year 2 students. She holds M.Ed (Instructional Technology) and B.A (Hons) Communication.</p>

	<p>Researcher's view on participant:</p> <p>He is very motivated and active in helping the junior staffs. He initiated Learning Management System in the institution that he is working currently. He believes that goals set for e-learning implementation can be achieve with the help of deans from all the faculties.</p>
P14	<p>Current position held in MAPCU</p> <p>Committee member</p> <p>Gender: Male</p> <p>Background/experience:</p> <p>He is currently Registrar of private higher education institution where he provides leadership for the education division in the planning, organization and management of all activities related to policies and procedures on admissions, records and examinations. He was member of MAPCU for almost 2 years. He holds a Master of Business Administration from the Victoria University of Technology in Australia and has more than 23 years of professional experience as an educator. He has been coordinator for teaching and learning technology for 7 years.</p> <p>Researcher's view on participant:</p> <p>He believes that change is the key word to success. He is very keen in vision and mission of higher education.</p>
P15	<p>Current position held in Institute B:</p> <p>Lecturer</p> <p>Gender: Female</p> <p>Background/ experience:</p> <p>She graduated from University Science Malaysia with a MBA (Advanced). She was a lecturer for almost 10 years in private higher education institutions. She was also responsible in Business Association as Secretary. She has been through a cycle of e-learning implementation in her institution.</p> <p>Researcher view on participant:</p> <p>She believes that implementation of e-learning and change management was very much related. She is also very active in extracurricular activities</p>
P16	<p>Current position held in Institute E:</p> <p>Lecturer</p> <p>Gender: Male</p> <p>Background/experience:</p> <p>He holds Master Degree in Science Social from University Putra Malaysia. He is also member of Qualitative Research Association Malaysia and has been working as a lecturer for almost 7 years. He is teaching subjects like TITAS, Moral studies, Introduction to University and Social Science subjects. He has been in a cycle of e-learning implementation in a private higher education institution.</p> <p>Researcher's view on participants:</p> <p>He likes to interact with other educators and very helpful towards his juniors. He is also active in co-supervising students on their final</p>

3.8 Pilot study

Before starting field work of this research, a preliminary analysis of the literature was carried out by looking through materials from libraries, the internet, journals, conference papers and previous research related to this area. It was aimed at providing an overview of change management and its worldwide development in e-learning implementation. In order to promote e-learning pedagogy, it was necessary to understand the forces that can motivate the growth of e-learning implementation. The researcher used convenience sampling in the pilot study. The convenience sampling that was used allowed the researcher to obtain the basic data and trends regarding this research. The respondents selected were also easy to recruit for this research.

Even though this sampling was not ideal to test the entire population it gave an overview for a pilot test. The convenience sampling consisted of fifty educators from private universities that had vision and mission on implementation of e-learning in their institutions. The participants in this research were also asked regarding their observations, views and ideas regarding the instruments. The response of the instruments and conversations were used as guidelines to rewrite the questionnaire. After re-testing the second draft of the questionnaire, ambiguities in the instructions to respondents were identified and corrections were made. The questionnaire was then distributed personally to the respondents. Several positive factors and negative indicators were identified.

Furthermore, the findings from the focus group were in line with the past literature pertaining to educators' perspectives, opinions, beliefs, and attitudes. During this session, the participants were briefed with the purpose, layout and content of the

survey. All the respondents in the pilot test were chosen from the same target population for the actual research. However, the respondent who were participated in pilot study would not participate in the actual research. Each questionnaire was attached with a small token of appreciation for the participation. All the pilot test questionnaires were returned and the respondents gave good responses to the questionnaires.

3.8.1 Content validity for pilot test

Content validity was determined through using scales which were adopted from established empirical studies (Narver et al., 1993; Jaworski & Coupland, 2014). The questionnaire validity and reliability was ascertained by conducting Cronbach Alpha. Even though validity and reliability of SSQ were mentioned, the researcher were still conduct a pilot test to determine the actual validity in the context of this research.

Moreover, the test was not used for statistical purposes and responses from the pilot test were not included in the research findings. In fact, only a preliminary reliability evaluation was carried out with Cronbach's Coefficient Alpha Reliability Analysis. The researcher did not carry out the factor analysis due to small sample size. Tabachnick and Fidell (2007) reviewed this subject with the purpose of reassuring to encompass the smallest amount of 300 cases for factor analysis (Saunders & Thornhill, 2003). Therefore, factor analysis was not needed in the pilot test (Saunders & Thornhill, 2003). While recommended by Nunnally (1979) in the initial point of the research reliability in the range of 0.8 to 0.9 was adequate. The summary results of Cronbach's Alpha stated in table 3.9.

Table 3.9: *Summary results of Cronbach's Alpha*

	Construct	No. of items	Means	Std-deviation	Cronbach's Alpha
1	Stakeholders involvement	2	75.39	14.76	.8002
2	Systems view	8	45.89	4.67	.9001
3	Evolving mindset	4	59.56	7.87	.8395
4.	Understanding transition	3	64.56	9.87	.8279
5.	System design	8	80.70	14.87	.8007
6.	System evaluation	2	80.66	14.89	.8021
7.	Academic transform	6	53.86	11.54	.7910
8.	Service and satisfaction	10	64.63	9.32	.8153
9.	Ownership control	10	62.83	11.28	.8522

Additionally, participants were encouraged to be very free with their responses, make suggestions for improvement and delineate any difficulties that they found. After questionnaires were answered by each participant, they were asked for their comments. Comments were solicited on the clarity of the questions and the editing were done in order to simplify the questions. The pilot test results identified ambiguities in the questionnaire items. Problems concerning instructions given for completing the questionnaire were also solved. Consequently, length of the questions in the questionnaire was shortened in response to some feedback received during the pilot study, a few questions were rephrased.

A final version of the questionnaire was prepared for the use in the actual research. The entire commentaries, opinions and implications of the respondents were taken into consideration. Several important points were included to the pilot test sections such as:

- a) Sentence organization and preference of terms were improved
- b) The significance of numerous substances was relatively indistinct and it was rearticulated

c) Correction of spelling error

d) Restructured all the positively and negatively worded statement

Pilot studies were not conducted for the interview protocols designed for this study because qualitative data collection and analysis were often progressive. In other words, data in second or subsequent interview series were considered ‘better’ than the previous one as the interviewer may have gained insights from previous interviews which were used to improve interview schedules and specific questions. This has led some researchers to agree that in qualitative approaches separated pilot studies were not necessary especially if the researcher was confident when using the interview technique.

Besides, it was the aim of the researcher to develop a simple questionnaire for educators to evaluate the change management due to e-learning implementation in private higher education. With this in mind, items with complex variables were deleted to simplify the structure. The pilot studies have definitely increased the likelihood of success in the actual study. In summary, it was important that questionnaire for data collection was developed systematically in order to reduce measurement errors with regards to questionnaire content, design and respondent. The well defined conception and transformation of content into questions will minimize such measurement errors. Careful attention to details and understanding of the process flow involved in developing the questionnaire were considered as the small sample size in the pilot studies, the researcher could not conclude definitely that it was the true trend of results and therefore such conclusion were best left for the actual study.

3.9 Research instrument

These research instruments were based on change management processes to support the improvement of education transformation in private higher education institutions. This research was an empirical study employed survey and interview were

used as the research method. Both of the methods saved time and cost while being able to reach a wider variety of respondents (Stake, 2000). The questionnaire survey method allowed for a wider spread of sample in a short period of time. It also allowed generalization to be made concerning characteristics of the entire population being studied (Subrahmanyam et al., 2001).

Besides that, two arrangements of questionnaires referred to (Appendix A) were developed. Both forms of questionnaires were alike in the subject matter however it was just different in the form of presentation. An online survey questionnaire was intended to attain part time educators. The questionnaire was also mailed online through the researcher's links and institutions staffs' directory. The questionnaire was developed on basic beliefs or assumptions which included:

- 1) The major enhancement in education observed and obtained significant time and extended tenure in service programs.
- 2) During service, academicians paid attention to improve the attribute of private education institutions programs.
- 3) Academicians were aggravated to gain knowledge of innovative belongings while they have several controls in excess of their learning and were complimentary from threat.
- 4) Academicians differed broadly in their competencies and willingness to discover.
- 5) Private education institutions atmosphere inspired the accomplishment of change management.
- 6) The private education institutions were the main appropriate component of transformation in education.

7) Private education institutions have the accountability given to the possessions for managing the change.

The questionnaire SSQ was adapted by the researcher because it was supporting the conceptual foundation of this research. The finishing questionnaire was developed on the response attained from the pilot survey. The questions in change management survey were structured across nine major categories:

- 1) Stakeholders involvement - two items
- 2) System views -eight items
- 3) Evolving mindset –four items
- 4) Understanding transition- three items
- 5) System design- eight items
- 6) System evaluation- two items
- 7) Academic transform – six items
- 8) Service and satisfaction- ten items
- 9) Ownership control- ten items

The questionnaire consisted of twelve pages. A total of four opens and closed ended questions were included in the questionnaires. According Sommer (1991), closed ended questions were for the researchers to decide on the position of the questions. The main strengths with such arrangement were that close-ended questions were simple to inquire, decreased interviewer favoritism, were faster to manage, and offered a better consistency of reaction and effortless procedures (Sommer, 1991). Each questionnaire

was attached with a cover letter describing the general purposes of the research study and explaining that replies to every statement reserved confidentially.

The questionnaires were organized with A4 size paper and pre-tested before the actual survey. The final version of the questionnaire was developed after receiving feedback from the respondents. Close-ended questions and four open-ended questions were included in the survey instrument. In arranging the questionnaire, related questions were grouped together within the construct. The Likert scale was used for determining manner because the technique was easy to control (Zikmund et al., 2003).

In addition, all variables in the questionnaire were calculated lying on 5 point Likert rating scale. Likert scale was completely on empirical data subjects rather than subjective views of judges and it was constructed of homogeneous scales as a result would be valid and reliable (Burns & Scapens, 2000). Through Likert scale, respondents pointed out that they agreed or disagreed with cautiously assembled statements that vary as very positive to very negative. Individuals normally preferred beginning the five choices amid their scores (Burns & Scapens, 2000).

Table 3.10 : Likert Rating Scale

Strongly Disagree Strongly	Disagree	Uncertain	Agree	
Agree				
1	2	3	4	5

The first section was on demographic data. The section contained eight questions which covered gender, race, age, marital status, position, highest academic qualifications, facilitators/ non facilitator experience (years in the teaching profession)

and job status. In some questions, the respondents were allowed to tick more than one answer.

The second part of the questionnaire contained 53 items pertaining to three independent variables and six dependent variables. All the items were randomly arranged and not in a specific group. The criteria used to determine the questionnaire in such characteristics were deduced from findings of various research studies. The questions were arranged in negative and positive structured questions and the scores or numbers were reversed during data analysis. According to Henry, Marcy and Butler (1992), the subject matters respective principles could be used to form guidelines for developing the questionnaire.

The final inquiry was an open-ended question designed for suggestions toward improving the future change management for educators. After the questionnaire was completed, each item was analyzed separately and group item responses were summed for scoring. For individual scoring, the best scores were from 4 to 5 and the least score were 1 to 2. As for the group, the total marks were summed up and the best score were 80%-100% and the least score were from 10%-30%.

Interviews as qualitative data analysis helped together wider opinions and in-depth information on the change management process especially the journey that educators were going through, problems, challenges and ways to overcome them in private higher education institutions in Malaysia. The standardized open-ended interview was semi-structured in term of questions so that responses were open-ended. This allowed respondents to contribute as much as detailed information and allowed the researcher to probe questions. The semi-structured interviews to facilitate and discover strengthen of the survey questionnaire and arrangement of the questions (Teddlie & Tashakkori, 2010).

Time allocated for each interview with respondents was about half an hour. Additionally, a deeper indulgence of the agenda accomplishment and educators' feedback were attained. Findings commencing a large sample range with significant implication encompassed heterogeneity (Patton, 1990). The participants therefore, were responsible for providing organizational direction (Lincoln & Denzin, 2000). Six interview participants were gathered.

3.10 Statistical Techniques

For quantitative data analysis, data obtained from the respondents that were computed through the use of the SPSS (Statistical Package for the Social Sciences) Windows Version 9.0 program. Content validity ensured for each of the survey forms received (Nunnally, 1979, as quoted by Lee & Ng, 1996). Descriptive statistics (frequency distribution, mean and standard deviation) and inferential statistics (Pearson's correlation, independent t-test, one way Analysis of Variance (ANOVA), MANOVA, posthoc and multivariate regression measures were used to analyze the data collected.

Moreover, both exploratory and confirmatory factor analysis were carried out. The independent variables were constructed using simple regression against each dependent variable. The researcher performed a test of difference or measures of association between two variables at a time. The statistical procedures used in the analysis of collected data were summarized as follows:

- i) Demographic data analyzed using frequency distributions of descriptive analysis.
- ii) Respondents ranked on a five point Likert scale starting from 1(Strongly Disagree) to 5 (Strongly Agree). The percentage of respondents who agreed or disagreed with a particular statement was computed based on the Likert scale. The instrument offered positively worded reports. Every statement had 5 alternatives to select from strongly

agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1, The mean scores and standard deviations of each statement in Section 1 and Section 2 of the questionnaire were also obtained. The standard deviation of each statement used to gauge the degree of agreement between respondents in each of the statements. Replies closed to a particular Likert items were ordinal data, with five levels. Likert answers are able to be evaluated by means of non-parametric tests such while the Mann-Whitney test the Wilcoxon symbol grade assessment and the Kruskal-Wallis test (Russell, Wortham,& Saunders, 2003).

iii) t-test of one way analysis of variance (ANOVA) expanded to evaluate the dissimilarity linking the mean scores of each statement based on the educators' demographic backgrounds. One way ANOVA compares the means of one dependent variable in many groups if they are significantly different from each other. The frequency distribution, mean and standard deviation were also obtained from data to ascertain whether the distribution was normal or otherwise. It was used to explain broad characteristics of respondents. The t-test was used to test the difference between the educators toward change management on e-learning implementation. Independent t-test was used to determine if two distributions differ significantly from each other. This test compares the means of two different samples for examples the means of male and female.

iv) Multivariate analyses of variance (MANOVA) compare the means of several multivariate populations. Tabachnick & Fidell (2007) elucidate that MANOVA requires a minimum data set of one or more independent variables and each has two or more levels. In addition, there were two or more dependent variables for each level of independent variables. To use MANOVA, a few assumptions were made. First, the data meet the requirement of homogeneity of Variances –Covariance Matrices, where if $p > 0.001$ the data is homogenous. Another requirement is the homogeneity of variance

for each of the dependent variables. This assumption can be tested using Levene's tests, where if $p > 0.05$, the assumption is not violated. Post-hoc comparisons were conducted to investigate the differences between groups for each dependent variable.

v) The reliability of the questionnaire as a whole was computed using Cronbach Coefficient Alpha. The acceptable alpha for exploratory research is .7 and above (Lee & Ng, 1996).

vi) Pearson correlations were used to show a relationship between two variables. A positive correlation indicates that as the value of one variable increase, the value of the other variables also tends to increase. A negative correlation indicates the reverse, as the value of one variable increase, the value of the other tends to decrease. A zero correlation indicates no relation between the two variables (Coakes, Steed & Price, 2008) Pearson's bivariate correlations were used in this study to test the relationship between the constructs and its relative influence on change management to empower the educators for e-learning implementation.

vi) Multiple Regressions is an extension of bivariate correlation and is used to determine variables that can significantly predict or influence the dependent variable. In this study, Stepwise Multiple Regression was employed. In stepwise selection, the independent variables are added to the statistical equations one at the time and the decision to add or remove the independent variables, as well as the order of their entry to the equation, are determined by the statistical considerations (Coakes, Steed & Price, 2008). The strength of relationship between the independent variables and dependent variables were indicated by R and R^2 represents the proportion of variation in the dependent variable that is explained by the independent variables (Kinnear & Gray, 2006).

Besides that for an interview, the researcher needed to code the entire interview. These procedures needed profound planning. The data coding was prearranged to identify models or themes in the transcriptions of interviews and field notes. The progression concerned interpretation of transcriptions of the entire data, discover descriptors or codes, gather or grouping categories of data collectively according to the codes and recording data if essential (Teddlie & Tashakkori, 2010). Codes must coherent with one another to standardize the analysis (Miles and Huberman, 2002). The data were analysed by NVivo. NVivo is appropriate to analyze this research because it consisted of free flowing texts and it is not limited to certain forms. The researcher has to work with notes from literature or other resources to start developing skills and ideas using NVivo, as these were readily available while the researcher finalized plans and gained various approvals necessary to gather the researcher's own data. Code notes also provided a basis for making comparisons with the researcher's preliminary findings. Using NVivo flow charts and purely exploratory diagrams were created using the modeling tools.

3.11 Data Analysis

In semi-structured interviews, pre-planned questions were used to explore certain specific topics. These cue questions then automatically provided themes for investigation and subsequent analysis of the data gathered. It was common for themes to be identified in advance because a research study starts with the assumption that certain aspects of the phenomena under investigation should be focused. Themes generated in this way were referred to as "a priori" themes. Another justification for using prior themes was that the important issues in relation to the topic studied were so well established. This can safely be expected to be raised in the data. In this study, 'change management' and 'e-learning' were safely used as a priori themes, given their

prominence in the literature. The key advantage of using a priori themes was that they can hasten the initial coding phase of analysis which was usually very time consuming.

Moreover, one possible pitfall for using a priori themes was the matters that may not related to the a priori themes may be overlooked during data analysis because of intense focus on data that fit the priori themes. On the other hand, the researcher may fail to recognize when a priori theme was not proved to be the most effective way of characterizing the data. To guard against this danger, the researcher recognized that priori themes were tentative. They were subjected to redefinition or removal as any other theme. In this study, other new themes were included with others as the study advanced into the data collection stage. The researcher restricted the number of a priori themes as far as possible to avoid lumbering effect on the data analysis. The a priori themes were derived as in the example of an interview in Appendix J by the researcher.

3.11.1 Quantitative Data Analysis

In this study, the quantitative data from the questionnaire were entered into the (Statistical Package for the Social Sciences (SPSS) and Analysis of Moment Structure (AMOS) software for data analysis. Exploratory factor analysis was used for data exploration (Hair, 2006). It was a technique that assists researchers to determine the structure of factors to be examined (Hair, 2006). In other words, it was a technique used when the relationship between latent and observed variables was unknown or uncertain. In this research, exploratory factor analyzes were applied to recognized dimensionality and convergent validity of association by items. An experiment such as The Kaiser-Meyer-Olkin (KMO) and Barlett's Test of Sphericity (Bartlett's Test) were also engaged. These two analyzes sufficient to analyzed the sample (Pallant, 2001). Bartlett's evaluation with a consequence value of less than .05 ($p < .05$) and KMO by means of more than 0.60 were suitable for factor analysis (Pallant, 2001).

Additionally, the Varimax Orthogonal Rotation methods were also included for this research. Varimax Orthogonal is able to shorten the factor loadings and aid in understanding (Churchill & Iacobucci, 2005). Factor loading was practical to determine the convergent and discriminant validity of the scales (Hurley, 2004). Factor loading indicated the strong peak of association among the items and latent constructs (Hurley, 2004). The analyses of this research were also including Confirmatory Factor Analysis which was exercised to investigate convergent and discriminant validity. In order to assess for convergent validity, the projected model has to demonstrate a holistic fit (Schumacker, Lumax & Kline, 1998). In other words, the hypothesized models are required to illustrate absolute fit, incremental fit and model parsimony (Schumacker, Lumax & Kline, 1998). Model fit measures the hypothesized model that fits the data (Schumacker, Lumax & Kline, 1998). With the aim, indicted of the absolute fit model provide an assessment of discrepancy between matrices of variances and covariance (hypothesized model) and implied models (reproduced model) (Schumacker, Lumax & Kline, 1998). The indicted embrace Chi-Square statistic, normed chi-square or relative Chi-Square, Goodness-of-Fit (GFI), Adjusted Goodness of Fit (AGFI) and Root Mean Square Error of Approximation (RMSEA) (Schumacker, Lumax, & Kline, 1998).

An incremental or comparative fit, further investigated model fit of the hypothesized model against the fit baseline of independence model or null model, where there was no proposed relationship among variables (Bentler & Bonett, 1980). In analyzing the relationship from hypothesized models, the results were compared with the independent models to indicated overall fit of hypothesized model (Schumacker, Lumax & Kline, 1998). The scored designed for incremental fit models vary commencing from 0 to 1 proposed an ideal fit whereas 0 referred to present being no disparity linking the hypothesized and independent model (Schumacker, Lumax & Kline, 1998).

Table 3.11: *The ideal Goodness of Fit (AGFI), Root Mean Square Error of Approximation (RMSEA) and Comparative Fit Index (CFI).*

Type	Name	Abbev.	Acceptable level	Comments
Model Fit	Chi-square	(df,p)	$p > 0.05$ at $\alpha = 0.05$	$p > 0.05$ reflects acceptable fit; 0.1 reflects a good fit. To get a non-significant with an association to degree of freedom (meaning that data fits the models), significance has to be at $p > 0.05$ or > 0.1
Absolute Fit	Goodness-of-fit and adjusted Goodness of fit	GFI AGFI	GFI and AGFI > 0.95	Value between 0.90-0.95 may also indicate satisfactory fit.
Absolute Fit	Root mean-Square Error of Approximation	RMSEA	RMSEA < 0.05	Value between 0.05-0.08 may also indicate satisfactory fit. Value 0 indicates a perfect fit.
Incremental Fit/ Comparative Fit	Comparative Fit Index	CFI	CFI > 0.95	Value between 0.90-0.95 may also indicate satisfactory fit. Value close to 0 indicates poor fit, CFI=1 indicates perfect fit.

Source. Adapted from Hair (2006)

There were, in addition, a medium operate to investigate for convergent and differentiation of the validity. Factors such as the theoretical background of the study logical argument and opinion have to be established prior to some pronouncement on model fit is completed (Mavondo & Farrell, 2000).

3.11.2 Qualitative Data Analysis

Qualitative data analysis was the process of “making sense out of the data” and it involved “consolidating, reducing and interpreting” (Merriam, 2008, p.178) what the participants have said and what the researcher has observed and comprehended. The

main goals were to reveal important themes and extent of emphasis that underlie participants' views on the topic and compare these themes across different types of groups. Even though there were many guidelines proposed by qualitative researchers (Merriam, 2001; Miles & Huberman, 2002) but there was not a single, acceptable approach to analyzing qualitative data (Creswell, 2008; Gay, Mills & Airasian, 2006). According to Creswell, it was an "eclectic process" (2008, p. 245) these process of successive approximation were to continue until theoretical saturation has been attained. This happens when the iteration process did not bring forward any more new ideas. According to Gay, Mills and Airasian, (2006), the researcher has the key role and the quality of the analysis depended heavily on the researcher's intellectual qualities. With the wise devised pre-planned interview questions and cues accurately representing the concepts or issues being investigated, any resultant contamination in this study was to be minimal.

In this study, the researcher recognized that qualitative data should be analyzed as it was collected because qualitative research design was emergent. First, the researcher collected data and prepared it for analysis by typing and transcribing it verbatim. Refer to Appendix K for an example of an interview transcription. Then researcher then read and re-read the text and wrote down the impressions that she got from the text as she read. In scrutiny, initial categories of information about the study's phenomenon were formed. This open coding for this study was presented in Appendix N. The data were then identified by dividing text data into analytically meaningful segments which were sorted and rearranged in order to make general sense of the data. This was a process of "reducing a text or image database to description and themes of people, places or events" (Creswell, 2008, p. 268). Codes were then examined for overlap and redundancy and these codes collapsed into broad themes or descriptions of the setting or participants. Appendix J was used as a tentative theme listed to guide the

data coding process in order to generate the main codes and themes. According to Merriam (1998), formulating themes was largely an intuitive process, but it was also orderly and informed by the study's purpose the researcher's orientation knowledge and the meanings. The researcher also explained that the number of themes depends on the data were needed to be managed properly.

Meanwhile, Creswell and Clark (2001) suggested that the number of codes is reduced to smaller, more manageable number such as 25 to 30 and the final number of themes should be about 5-7. This selective coding the researcher identified as the "main" themes in the data related them systemically to other categories that were developed in the axial coding process. A qualitative report detailing information about a few themes that was preferred compared to general information on many themes. The constant comparative method was used as a data analytic technique in the present study. This method was developed by Glaser (1978) originally to develop grounded theory. However, as it involved inductive and concept building orientation of all qualitative research, it has been widely used by many researchers not seeking to build substantive theories (Merriam, 1998). As the name implies, the basic strategy was to constantly compare data sets and themes generated and also within and between levels of conceptualization until findings were confirmed. The thematic codes generated from this study were listed in Appendix M. As this study involved multiple cases, there were two stages of analysis namely within cases analysis and the cross case analysis.

The first stage was the within case analysis whereby each case was regarded as a comprehensive case in and of itself. From the data collected from each institution, comparisons were made through interactions between the researcher and the participants so that the researcher could learn as much about the contextual variables as possible that might have a bearing on the institutions. The second stage, cross case analysis, only began once the first stage was completed. It sought to build abstractions across the

cases. Here, the researcher attempted to build a general explanation that fits each of the individual cases. In the cross-case analysis, the categories or themes emerged from the first case were compared with the categories or themes emerged from the second case. Miles and Huberman (2002) warned that simply summarizing ostensibly across some themes will not reveal much about the data. They stressed that researchers need to investigate the complex configuration of processes within each case, understand the local dynamics, patterns of themes that transcend particular case.

Besides that, the process of analyzing qualitative data takes an inductive form with the ultimate objective being to generate a larger, consolidated picture. In qualitative study, of data collection and data analysis happen simultaneously that they were tightly interwoven, recursive and dynamic (Creswell, 2008; Gay, Mills & Airasian, 2006; Marshall & Rossman, 1995; Merriam, 2008). While collecting data, information previously collected was analyzed to look for major ideas. Both the processes interacted continually so that the emerging thoughts of the researcher became the focus for the next data collection period. This was a distinctive feature of qualitative research as traditional approaches to quantitative research only required the data to be analyzed after collection. The data analysis process was iterative because it involved moving back and forth between the data collection and analysis. It involved a complex process of abstract concepts that indicate categories of data that were with inductive reasoning, deductive reasoning, description and interpretation (Merriam, 1998). In essence, the researcher made her personal assessment to a description that fitted the situation or themes that captured the major categories of information, bringing her own perspective to her interpretation.

3.12 Reliability and Validity Assessments

Reliability, validity, and practicality were used to estimate the uniqueness of an excellent measurement (Cooper & Emory, 1995). The SSQ instrument used for this research was designed and used in a research in United Kingdom by Hambling (2010). It was conducted on 998 managers of Microsoft UK on their change management in the context of a multi-national Customer Relationship Management (CRM) project, using SPSS with Multiple Regression Analysis, showed the good reliability and validity of the instrument (Hambling, 2010). The instrument was valid and reliable and it has demonstrated face validity of .867 and reliability was found to be in the .78 range. Practicality was considered in terms of the convenience to administer, the ease to interpret and the economy of cost (Cooper & Schindler, 2003). In contrast, reliability and validity involved a measurement of precise and applicability (Malhotra, Kim & Agarwal, 2004). Since this, research utilizes multi-item scales, which were a better measurement for change management (Malhotra, Kim, & Agarwal, 2004). Churchill and Iacobucci (2005), hypotheses were tested for reliability and validity to conclude whether they considered what they proposed to evaluate.

By determining the validity and reliability, it was easier to normalize the measurement scales. Reliability and validity involved the dimension of accuracy and applicability (Malhotra, Kim & Agarwal, 2004). The validity and reliability assessments lessened measurement errors and imperative to understand measurement that reveals an accurate score of variables that were being calculated (Churchill & Iacobucci, 2005). To increase the consistency, accuracy and applicability, researcher normally performs reliability and validity tests on the instrument measures (Malhotra, Kim & Agarwal, 2004). If a measure was entirely valid, it was entirely reliable (Malhotra, Kim & Agarwal, 2004). In other words, ideal validity necessitates that there was no measurement inaccuracy.

Thus for this research, reliability was essential, but not adequate circumstances for validity. The goodness of measure was established through the different kinds of reliability and validity tests depicted (Sekaran, 2003). In this research, well validated and reliable measures were obliged to make certain that the research was scientific. Various factors can cause measurement errors, systematic errors and random errors (Sekaran, 2003). The reliability was an indicator that measures the conception and added to the 'goodness' of a measure (Sekaran, 2003). Reliability measures the consistency within measurement that was to make sure the dependable of the dimension across point and range of matter in the instrument (Sekaran, 2003). Peter (1979), described reliability as quantities to which measures were liberated from error and, as a result it defer reliable consequences. Nunnally (1979) argued that reliability was the extent in which measurements were repeatable with several random manipulates which liable to construct measurements diverse in random errors.

There were quite a few categories of reliability analysis that preserved purpose to test the integrity of measures the test retest reliability, parallel form reliability (alternative-form reliability) and internal consistency reliability, which included interim consistency reliability and split half reliability. In this research, the internal consistency of measures was measured using the interim consistency reliability. This was a test of consistency to respondents answer for all of the items in the questionnaire. The Likert scale items were tested using Cronbach's Coefficient Alpha (Cronbach, 1946). The Likert scale has also been used often in studies and research on change management (Marrow, Bowers & Seashore 1967). Cronbach's Alpha was a reliability coefficient that point out how fine the matter in a position was completely associated to one another (Sekaran, 2003). The argument was in line with Churchill and Iacobucci (2005) and Peter (1979) where these researchers recommended Cronbach's Coefficient Alpha for assessment of reliability in internal consistency. The Alpha Coefficient ranges from 0 to

1. The higher coefficient means the measuring instrument has a better and a higher internal consistency reliability (Sekaran, 2003).

3.12.1 Validity test

Throughout the data collection and analysis process, the trustworthiness of the findings and interpretations must be maintained. Chesebro & McCroskey (2000) defined validity as the limit to which compute or position of measures the conception within research the quantity in which it was liberated as a non-random error. Malhotra, Kim & Agarwal, (2004) suggested that validity scale is a point to variant experiential scale amongst characteristics for the measurement. Creswell defined the validity of findings as “that the researcher determines the accuracy or credibility of the findings through strategies such as member checking or triangulation” (2008, p. 266). In other words, validity is a term used to ensure the capability of the scale. It was a test of the accuracy of scale on validity and commencement through content validity, which stand by construct validity (Chesebro & McCroskey, 2000). Four procedures were adhered to in this study to enhance the validity of findings. They were triangulation, member checks, peer examination and audit trail. Each validation procedure is described in the following sections.

3.12.2 Triangulation

Triangulation referred to collecting information from a diverse range of individuals, sites and sources of data, using multiple investigators or methods (Merriam, 1998; Newman & Benz, 1998). Denzin (1982), recognized that there are four types of triangulation which were data triangulation that involved time and space, investigator triangulation involved multiple researchers, theory triangulation involved using more than one theoretical interpretation and methodological triangulation that involved using more than one method to gather data, such as interviews, observations and

questionnaires. Mixed qualitative and quantitative methods support the use of multiple methods (Campbell and Fiske, 1959). Thus, this research described multimethod triangulation. This research has approached multimethod triangulation to help in obtaining more reliable results because it proved to be similar after each method used and also it increases the validity of the entire study. The general feeling was that with more sources of information, the more likely one can get complete perspectives of the phenomenon besides strengthening the study's usefulness for other settings (Newman & Benz, 1998). In order to capture the conception of change management due to e-learning implementation information was collected through multiple sources from the MAPCU representative interview, private higher education institution management personnel interview, educators' interviews and questionnaire and e-learning coordinator interview. All data collected were triangulated during data analysis data.

In addition, to inter-check various data obtained, the multiple data sources gave a holistic, multidimensional view of the phenomenon. In this study, the interviews and survey questionnaire gave in-depth information on change management due to e-learning implementation on status, trends, problems, challenges, ways to adapt and institutional directions from the philosophical and practical aspects about the actual implementation process. Furthermore in the study, data from private universities that have vision and mission related to e-learning ensured that the study was generating both precise reports. Thus, the different sets of data were interwoven during the data analysis phase in order to identify the relationship between them to facilitate synthesis of the findings. Newman and Benz (1998) identified relationship exists between the various sets of data as the structural relationship.

3.12.3 Member Check

Member referred to the participants being studied. Member check referred to systematically soliciting feedback about the research data and conclusions from the participants. In this way, member check helped to rule out the possibility of misinterpreting the meaning of what participants say or do. This process needs to be carried out continuously (Merriam, 2008; Newman & Benz, 1998). In this study, the researcher verified and confirmed with the interview participants if the description was correct, complete and realistic if the included themes were accurate and if the researcher's interpretation was fair. Usually, the member check was conducted at the beginning of the following interview or at the end of the interview.

3.12.4 Peer examination

Peer examination seeks colleagues to comment on the findings as they emerged (Merriam, 1998). Newman and Benz (1998) explain that peer examination was important to counter situation where the researcher was familiar to the phenomenon in the study at the outflow of the research objectives. This was extremely crucial in this study because the researcher was working in a private higher education institution. In this study, opinions from other professionals were sought to provide the researcher a different perspective and this was especially helpful when a breakthrough was needed when the researcher faced a bottleneck situation during the data analysis phase, especially in synthesizing the findings, which was of great anxiety and uncertainty. The researcher also had conducted individual consultation and informal discussion with fellow Ph.D. students, colleagues with relevant work experience and the academics involved in the supervision of student work in the similar area.

3.12.5 Audit Trail

In the context of research, the researcher authenticates each step of the study by recording each work done from collecting, coding, transcribing, analyzing field data and finally synthesising the findings. An audit trail could contribute to the research community because another researcher can replicate the study (Newman & Benz, 1998) and the derivation of conclusion can be known (Merriam, 1998). In other words, it was important to provide context for the readers to make a decision on the applicability of the findings. Thus, for an audit to take place, each step taken throughout the research required to be described precisely and concisely, including how the participants were chosen, field data were collected, categories derived, decisions made and findings synthesized (Merriam, 1998). In this study, the researcher created a matrix for her data collected thus far capturing codes during the audit trail and related them to the research questions. An example of such record is shown in Appendix I.

3.12.6 Content Validity

Content validity (face validity) highlighted the necessity for exposure of the entire domains of the concept being scrutinized (Cooper & Emory, 1995). Malhotra et al., (2004) disagree that content validity (face validity) was a biased but systematic assessment of how the content of scale symbolized the capacity tasks. Most of the time, skilled, workers or professionals were requested to articulate their opinions on the relevance and sufficiency of the paradigm (Zikmund, 2003). For this research, the initial set and the final scale developed was subject to independent evaluation by a few experts in change management and e-learning. Content validity could be determined through using scales, which were adopted from established empirical studies or through pre-testing (Narver et al., 1993). Since subject matter validity was not an adequate

measurement for the validity of the scale (Malhotra, Kim & Agarwal, 2004) other validity tests were performed to validate the scales used in the research.

3.12.7 Construct Validity

Zikmund et al., (2003) stated that the empirical support by means of the measure was reliable among the theoretical judgment concerning perception. While Malhotra, Kim and Agarwal (2004) suggested that construct validity tackles the subject of assemble features in scale that was measured. He also argued that ‘paradigm of validity was the most complicated category of validity to establish’ (Malhotra, Kim & Agarwal, 2004). In testing for construct validity, the convergent and nomological validity need to be examined. According to Malholtra, Kim and Agarwal (2004), convergent validity that determines the construct validity that measures the range of scale that associates positively through further measures of the equivalent constructs. Discriminate validity was a construct validity that reviews the point which did not assess in supplementary constructs as hypothetical to diverge (Malholtra Kim & Agarwal, 2004). Nomological validity was a validity that measures the affiliation among theoretical constructs (Malhotra, Kim & Agarwal, 2004). It hunts for confirmation of significant correlations among the construct as the forecast of theory (Malhotra, Kim & Agarwal, 2004).

Moreover, Nunnally (1979) stated that factor analysis encompass task in analyzing the three portions of validity. Factor analysis could also assist researchers in revisiting their instrument’s content validity (Nunnally, 1979). In contrast, ‘internal structures and cross structures of variables’ construct validity can be determined by applying factor analysis. This was relevant to construct validity where the underlying notion was to examine whether or not the measurement adapted measures needed (Nunnally, 1979). In this context of research, factor analysis used to assess the convergent and discriminant validity.

3.13 Generalizations

In any social science researchers, when characteristics of individuals were comprehensively documented and the research procedures were carefully described, readers can critically, evaluate that study for its generalizations and build an ‘inferential bridge’ to illuminate in own particular situations (Shulman, Wilson & Hutchings, 2004). For the purpose of this research, data that were obtained from sources such as ministry annual reports and other official reports which related were also being used in relevant contexts. All of these points enabled the researcher to build the inferential bridge.

Generalization to finite set of cases, it may possible to assess the typicality of the cases studied by comparing their relevant characteristic with information about the target population as available in official statistics (Hammersley & Atkinson, 2007). Comparisons of educators’ perspectives of their knowledge, attitude and their practice in change management with the purpose to enhance e-learning pedagogy that compared with quantitative and qualitative data obtained from educators in private higher education institutions. Likewise, the responses of the educators through the survey questionnaire also were compared with educators’ perspectives of their practices obtained through the interviews.

Additionally, the real strength of this research design was the blending of quantitative and qualitative data, including for the purpose of generalization. This design demonstrated clearly in the flow of each part of the data. As been suggested by Chi (1997), it could also complement the data for the findings to be more meaningful.

3.14 Verification strategies

Researchers’ favoritism was the chief warning to valid interpretation (Stake, 2000). Participant verification designed for the precision of the information transcribes and translate in research endeavor to be in charge for researcher biases (Merriam, 1998;

Miles & Herberman, 2002). Informants were specified for the prospect to evaluate and revise the information of their viewpoint to confirm its accurateness. The diversity of the foundation for data gathering offer triangulation in the data.

Furthermore, the researcher was attained data throughout the diversity of techniques that obtainable for educators to articulate their view of change management that incorporate technology on their learning and teaching in the perspective of e-learning. Educators' thoughts were gathered through interviews, e-learning tools that were administered to the educators' and were observed or audio taped. Interviews were taped and in some cases both video and audio taped. Follow-up probes were occasionally sent by electronic mail to the informants subsequent in an interview to explain importance or discovery of an innovative inquiry as an outcome of the transcription progression. The exploited of the interview and observation practice offer reliability in the identical measures that being the impact for each case (Yin, 1994).

3.15 Ethical considerations

The researcher protected every part of required endorsement of this research. Participants volunteered to contribute and encompass the right to remove of the research at any occasion. The uniqueness of all participants was protected as all the educators that being interviewed objected to their names being specified in the writing up. At the beginning of the interviews and questionnaire, a consent letter as referred to appendix L was given to the respondents. At the end of this research, each higher education institutions were participating and given a final summary of this research as appreciation.

3.16 Time horizons

The research length was an important factor (Malhotra & Birks, 2007). For this research, about seven months were projected for questionnaires survey and interviews.

It was necessary to determine the time horizons over a given period in research (Malhotra & Birks, 2007). Analyzing data were projected for five months. The writing part took another two months to be completed. This research was projected to complete by March 2015.

3.17 Summary

This chapter has presented the overall methodology utilize for this research. It consisted of the research purposes, described how the instruments were being developed and the process of identifying populations and samples. Further explanation of questionnaire distribution, data collection, and research methodologies was as well included in this chapter. The research designs that exploit in this research were occupied with two phases of data collection and analysis. Phase 1 concerned two stages in which, first stage focused on pilot study and the second stage focused on questionnaire, which collected background information from the respondents and their perspectives towards change management of educators' towards e-learning implementation in private higher education institutions in Malaysia. Similarly, phase two which were also involved two stages in which, first stage focused on a long term assessment and the second stage focused on the interpretation of the interviews.

This incorporated thorough method in creating items commencing the literature and considering their representativeness. This was followed by a pilot testing in order to spell out the questions and the suitability of the projected scales. The procedures of statistical techniques were applied to analyzing the data that were obtained from the survey that has been delineated. The following chapter reported on the results. The discussion and findings of the phase one and phase two were presented in the next chapter in chronological order of the research questions while the summary and implications of the study were discussed in Chapter 5.

CHAPTER 4: DATA ANALYSIS AND RESULTS

4.1 Overview

The analyses in this chapter were aimed to fulfill the objectives and answering the research questions. The sections in this chapter divided according to the research questions, which were reiterated below:

1. Is there a significant relationship between e-learning implementation and change management in private higher education institutions within Malaysia from the perspective of educators?
2. Which change management variables that most influential e-learning implementation in private higher education institutions within Malaysia the perspective of educators?
3. What are the status and trends of e-learning implementation in private higher education institutions within Malaysia from the perspective of educators?
4. What changes occurred in private higher education institutions within Malaysia in e- learning implementation focusing on educators' perspective?
5. What are the problems and challenges faced by educators in adopting the changes due to e-learning implementation in private higher education institutions within Malaysia?
6. What are the ways to initiate change management for e-learning implementation by educators in private higher education institutions within Malaysia?

4.2 Number of Questionnaires Distributed, Returned and Usable

In order to capture the targeted sample size of 381 respondents, 550 survey questionnaires were distributed to private higher education institutions in Kuala Lumpur that have vision and mission on e-learning implementation. As shown in table 4.1, a total 493 were returned, representing a response rate of 89.6%. Out of the 493 returned, 487 were found to be usable (88.5%) and 5 questionnaires were rejected due to incomplete responses (11.5%). From this feedback, it was concluded that respondents were willing to give their cooperation in answering the survey questions at their convenience. This provides evidence that if a survey is monitored and administered properly, much information can be gathered from the respondents.

Table 4.1: *Questionnaires Distributed, Returned and Usable*

Institute	Questionnaires Distributed	Questionnaires Returned	Complete Questionnaires	Incomplete Questionnaires
A	100	98	96	2
B	150	143	142	1
C	150	137	136	1
D	150	115	114	1
Total	550	493 (89.6%)	487(88.5%)	5(11.5%)

4.3 Cleaning of data

In this subsection, the detection of missing data and outliers were determined. It is essential to check the data set for possible errors. Some analysis can be very sensitive to the outliers, the values that are well below or above the other scores (Tabachnick & Fidell, 2007). According to Saunders and Thornhill (2003), outliers are observations with unique combinations of characteristics that are identifiable as distinctly different

from other observations. It can be either an unusually high or low value on a variable. In this case, it could arise from procedural error, such as data entry error or a mistake in coding. These outliers identified during the data cleaning stage and missing value.

4.3.1 Detention of missing data

Missing data were reduced as much as possible by checking all the questionnaires at the data collection. When any questions were found unanswered, it was immediately brought to the attention of the related respondents. Since all the data were keyed into SPSS manually, before any tests were conducted using the data set, frequency for each variable in the study as well as missing value analysis were run to the data were “clean”. The results indicate that no missing data exists in this study.

4.3.2 Detection of outliers

Tabachnick and Fidell (2007) define outliers as the observations with a unique combination of characteristics identifiable as distinctly different from others. It is important to make a distinction between outliers that ought to be deleted and those that ought not to be. Outliers that require deletion are those attributable to incorrect data entry, recorded missing values that have been read as real values and data from respondents who are not members of the intended population (Tabachnick & Fidell, 2007). For this study, nine maximum and minimum extreme values for all the study variables were produced using the SPSS procedure. A visual inspection of the data and the extreme values, as presented in appendix 17, revealed that the data were bona fide tables and not outliers that required deletion, according to the criteria of variables. Furthermore, outliers must be viewed within the context of analyzes and evaluation by the information that it could convey. As such, no outliers were presented from the study.

4.4 Means and Standard Deviation of Study Variables

Table 4.2 presented the mean and standard deviation for the variables in this study. All variables were measured on five points Likert type scale. The mean scores for all the variables range between 20.23 and 67.54. This indicates that change management variables and e-learning variables are in moderate level. The standard deviation scores range from 6.03 to 22.67.

Table 4.2: Means and standard deviation for study variables

Variables	Mean	Standard Deviation
Stakeholders involvement	36.67	20.54
Systems view	46.22	19.53
Evolving mindset	33.47	8.24
Understanding transition	26.98	17.24
System design	59.81	11.18
System evaluation	42.13	22.67
Academic transform	20.23	6.03
Service and satisfaction	52.19	16.28
Ownership control	67.54	22.11

4.5 Skewness and Kurtosis of Study Variables

The normality of the distribution of the data, the skewness and kurtosis of each variable were examined. The critical value for both measures of normality has drawn the distribution. The SPSS software package was used to generate the skewness and kurtosis values for each of the variables in this study. Therefore, for the calculated skewness and kurtosis values, zero assumes perfect normality in the data distribution is seldom achieved, more and less 2.58 indicates rejecting the normality assumption at the

probability level, and more or less 1.96 signifies a 0.05 error level (Seels & Glasgow, 1991). Table 4.3 summarizes the skewness and kurtosis for the nine main variables of this study. By applying the above criteria to the skewness values for each of the study variables, it is that none of the variables fall outside the more and less 2.58 range of skewness. Thus, the data for this study is normal with regards to skewness.

Univariate skewness and univariate kurtosis value range from -0.501 to 0.062 and -0.402 to 0.564 respectively. The relatively large value of Mardia's normalized multivariate estimate kurtosis (23.623) shows evidence that the data are slightly not multivariate normal. In order to address the issue of multivariate non-normality, bootstrapping is conducted to assess the stability of parameter estimates and report them more accurately. Within the context of SEM, bootstrapping provides a mechanism for addressing situations where the statistical assumptions of large sample and multivariate normality may not hold (Boon, 2003). In this study the Bollen-Stein bootstrap procedure (Bollen & Scott, 1993) was employed.

It is a modified bootstrap method for the χ^2 goodness of fit statistic which provides means to test if the specified model is correct. In particular, it can be used to correct for the standard error and fit statistic bias that occurs due to non normal data. It tests the adequacy of the hypothesized model based on the transformation of the sample data such that the model is made to fit the data perfectly. In this study, 1000 bootstrap samples were drawn with replacement from this transformed sample. The Bollen-Stein bootstrap p -value is 0.356 ($>.05$) indicating that there is sufficient evidence to reject the hypothesized model.

Considering the feasibility and statistical significance of all parameter estimates, the substantially good fit of the final model and the lack of any substantial evidence of model misfit, the author concludes that the nine dimensions can represent an adequate

description of educators' perspective of change management due to e-learning implementation in private higher education institutions.

Table 4.3: *Skewness and Kurtosis for study variables*

Study Variables	Skewness	Kurtosis
1) Stakeholders involvement	0.062	-0.627
2) Systems view	-0.130	-0.468
3) Evolving mindset	-0.222	-0.862
4) Understanding transition	-0.306	-0.355
5) System design	-0.100	0.768
6) System evaluation	-0.500	-0.455
7) Academic transform	-0.465	-0.344
8) Service and satisfaction	0.060	-0.643
9) Ownership control	0.041	-0.535

4.6 Linearity, homoscedasticity and Normality

Multiregression analyzes are the main statistical techniques employed to test the hypotheses of this study. Therefore, several assumptions with regards to the use of multiple regressions, namely, linearity, normality, and homoscedasticity must be met (Hair et al., 2006). Since multiple regressions are based on correlation, which is only sensitive to linear relationships, gross departures from linearity means that important relationships remain undetected (Sims, 2008). Linearity of any bivariate relationship is easily examined through scatter plots (Sims, 2008). The resulted scatter plots to test for linearity of the relationships between each of six dependent variables and three independent variables were done using the scatter plots shown in appendix Q. A visual inspection of the bivariate scatter plots reveals that there is no U-shaped distribution indicating a linear relationship. Through an analysis of residuals and partial regression

plots, non-linear pattern to the residuals is found. This indicates that the overall equation is linear and thus, the assumption of linearity is not violated.

The second assumption is that the relationships between the variables exhibit homoscedasticity. That is the variance of one variable consistent across all values of the other variables. The scatter plots are presented in appendix R has no noticeable patterns of residuals were noted. A visual inspection of the scatter plots did not show any pattern of increasing or decreasing residuals. Thus, homoscedasticity exists for the dependent variables of the study.

The analysis on skewness and kurtosis presented earlier in this chapter reveals that the data in the study are normally distributed. In addition, the Normal Probability-Plot (P-P) for standardised residuals was also examined to determine the normality of the independent variable. The resultant Normal P-P plot, as presented in appendix R shows that the plotted data values do not deviate much from the straight diagonal line. Thus, indicating that the study variables of this study are normally distributed.

4.7 Exploratory Factor Analysis

The present researcher would like to clarify that the main objective of exploratory factor analysis is data reduction and exploration of the factors loaded in the present study. As mentioned earlier Exploratory Factor Analysis was carried out, using the Varimax Orthogonal. The results in forms of rotation were almost identical. However, the orthogonal rotation has the strong likelihood that correlated factors and theoretically justified. Thus, Orthogonal Varimax Factor Analyses are used for further analysis.

To identify the underlying dimensions of independent variables (ownership control, academic transform, and service and satisfaction) the principal component factor analysis with orthogonal rotation was conducted. A total of nine constructs (60

items) namely stakeholders' involvement, system view, evolving mindset, understanding transition, system design, system evaluation, ownership control, academic transform, service and satisfaction were the factors that analysed to identify the number of dimensions derived. As suggested by Aaker (1971). Factors with eigenvalues greater than 1.00 were retained.

Besides that, an exploratory factor analysis (EPA) was performed to reduce the large number of variables (items) to a smaller set of underlying factors that summarize the essential information contained in the variables. The detailed explanation of the analysis and its interpretation are presented in the following section. To determine the underlying factors, principal axis analysis was employed as an indicative test to determine if the 53 items were tapping onto the same construct. The nine factors have eigenvalues greater than 1.0 as referred to appendix P. To ensure that only very significant loadings are considered the variables for a factor are selected only when the absolute size of their factor loadings is 0.5 or more (Hair et al., 2006). The Bartlett's test of sphericity was significant (Approx. $\chi^2 = 21265.198$, d.f = 2145, $p=0.00$), Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.896, far greater than 0.6 which is acceptable and conformed to the multivariate normality of the data as refer to appendix O. An inspection of the anti image correlation matrix revealed that all the measures of sampling adequacy were well above the acceptable level of 0.5.

The communalities of the items range from 0.327 to 0.753 and these were acceptable. A communality represents the variance in that variable accounted for all the factors and was calculated by summing the squared of all factors loadings for a variable. Low communality indicates that the factor model was not effective and the variable should be omitted from the model. On the other hand, low communalities across the set of variables indicated that the variables were weakly related to each other. Usually, a communality of 0.75 was considered high and a communality of 0.25 was considered

low. However, it was vital that communalities were construed with the interpretability of the factors. A communality value greater than one signals cause spurious solution due to insufficient sample size or the number of factors was either big or small.

Table 4.4: *Factor Loadings and Dimensions*

Items/Factors	Loadings
Factor 1	
Accountable to learn the change management process (EM_26_1)	.773
Self-evaluate in handling change management process (EM_26_2)	.756
More professional in handling change management process (EM_26_3)	.745
Gain concrete experience in handling change management process (EM_26_4)	
Eigenvalues	10.2
Percent total variance	14.3
Factor 2	
More observant while experiencing change management process (AT_26_5)	.643
Actively experiment the capabilities to adapt changes in implementing e-learning (AT_26_6)	.652
The institution train educators' to handle change due to e-learning implementation (AT_27_4)	.755
The institution structure program for exposure to handle change due to e-learning implementation (AT_27_5)	.587
The institution evaluates the programs exposure program to handle change due to e-learning implementation (AT_27_6)	.635
The institution does maintenance to handle change due to e-learning implementation.(AT_27_7)	.697
Eigenvalues	6.5
Percent total variance	9.8

Factor 3

The institution ready to handle change due to e-learning
implementation (UT_27_1) .726

The institution plan to handle change due to e-learning implementation.
(UT_27_2) .633

The institution develops good change management process before
e-learning implementation (UT_27_3) .626

Eigenvalues 3.7

Percent total variance 5.6

Factor 4

Exists in a state of rapid and continues change (SE_28_1) .723

Deals with change incrementally and separately (SE_28_3) .643

Eigenvalues 3.1

Percent total variance 2.9

Factor 5

Evolves through long periods of stability with short bursts of
fundamental changes (SS_28_2) .647

Constantly undergoing changes step by step (SS_28_4) .589

Communications about the implementation are not given in advance
and not relevant(SS_31_2) .532

Incentives are linked with the implementation to aid the process of change
(SS_31_5) .622

Implementation communications are open and readily available (SS_31_6) .622

Wide timescales for the implementation deliverables are set and goals
and are met (SS_31_7) .637

Training is frequently given with supporting materials creating
confidence with the system and the processes (SS_31_10) .586

Conflicts within the implementation are avoided (SS_31_12) .659

The reasons for change are unclear and there are different views of the
goals of the implementation (SS_31_13) .561

Research& development done to enhance educators' adaptation towards the

change (SS_31_14)	.655
Eigenvalues	3.1
Percent total variance	4.4
Factor 6	
There are logical reasons for change which are visible and the goals are	
Transparent (SV_29_1)	.631
Change projects create resistance which has to be broken (SV_29_2)	.619
There are long periods of planning before the change is delivered (SV_29_3)	.592
Training is adequate to answered questions about change	
(SV_29_8)	.505
The process of implementation for the change is flexible and reactive	
(SV_29_9)	.627
Communication about the change is limited to only those directly	
concerned with the project (SV_29_12)	.572
Communications about the change are timely and relevant (SV_29_14)	.588
Conflicts within the change are looked for and try to be solved (SV_29_15)	.674
Eigenvalues	2.1
Percent total variance	4.6
Factor 7	
Change is expected without being linked to incentives (OC_29_4)	.731
The project lead for the change is known and project champions aid the	
planning and implementation (OC_29_5)	.582
Good ideas for change are hidden and used for personal agendas (OC_29_6)	.638
The implementation of the change within your role is managed solely by	
your institution (OC_29_7)	.620
There are delays in the timescales that are set in the change project	
(OC_29_10)	.652
Project teams have sometimes a lack of consequence and consistency in	
regards to the change (OC_29_11)	.572
Those concerned with the outcome of the change project take part in	
planning (OC_29_13)	.591
Educators involvement in the change project before delivery takes	
place (OC_29_16)	.561

They consider it as a dynamic project which changes in timescales and deliverables. It has focus on contingency which appreciates the complexity of issues (OC_30_2)	.623
Is a combination of more on second statement but less on first statement (OC_30_4)	.642
Eigenvalues	4.1
Percent total variance	5.6
Factor 8	
They managed within a set time frame with clear objectives and methods that were communicated in advance and managed in a controlled way (SI_30_1)	.571
Is a combination of more on first statement but less on second statement (RECODE_SI_30_3) (R)*	- .639
Eigenvalues	2.0
Percent total variance	4.3
Factor 9	
Once the implementation has taken place, user involvement in the project begins (SD_31_1)	.546
The direction of the implementation is influenced by resistance (SD_31_3)	.638
Each release begins with no anticipated planning (SD_31_4)	.549
There are predetermined guidelines for how the system implementation is to be managed and these are followed (SD_31_8)	.581
Ideas are openly communicated and encouraged within the implementation (SD_31_9)	.614
Key implementation personnel are chosen, put in charge and left unchanged (SD_31_11)	.532
Implementation leadership is unclear and e-learning champions are not utilized effectively (SD_31_14)	.588
The e-learning strategy, system design and processes are determined completely outside of faculty control (SD_31_15)	.561
Eigenvalues	1.9
Percent total variance	2.9

*Factor loading less than 0.5 was omitted

Table 4.4 presents the derived factor analysis solutions. The principal components analysis extracted nine factors having eigenvalues greater than 1.0. The nine factors accounted for 54.4 percent of total variance. Factor 1 was loaded with four items from evolving mindset scales (EM_26_1, EM_26_2, EM_26_3, EM_26_4), explaining 14.3 percent of the variance. Factor 2 comprised six loaded items from academic transform scales (AT_26_5, AT_26_6, AT_27_4, AT_27_5, AT_27_6, AT_27_7) explaining 9.3 percent of the variance. Factor 3 comprised three loaded items from understanding transition (UT_27_1, UT_27_2, UT_27_3) explaining 5.6 percent of variance. Factor 4 from system evaluation (SE_28_1 and SE_28_2) explaining 2.9 percent and factor 8 comprised 2 items from stakeholders' involvement (SI_30_1 and RECODE_SI_30_3) and 4.3 percent of total variance. RECODE_SI_30_3 was reversed scored for further analysis to increase the alpha value in the range of 0.508 to 0.802. Factor 5 and 7 were comprised 10 items explaining 4.4 percent and 5.6 percent of total variance. Factor 5 was from service and satisfaction scale (SS_28_2, SS_28_4, SS_31_2, SS_31_5, SS_31_6, SS_31_7, SS_31_12, SS_31_13, SS_31_14) and factor 7 was from ownership and control scales (OC_29_4, OC_29_5, OC_29_6, OC_29_7, OC_29_10, OC_29_11, OC_29_13, OC_29_16, OC_30_2, OC_30_4). Factor 6 and 9 were comprised 8 items explaining 4.6 percent and 2.9 percent of total variance respectively. Factor 6 comprised of system view (SV_29_1, SV_29_2, SV_29_3, SV_29_8, SV_29_9, SV_29_12, SV_29_14, SV_29_15) and factor 9 comprise of system design (SD_31_1, SD_31_3, SD_31_4, SD_31_8, SD_31_11, SD_31_14, SD_31_15).

The results show that educators need to focus on these nine dimensions to influence change management due to e-learning implementation. For further analysis, only these nine dimensions were used on the reliability and the number of items loaded.

4.8 Reliability Assessment

In order to ensure that the developed scales and factors measured consistently intended to measure, the Cronbach's Alpha Coefficient (Nunnally, 1967) was employed to test their reliability. A post test of the reliability of the survey instrument used in this study was measured by internal consistency approach (Churchill, 1979). The Cronbach's Alpha was computed on each of the Likert scale items that were factor loaded into the nine factors mentioned earlier. The internal consistency reliability scores ranged from .641 to .854 as in Table 4.5 after removing some items with low corrected item-total correlations value.

Table 4.5: *Reliability for Each Variable*

Variables	Final no. of items	Final internal reliability (Cronbach's Alpha)
Evolving mindset	4	.641
Academic transform	6	.742
Understanding transition	3	.652
System evaluation	2	.704
Service and satisfaction	10	.732
System view	8	.712
Stakeholders involvement	2	.668
Ownership control	10	.790
System design	8	.854

4.9 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was conducted to determine the dimensions that were important to the educators. There are two methods commonly used by previous researchers in evaluating the validity of a measurement model testing for each construct separately or testing all constructs together at one time (Cheng, 2001). A study conducted by Woo (2009) has tested all constructs at once (including the moderating variables) in his measurement model. In this study, testing all the constructs

at once also is preferable than to test each construct separately because of the ability to take into account the relationships between the indicators of different constructs. In this case, discriminant validity is not only assumed but also statistically tested. However, it should be noted that researchers attempting to model relationships among a large number of variables that have found it difficult to fit such a model to predictions even with strong theoretical support (Joreskog & Sorbom, 1986). Therefore, steps are needed to decrease the number of indicators used while maintaining the estimation of measurement error given by using multiple-item indicators. In the present study, all the nine final variables derived from the Exploratory Factor Analysis were used in assessing the measurement model. Once the measurement model specified using all the derived items the researcher must examine unidimensionality, which refers to the existence of a single construct underlying a set of measures (Garver & Mentzer, 1999). This is because a highly mandatory condition for construct validity and reliability checking is the multidimensionality of the measure (Anderson & Gerbing, 1998).

The first order and second order Confirmatory Factor Analysis have been conducted to determine a better model fit. When comparing the first order model and second order model, both performed identical results as refer to table 4.6, comparing their fit indicates, however, where both models show acceptable fit indices as, in this case, there are two ways in which a decision concerning which model to choose for further analysis can be made. Firstly, it can be based on the priori status of the change management and e-learning structures. As is recommended by priori theoretical structure, whereby e-learning and change management consists of nine multidimensional constructs with atleast two items for each dimension. These suggest that the second order model may be preferable.

Table 4.6: *First order and second order confirmatory factor analysis model results for e-learning and change management constructs*

	X^2	df	P	X^2/df	GFI	$AGFI$	CFI	$RMSEA$
1 st Order CFA	330.678	74	0.000	4.478	0.954	0.997	0.935	0.065
2 nd Order CFA	330.678	74	0.000	4.478	0.954	0.997	0.935	0.065

Secondly, the use of a second order model increases the validity of the construct, if the model could be empirically tested in a second order form this would allow a stronger statement (Hair et al., 2006). As indicated in figure 4.1 the structural relationships or factor loadings covaried from one dimension to another ranging from 0.46 to 0.84 when they were tested in a higher or second form. Therefore on the basis of the prior status of the scale and construct validity, a decision to select the second order model presented in figure 4.2 was made. For further analysis, the researcher decided to take a balance weight average for the dimensions to represent e-learning and change management variables.

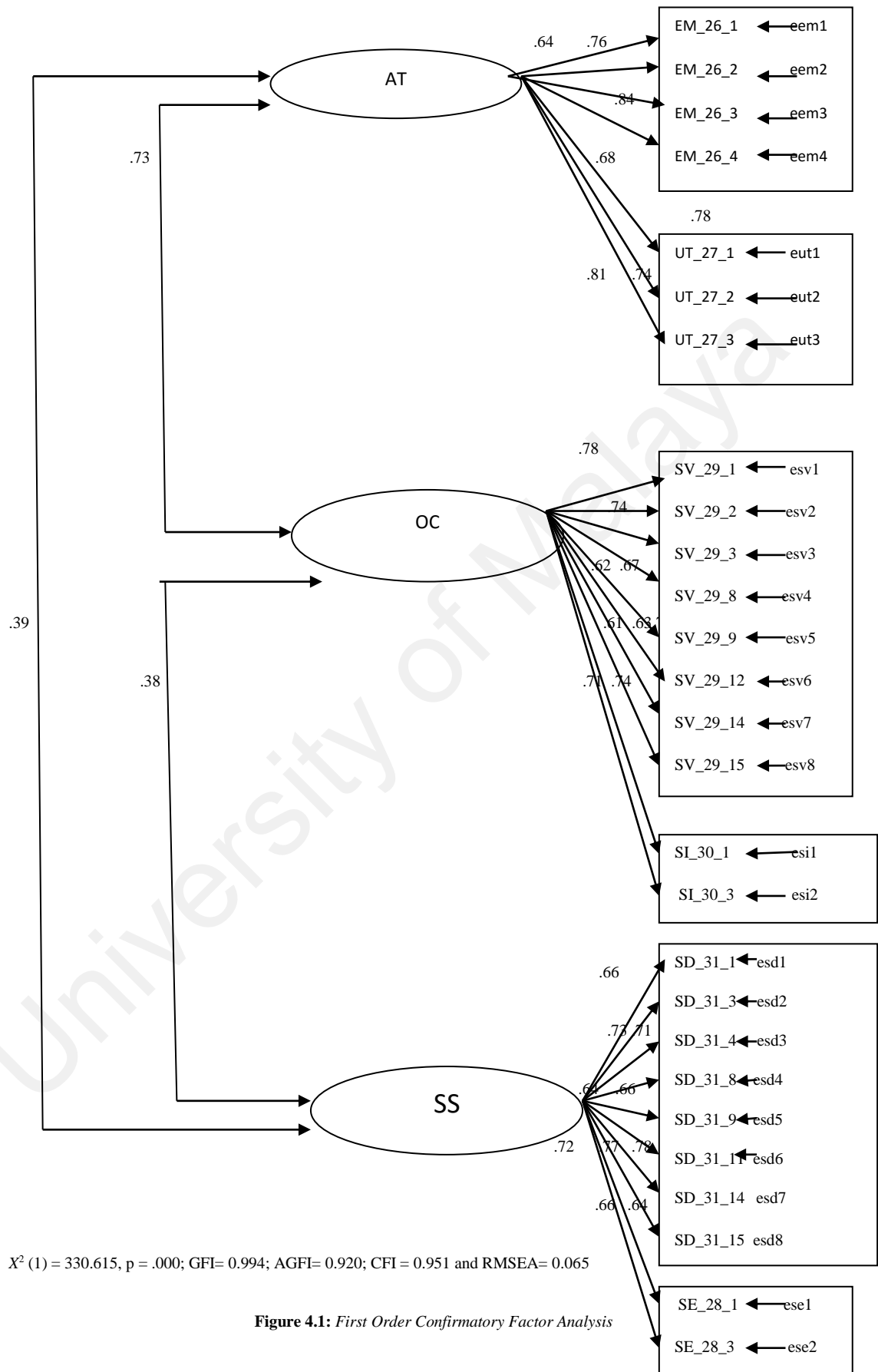


Figure 4.1: First Order Confirmatory Factor Analysis

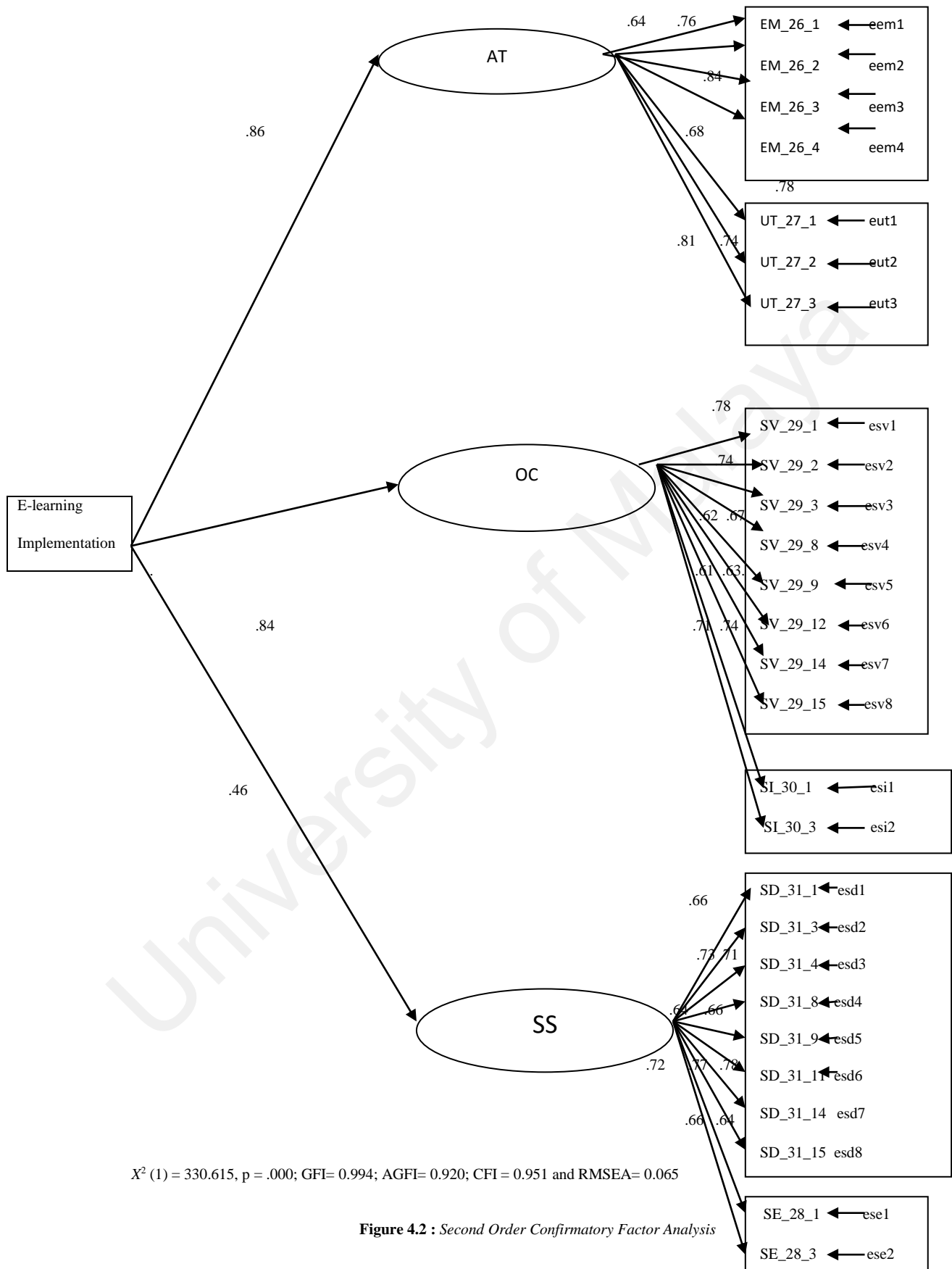


Figure 4.2 : Second Order Confirmatory Factor Analysis

Once each construct in the measurement model is considered acceptable, the overall measurement model should be assessed and each construct should be evaluated for unidimensionality in the presence of other constructs (Medsker, William & Holahan, 1994). The criteria for assessing construct unidimensionality in Confirmatory Factor Analysis include the fit of overall measurement model and the fit of the component in the measurement model.

In order to fulfill second criteria of construct unidimensionality, modification indices, and standardized residuals were examined to see whether there was any mis-specification in the model (Byrne, 2001). Thus in this study, one item was reversed the score from the construct of stakeholders involvement to have a model fit using the modification indices, standardized residual and standardized regression weight. As discussed earlier, the measurement model in this study was examined by correlating all nine variables and it was allowed to correlate with each other.

4.9.1 Convergent validity

The first criteria of construct unidimensionality as suggested by Steekamp and Van Trijpn (1991), was fulfilled in which the result of CFA indicates a well fitting model of GFI=0.916; AGFI=0.900; TLI= 0.927; RMSEA=0.040. Comparative Fit Index (CFI) of 0.9 or above for the model implies that there is strong evidence unidimensionality (Kline, 1998). In this study, the CFI indices together with the other indices to measure the model fit for all constructs as presented in table 4.7. The chi square statistics were significant and other fits indicate a recommended level of indices, thus, suggesting a well fitting measurement model. Table 4.7 also showed the correlation among variables in this study.

The results from the measurement model show that only one variable from stakeholders' involvement (SI_30_1 and RECODE_SI_30_3) was reversed scored to fit

with the model. Table 4.7 also indicated that all latent variables were measured by more than two items except for system evaluation and stakeholders' involvement scale. A few studies have been conducted by Rowley & Sherman et al., (2004), Carol (2014) and Vincent, McCormack, and Johnson, (2015) also used only two items to measure variables. Therefore, it is reasonable to accept only two items to measure the variables. As shown in the table 4.7 the correlation among variables in the present study. The covariance ranged from -0.481 to 1.104. The negative covariance indicates that higher than average values of one variable tend to be paired with lower than the average value of the other variables. The convergent and discriminant validity can be assessed and tested using the measurement model in SEM (Hair et al., 2006).

Thus in this study the overall fit of the measurement model was assessed using GFI, AGFI, CLI and RMSEA for indices. The magnitude, direction and statistical significant of the estimated parameters between the nine variables. The results are shown in table 4.7. the results of all the criteria for the GFI (0.916) , AGFI (0.900) and TFI (0.927) yielded results of more than 0.9, indicating a good fit model with RMSEA of 0.040 and suggesting evidence of the estimated parameters between variables and their indicators were above the reasonable benchmark of 0.5 (Hair et al, 2006), indicating that convergent validity exists. Moreover, to show that the convergent validity exists for the study variables of the measurement models, the direction for all the estimated parameters were in the same direction as expected. In addition, the critical ratio (C.R.) for all the estimated parameters exceeded the benchmark of 1.96 which were also found to be statistically significant and standard error (S.E) were not excessively large or small (Byrne, 2001) .

Table 4.7: *The Magnitude, Direction and Statistical Significant of the estimated parameters between variables and their indicators- testing for convergent validity*

Indicators	Variables	Std Regression Weight	Std. Error (S.E)	Critical Ratio (C.R)	P
EM_26_1	Evolving mindset	0.604	0.048	21.423	***
EM_26_2	Evolving mindset	0.714	0.074	18.141	***
EM_26_3	Evolving mindset	0.689	0.043	9.123	***
EM_26_4	Evolving mindset	0.799	0.053	20.835	***
AT_26_5	Academic Transform	0.824	0.043	16.589	***
AT_26_6	Academic Transform	0.593	0.048	15.252	***
AT_27_4	Academic Transform	0.615	0.053	11.399	***
AT_27_5	Academic Transform	0.642	0.102	10.588	***
AT_27_6	Academic Transform	0.752	0.044	9.342	***
AT_27_7	Academic Transform	0.853	0.062	7.225	***
UT_27_1	Understanding Transition	0.897	0.068	10.120	***
UT_27_2	Understanding Transition	0.687	0.049	11.818	***
UT_27_3	Understanding Transition	0.732	0.038	9.215	***
SE_28_1	System evaluation	0.839	0.048	12.655	***
SE_28_3	System evaluation	0.798	0.046	13.865	***
SS_28_2	Service and satisfaction	0.833	0.047	10.534	***
SS_28_4	Service and satisfaction	0.884	0.057	11.754	***
SS_31_2	Service and satisfaction	0.793	0.038	7.764	***
SS_31_5	Service and satisfaction	0.598	0.042	12.543	***
SS_31_6	Service and satisfaction	0.583	0.044	14.564	***
SS_31_7	Service and satisfaction	0.692	0.032	15.232	***
SS_31_10	Service and satisfaction	0.672	0.028	13.346	***
SS_31_12	Service and satisfaction	0.748	0.031	11.431	***
SS_31_13	Service and satisfaction	0.791	0.041	14.657	***

SS_31_14	Service and satisfaction	0.883	0.035	13.757 ***
SV_29_1	System view	0.753	0.022	7.235 ***
SV_29_2	System view	0.644	0.035	11.645 ***
SV_29_3	System view	0.681	0.027	10.524 ***
SV_29_8	System view	0.559	0.029	10.364 ***
SV_29_9	System view	0.734	0.038	13.644 ***
SV_29_12	System view	0.658	0.035	11.533 ***
SV_29_14	System view	0.685	0.032	10.421 ***
SV_29_15	System view	0.748	0.037	12.354 ***
OC_29_4	Ownership and control	0.763	0.026	11.765***
OC_29_5	Ownership and control	0.785	0.034	14.475***
OC_29_6	Ownership and control	0.595	0.027	11.643***
OC_29_7	Ownership and control	0.764	0.033	23.341***
OC_29_10	Ownership and control	0.755	0.042	7.453***
OC_29_11	Ownership and control	0.542	0.036	9.524***
OC_29_13	Ownership and control	0.588	0.042	11.653***
OC_29_16	Ownership and control	0.762	0.031	10.231***
OC_30_2	Ownership and control	0.756	0.047	10.435***
OC_30_4	Ownership and control	0.689	0.032	10.255***
SI_30_1	Stakeholders involvement	0.624	0.021	11.532***
RECODE_SI_30_3	Stakeholders involvement	0.501	0.046	10.325***
SD_31_1	System design	0.682	0.023	11.754***
SD_31_3	System design	0.746	0.030	10.766***
SD_31_4	System design	0.682	0.036	21.345***
SD_31_8	System design	0.842	0.043	7.810***
SD_31_9	System design	0.811	0.032	9.354***
SD_31_11	System design	0.712	0.027	9.551***
SD_31_14	System design	0.832	0.038	11.521***
SD_31_15	System design	0.795	0.029	13.754***

4.9.2 Reliability test

Reliability is also an indicator of convergent validity (Hair et al., 2006). According to Hair et al., (2006) Coefficient Alpha is generally an internal measure of reliability as in most practical cases it is only the lower bound on reliability. Hair et al., (2006) also stated that coefficient alpha remains a commonly applied estimate although it may understate reliability. The results of construct reliability for all the constructs studied, based on the measurement model output using SEM, were presented in table 4.8. The rule of thumb for the reliability estimate is that 0.7 or higher suggests good reliability (Hair et al., 2006), and the results indicate that convergent validity exists for the constructs of the study. Variance extraction measures the total amount of variance in the indicators accounted by the variable (Hair et al., 2006). Variance extracted of less than 0.5 indicates that on average, more error remains in the items than the variance explained by the factor structure in the measurement model (Hair et al., 2006). The calculated results of the variance extracted as shown in table 4.8, indicate that the variance extracted for item are below 0.5. However they did not cause concern as it is not uncommon to find estimates below 0.5, even when the reliability is acceptable (Hatcher, 1994).

The results of the construct reliability for the variables examining the dimension of change management due to e-learning implementation showed that the overall alphas that exceed the cut off point of reliability recommended by Nunnally and Berstein (1994) are evolving mindset, academic transform, system view, stakeholders involvement, ownership control, stakeholders involvement and ownership control with 0.942, 0.952, 0.914, 0.961 and 0.952 respectively. While the result showed that the construct reliability coefficients for understanding transform, service and satisfaction and system design showed 0.864, 0.835 and 0.843 respectively. For system evaluation, the result for construct reliability coefficients showed 0.732.

Table 4.8: *Construct reliability and variance extracted for the study constructs*

Constructs	Construct Reliability	Variance Extracted
Evolving mindset	0.942	0.552
Academic transform	0.952	0.553
Understanding transition	0.864	0.360
System evaluation	0.732	0.521
Service and satisfaction	0.835	0.594
System view	0.914	0.622
Stakeholders involvement	0.961	0.583
Ownership control	0.952	0.590
System design	0.843	0.518

4.10 Characteristics of the respondents

Data collected on the demographics of private higher education educators were analyzed using descriptive statistics. The background of educators involved in this study was examined by the following characteristics:

- Level of education
- Current position
- Gender
- Race
- Age
- Marital status
- Job status
- Years of experience in teaching profession

4.10.1 Level of education

Respondents were asked to identify five different categories from doctorate degree to diploma and the others. Table 4.9 shows the distribution of frequency and percentage of scores for the professional qualification of educators in private higher education institutions that have vision and mission in Malaysia. Four levels of professional qualification were reported and the distribution was given in table 4.9. The findings showed that 244 (50.1%) of the respondents held Master degree. The result indicated that slightly more than half of the lecturers in private higher education institutions that vision and mission based on e-learning in Malaysia had Master's degree. In total of 46 (9.5%) of the respondents have doctoral degree and the balance 190 (39.1%) respondents were having bachelor degree, 6 (1.2%) respondents had diploma and only one respondent has answered other.

Table 4.9: *Respondents' Level of Education*

Level of education	Frequency	Percent
Doctoral	46	9.5%
Master degree	244	50.1%
Bachelor degree	190	39.1%
Diploma	6	1.2%
Others	1	0.2%
Total	487	100%

4.10.2 Current position of respondents

Based on the results in table 4.10 current position of most respondents were lecturers which were 265 (54.4%) respondents. This indicated that more than half of the respondents were lecturers. This was followed by the tutor, 101 (20.7%) respondents

and teachers 80 (16.4%) respondents. However, 25 (5.1%) respondents were the senior lecturer and only 16 (3.2%) respondents were the instructor.

Table 4.10: *Current Position of Respondents*

Position	Frequency	Percent
Teacher	80	16.4%
Instructor	16	3.2%
Tutor	101	20.7%
Lecturer	265	54.4%
Senior Lecturer	25	5.1%
Total	487	100%

4.10.3 Gender of the Respondents

With regard to the gender of the lecturers, table 4.11 shows the distribution of frequency and percentage of the scores for the gender of lecturer in selected private higher education institutions in Malaysia. Based on the results in table 4.11, 293 (60.2%) respondents were female and 194 (39.8%) were male respondents. This indicates that most of the educators were female in private higher education institutions that have vision or mission on e-learning implementation.

Table 4.11: *Gender of the Respondents*

Gender	Frequency	Percent
Female	293	60.2%
Male	194	39.8%
Total	487	100.0%

4.10.4 Race of respondents

Most of the respondents which were 368 respondents were Chinese, compared to only 95 Malay respondents. This was followed by 17 respondents in the category of others and 7 respondents were Indian. Table 4.12 showed the distribution of frequency and percentage of the race of respondents.

Table 4.12: *Race of the Respondents*

Race	Frequency	Percent
Malay	95	19.5%
Chinese	368	75.6%
Indian	7	1.4%
Others	17	3.4%
Total	487	100%

4.10.5 Age of Respondents

Table 4.13 shows the distribution of frequency and percentage of the scores for the range of the age of respondents among educators in selected private higher education institutions. Based on the results in table 4.13, the most respondents (169 or 34.3%), were in the age range between 25-35 years. This result indicated that almost one third of the total respondents were aged 25-35 years. Moreover, 97 (20%) respondents were more than 56 years old. These results indicated that slightly fewer educators were in the age range 46-55 and 36-45 which were 94 and 92 respectively. The fewest educators (35 or 7.2%) were in the range of less than 25 years old.

Table 4.13: Age of Respondents

Age	Frequency	Percent
Less than 25	35	7.2%
25-35	169	34.3%
36-45	94	19.3%
46-55	92	18.9%
More than 56	97	20.0%
Total	487	100.0%

4.10.6 Marital status of respondents

Table 4.14 shows the distribution of frequency and percentage of the scores for the range marital status of respondents among educators in selected private higher education institutions. Based on the results in table 4.14, the most respondents or 261 (53.6%) were single. This result also indicated that almost half of the total respondents were single. Moreover, 159 (32.6%) respondents were married with children. These results indicated that slightly fewer educators were married without children and having other marital status which were 34 and 33 respectively.

Table 4.14: Marital status of respondents

Marital status of respondents	Frequency	Percent
Single	261	53.6%
Married with children	159	32.6%
Married without children	34	7.0%
Others	33	6.8%
Total	487	100.0%

4.10.7 Job status of respondents

Most of the respondents (398 or 81.7%) were full time educators, compared to part time respondents numbering 80 (16.4%) and under contract who numbered only 9 (1.8%) respondents. None of the respondents was in “other” category of job status. Table 4.15 shows the distribution of frequency and percentage of job status of respondents.

Table 4.15: Job Status of Respondents

Job status of respondents	Frequency	Percentage
Full time	398	81.7%
Part time	80	16.4%
Contract	9	1.8%
Others	0	0%
Total	487	100%

4.10.8 Years of experience in teaching profession

Table 4.16 shows the distribution of frequency and percentage of the scores for the years of experience in the teaching profession for the sample. Based on the results in table 4.16, the most respondents 191 (39.2%) were having 2-5 years of experience in the teaching profession. The results indicated that more than one third of the total respondents had teaching experience within five years 96 (19.7%) respondents were having 6-10 years of experience in the teaching profession. For the respondents who were having 11-15 years of teaching experience 85 respondents (17.5%), were close to respondents who were having 6-10 years of teaching experience. These results also indicated that fewer educators or 66 (13.6%) were having less than 1 year of experience. Those having 16-20 years of experience in the teaching profession numbered 46 (9.4%)

respondents. Furthermore, 3 (0.6%) of educators stated they had teaching experience exceeding 20 years.

Table 4.16: *Experience in Teaching Profession*

Years of experience in teaching profession	Frequency	Percent
Less than 1 year	66	13.6%
2-5	191	39.2%
6-10	96	19.7%
11-15	85	17.5%
16-20	46	9.4%
More than 20 years	3	0.6%
Total	487	100%

4.11 Correlation Analysis

Pearson's Correlation Analysis was conducted on all the main constructs as well as between e-learning implementation variables and change management variables. The results help further elaboration on the findings of the hypotheses testing. The main objective of Confirmatory Factor Analysis is to confirm the measurements used. Therefore, after the measurements were confirmed the correlation analysis was performed to provide preliminary information regarding the associations between the relationships of each dependent variable with independent variables using Multilinear Regression. The correlation analysis also gives an indication of whether there exist any multicollinearity problems in the data set. Furthermore, it is very common for researchers to do correlation analysis after confirmatory factor analysis.

In this study, e-learning variables are explained by three separate variables namely academic transform, ownership control, and service and satisfaction. In order to generate comparable mean scores on e-learning variable for each of the three variables, the weighted average approach was used. The total score for each three variables were

divided by numbers of items. Among the studies that used average approach were Albers-Miller and Straughan (2000).

The result of Pearson Correlation Coefficient is presented in table 4.17. The values of the coefficients range between -1 to +1 where 0 represents no relationship between two variables, and -1 or +1 shows perfect correlation (Tabachnick & Fidell, 2007). According to Burns and Scapens (2000), correlation coefficients that fall between more or less than 1 and more or less than 0.81 are generally considered to be very high, which in turn will create multicollinearity. In interpreting the correlations coefficient for this study, the correlation values of more or less than 0.5 and above reflect a strong correlation between two variables (Tabachnick & Fidell, 2007).

From table 4.17, there was an evident that there is not very strong correlation (0.8 and above) between any pairs of the nine variables of this study. The table reveals that one correlation coefficient value (academic transform and evolving mindset) was significant at the 0.01 level while the remaining were significant at the 0.05 levels. Academic transform also was found significant and positive correlation with the understanding transition ($r=0.449$). Ownership control was recorded high correlation with system view ($r= 0.481$). However, it was recorded low and positive correlation with stakeholders involvement ($r= 0.276$). For service and satisfaction recorded high correlation with positive significant with system evaluation ($r=0.413$) and system design ($r=0.383$). According to Benny and Feldman (1985), a rule of thumb states that any correlation exceeding a value of 0.8 (a very strong correlation) between independent variables is likely to result in multicollinearity in the data. Results of Correlation Analysis, as presented revealed that multicollinearity is likely to affect the interpretation of the regression model as the absolute of the correlation coefficients (ranging from - 0.088 and 0.449) are lower than the acceptable cut off value of 0.8.

Table 4.17: Correlation coefficient matrix

System view	Evolving mindset	Academic transform	Understanding transition	Service and satisfaction	System evaluation	System design	Ownership control	Stakeholders involvement
1-Evolving mindset	1							
2-Academic transform	0.412**	1						
3-Understanding transition	0.220**	0.449**	1					
4- Service and satisfaction	0.211**	0.201**	0.297**	1				
5- System evaluation	0.153**	0.287**	0.308**	0.413**	1			
6- System design	0.236**	0.172**	0.279**	0.383**	0.345**	1		
7- Ownership control	0.299**	0.274**	0.371**	0.287**	0.184**	0.254 **	1	
8- Stakeholders involvement	0.231**	0.257**	0.311**	0.434**	0.267**	0.291**	0.276**	1
9- System view	0.288**	0.361**	0.301**	0.203**	0.282**	0.319**	0.481**	0.258** 1

** $p < 0.01$ level (2-tailed)

4.12 Relationship between demographic and the study variables

The further analyse the group mean differences among the demographic variables, independent sample t-test was performed for gender. The other techniques of one way Analysis of Variance (one way ANOVA) was conducted to test individually whether change management variables consists of stakeholder involvement, system view, evolving mindset, understanding transition, system design and system evaluation and e-learning variables consists of service and satisfaction , academic transform and ownership control were significantly different in terms of seven selected demographics variables (age, level of education, position, race, marital status, job status and years of experience). These tests were conducted to generalize whether or not the subgroups within each demographic variable are significantly different in terms of their perceptions towards all the variables.

In terms of gender, it was found that the mean differences between male and female educators were significant in all variables but not in stakeholders' involvement. It appears that the male educators had more favourable significant in stakeholders involvement than female educators. Table 4.18 shows the output of independent sample t-test for gender.

Table 4.18: Independent sample t-test for gender

Demographic variables		Evolving	Understanding	System	System	Stakeholdes	System	Academic	Service	Ownership
		Mindset	Transition	Evaluation	View	Involvemnet	Design	Transform	Satisfaction	Control
Gender	Male	4.50	5.32	4.37	4.32	5.41	4.21	4.61	4.11	5.02
	Female	4.67	5.95	4.65	4.87	5.13	4.72	4.80	4.84	5.62
	t-value	1.99*	1.22	2.56*	1.64	1.12	3.45**	1.54	1.87 *	1.15

Note: Demographic variables were represented by means scores which higher scores represent with the attributes,

**p<.05,*

***p<.01*

Futhermore, table 4.19 shows the output of one way ANOVA test for selected demographic variables and study variables data. The data indicates that there were significant differences among level of education in two out of nine variables. The variables were evolving mindset and understanding transition. To test the significant differences between groups, the Post-Hoc Test using Scheffe was performed. The results indicated that the mean differences could be found among various level of education with regard to evolving mindset ($F= 5.38, p< .01$). Educators who were masters degree holder were found to have a significantly higher evolve in mindset than those with doctoral degree ($M= 4.21$), bachelor degree ($M= 4.34$), diploma ($M= 4.04$) and others ($M=4.13$). With respect to understanding transition the results show that level of education was also found to be significant ($F= 6.66, p<.01$). Educators who were bachelor degree had a significantly lower mean value ($M= 4.28$), compared to diploma ($M= 4.63$), masters degree ($M= 5.23$), doctoral degree ($M= 4.83$) and others ($M= 5.12$).

With regard to position, one way ANOVA result showed that there were significant differences among position in three out of nine variables. The variables understanding transition, system evaluation and academic transform. To test the significant differences between groups, the Post-Hoc Test using Scheffe was performed. The results indicated that the mean differences could be found among various position with regard to understanding transition ($F= 2.77, p < .01$). Educators who were lecturers were found to have a significantly higher understanding change than those who were teachers ($M= 5.24$), instructors ($M= 5.11$), tutor ($M= 4.21$) and senior lecturer ($M= 4.63$).

A like understanding transition, the one way ANOVA also showed that the mean differences among position were significant among system view ($F= 3.09, p < .01$). Educators who were tutor ($M= 4.92$), were found to have higher understanding transition compared to teacher ($M= 4.15$), instructor ($M= 4.61$), lecturer ($M= 4.37$) and senior lecturer ($M=4.22$). The one way ANOVA also showed that the mean differences among position were significant among academic transform ($F= 2.87, p < .01$). Educators who were lecturers ($M= 5.93$), were found to have higher academic transform compared to teacher ($M= 5.21$), instructor ($M= 5.66$), tutor ($M= 5.29$) and senior lecturer ($M=5.44$).

For race categories, the mean scores were found to be significant between only one study variable out of nine variables which were ownership control ($F= 3.02, p < .01$). After the Scheffe post hoc test was performed, it was found that Chinese educators were higher in ownership control than Malays ($M=4.67$), Indians ($M=4.32$) and others ($M=4.69$).

With regard to age category, one way ANOVA result showed that there were significant differences among age category in two out of nine variables. The variables

were system view and stakeholders involvement. The results indicated that the mean differences could be found among various age category with regard to system view ($F=2.86, p<.01$). Educators who were in the age category 36 to 45 years old ($M=4.86$) were found to have significantly higher in system view than those who were in the age of less than 25 years old ($M=4.21$), 25-35 years old ($M=4.32$), 46-55 years old ($M=4.57$) and more than 56 years old ($M=4.31$). A like system view the results also indicated that the mean differences could be found among various age category with regards to stakeholders involvement ($F=3.38, p<.01$). Educators in age category 46 to 55 years old ($M=4.98$) were found to have significantly higher stakeholders involvement than age category less than 25 years old ($M=4.69$), 25 to 35 years old ($M=4.27$), 36-45 years old ($M=4.31$) and more than 56 years old ($M=4.39$).

With regard to marital status, one way ANOVA result showed that there were significant differences among age category in one out of nine variables. The variables were system design. The results indicated that the mean differences could be found among various marital status with regard to system design ($F=2.69, p<.01$). Educators who were single ($M=4.71$) were found to have significantly higher in system design than those who were married with children ($M=4.18$), married without children ($M=4.64$) and others ($M=4.38$).

Dissimilarity to marital status, job status has one way ANOVA result showed that there were significant differences among job status in four out of nine variables. The variables were understanding transition, system view, system design and ownership control. The results indicated that significant mean differences could be found among various job status with regard to understanding transition ($F=2.68, p<.01$). Educators who were part time ($M=4.97$) were found to have significantly higher in understand transition than those who were full time ($M=4.32$) and contract ($M=4.21$). The results also indicated that significant mean differences could be found among various job status

with regard to system view ($F= 2.73, p < .01$). Educators who were part time ($M=4.87$) were found to have a significantly higher in system view than those who were full time ($M= 4.31$) and contract ($M= 4.44$). Similar to understanding change and system view the result also indicated that the significant mean differences could be found among various job status with regard to system design ($F= 2.24, p < .01$). Educators who were full time ($M=4.97$) were found to have significantly higher in system design than those who were part time ($M= 4.29$) and contract ($M= 4.19$). The results also indicated that significant mean differences could be found among various job status with regard to ownership control ($F= 2.67, p < .01$). Educators who were part time ($M=5.84$) were found to have significantly higher in ownership control than those who were full time ($M= 5.42$) and contract ($M= 5.66$).

With regard to years of experience, one way ANOVA result showed that there were significant differences among years of experience in two out of nine variables. The variables were system view and academic transform. The results indicated that the mean differences could be found among various category of years of experience with regard to system view ($F= 2.68, p < .01$). Educators who were 2 to 5 years old ($M= 4.69$) were found to have significantly higher in system view than those who were less than 1 year ($M= 4.58$), 6 to 10 years ($M= 4.22$), 11 to 15 years ($M=4.52$), 16 to 20 years ($M= 4.85$) and for more than 20 years ($M=4.28$). The results also indicated that the mean differences could be found among various category of years of experience with regard to academic transform ($F= 2.53, p < .01$). Educators who were 2 to 5 years old ($M=4.79$) were found to have significantly higher in academic transform than those who were less than 1 year ($M= 4.17$), 6 to 10 years ($M= 4.31$), 11 to 15 years ($M=4.22$), 16 to 20 years ($M= 4.67$) and for more than 20 years ($M=4.33$).

Table 4.19 : Result of One-Way ANOVA test on Demographic Variables and Study Variables

Demographic variables	Evolving	Understanding	System	System	Stakeholders	System	Academic	Service	
Ownership	Mindset	Transition	Evaluation	View	Involvement	Design	Transform	Satisfaction	Control
Level of education									
a)Diploma	4.04	4.63	4.33	5.75	4.64	4.89	5.53	4.09	5.13
b)Bachelor degree	4.34	4.28	5.28	5.11	4.90	4.01	5.07	4.35	5.64
c)Masters degree	4.71	5.23	5.33	5.65	4.19	4.34	5.34	4.98	5.28
d)Doctoral degree	4.21	4.83	4.64	5.82	4.18	4.55	5.44	4.78	5.35
e)Others	4.13	5.12	4.66	5.01	4.59	4.23	5.32	4.24	5.34
F-value		5.38**	6.66**	2.23	3.02	2.87	3.18	2.78	2.93
Group comparison (Scheffe)		d < c	b < c	-	-	-	-	-	-
		b < c	b < d						
Position									
a)Teacher	4.61	5.24	4.15	5.91	4.14	4.16	5.21	4.76	5.67
b)Instructor	4.89	5.11	4.61	5.13	4.86	4.33	5.66	4.26	5.77
c)Tutor	4.68	4.21	4.92	5.71	4.62	4.56	5.29	4.16	5.14
d)Lecturer	4.17	5.27	4.37	5.42	4.28	4.91	5.93	4.33	5.01
e)Senior lecturer	4.80	4.63	4.22	5.88	4.78	4.11	5.44	4.74	5.00
F-value	1.96	2.77**	3.09**	1.76	1.88	2.01	2.87**	1.07	1.54
Group comparison (Scheffe)		b < d	a < c	-	-	-	a < d	-	-
		e < d	e < c				b < d		
Race									
a)Malay	4.77	4.63	5.11	5.23	4.12	4.24	4.35	5.76	4.67
b)Chinese	4.22	4.71	5.01	5.76	4.33	4.67	4.98	5.32	4.99
c)Indian	4.56	4.32	5.22	5.12	4.22	4.38	4.21	5.99	4.32
d)Others	4.87	4.66	5.46	5.33	4.68	4.62	4.93	5.37	4.69
F-value	1.78	1.55	1.03	1.66	2.01	2.02	1.64	1.75	3.02**
Group comparison (Scheffe)	-	-	-	-	-	-	-	-	a < b
									c < b
Age category									
a)Less than 25	4.63	4.39	5.34	4.21	4.69	4.37	4.12	5.43	4.32
b)25-35	4.32	4.86	5.87	4.32	4.27	4.68	4.30	5.25	4.33
c)36-45	4.78	4.75	5.02	4.86	4.31	4.57	4.17	5.11	4.55
d)46-55	4.94	4.64	5.39	4.57	4.98	4.39	4.32	5.64	4.30
e)More than 56	4.34	4.23	5.21	4.31	4.39	4.59	4.79	5.01	4.58

	F-value	1.02	1.76	1.53	2.86**	3.38**	1.95	1.39	1.64	1.43
Group comparison (Scheffe)	-	-	-		a < c	a < d	-	-	-	-
					b < c	b < d				
Marital status										
a)Single	4.78	4.76	5.31	4.71	4.98	4.71	4.74	5.23	4.69	
b)Married with children	4.50	4.31	5.87	4.64	4.59	4.18	4.91	5.37	4.53	
c)Married without children	4.21	4.97	5.10	4.37	4.31	4.64	4.32	5.20	4.35	
d)Others	4.33	4.22	5.69	4.90	4.50	4.38	4.69	5.53	4.20	
	F-value	1.37	1.97	1.39	1.93	1.65	2.69**	1.49	1.72	1.58
Group comparison (Scheffe)	-	-	-	-	-	-	c < a			
							d < a			
Job status										
a)Full time	4.75	4.32	5.10	4.31	4.82	4.97	4.52	4.75	5.42	
b)Part time	4.87	4.97	5.79	4.87	4.43	4.29	4.03	4.95	5.84	
c)Contract	4.38	4.21	5.49	4.44	4.56	4.19	4.24	4.24	5.66	
	F-value	1.52	2.68**	1.96	2.73**	1.56	2.24**	1.36	1.02	2.67**
Group comparison (Scheffe)			a < b		a < b		b < a			
a < b										
			c < b		c < b		c < a			
c < b										
Years of experience										
a)Less than 1 year	4.78	4.67	4.17	4.58	4.32	4.38	4.17	4.67	5.11	
b)2-5years	4.52	4.11	4.63	4.69	4.51	4.29	4.79	4.82	5.29	
c)6-10 years	4.73	4.28	4.77	4.22	4.83	4.88	4.31	4.16	5.10	
d)11-15 years	4.90	4.96	4.52	4.52	4.27	4.26	4.22	4.02	5.07	
e)16-20 years	4.72	4.19	4.62	4.85	4.43	4.31	4.67	4.18	5.02	
f)More than 20 years	4.53	4.38	4.74	4.28	4.09	4.59	4.33	4.27	5.38	
	F-value	1.04	1.64	1.36	2.68**	1.43	1.72	2.53**	1.28	1.33
Group comparison (Scheffe)					b < e			a < b		
					a < e			f < b		

Note, Demographic variables were represented by mean scores (M) which scores represent greater agreement with the attributes.

Dashes represent data that were not applicable *p < .05. **p<.01.

4.13 RQ1: Relationship between e-learning implementation and change management

Multivariate Analysis of Variance (MANOVA) was conducted with ownership control, academic transform and service and satisfaction as independent variables and stakeholders involvement, system view, evolving mindset, understanding transition, system design and system evaluation as dependent variables. Box's M test was not significant, $M=15.16$, $F(18, 171664) = .865$, $p > 0.001$ and so was Levene's test of homogeneity of variance. The non significance of both tests indicates that the assumptions of homogeneity of variance covariance and homogeneity of variance are tenable. The results of multivariate analysis of variance among the three independent variables and six dependent variables were presented in table 4.20.

Table 4.20: *Results of MANOVA on e-learning variables and change management variables*

	Mean			MANOVA		
	OC	AT	SS	df	F	p
SI	4.23	4.62	4.53	2	11.92	.000*
SV	4.13	4.56	4.51	2	10.32	.003*
EM	4.29	4.82	4.11	2	9.53	.000*
UT	4.08	4.57	4.32	2	7.75	.001*
SD	4.27	4.02	4.17	2	6.69	.000*
SE	4.66	4.13	4.22	2	10.03	.000*

*Significant mean effect

MANOVA between variables revealed that there were significant differences in the mean scores of all measures of e-learning variables as well as change management variables. Therefore, the null hypothesis H_{01} is rejected. Significant differences existed in the mean scores of Stakeholders Involvement (SI), $F(2,485)=11.92$, $p < 0.001$; System

View (SV), $F(2,485)=10.93, p<0.003$; Evolving Mindset (EM), $F(2,485)= 9.53, p<0.001$; Understanding Transition (UT), $F(2,485)=7.75, p<0.001$; System Design (SD), $F(2,485)= 6.69, p<0.001$; System Evaluation (SE), $F(2,485)=10.03, p<0.001$. Post-Hoc Test of LSD (appendix S) indicated that the mean scores of SI, SV, SD for OC and SS were not significantly different from each other. However, those obtained by AT were different and thus significantly lower than those of their counterparts of OC and SS. On the other hand, EM and UT for AT and SS were not significantly different from each other. However, SE for OC and AT was also not significantly different from each other.

4.14 RQ2: Change management variables that most influence the e-learning implementation

This section reports on the findings that address on independent variables (ownership control, academic transform, and service and satisfaction) most influences the dependent variables of stakeholders' involvement, system view, evolving mindset, understanding transition, system design, and system evaluation. For the purpose of that stepwise multiple regressions were performed. In order to determine which variables contributed to independent variables were regressed against dependent variables. Table 4.21 displays the summary of Stepwise Multiple Regression analysis for independent variables that were predicted to contribute to the dependent variables.

Table 4.21: *Summary of Stepwise Multiple regression analysis for variables predicting dependent variables*

IV	Model Summary		ANOVA		Coefficients		
	R^2	Adjusted	F -	p	Beta	t	p
		R^2	value				
(Stakeholders' involvement)							
OC	.078	.074	31.54	.000*	.257	5.02	.000*
OC+AT	.102	.096	18.78	.000*	.127	2.47	.002*
(System view)							
OC	.064	.058	15.24	.000*	.632	3.63	.000*
OC+AT	.074	.063	9.48	.000*	.452	2.52	.003*
(Evolving mindset)							
AT	.234	.217	9.23	.000*	.342	3.63	.001*
AT+SS	.192	.184	12.53	.000*	.213	3.51	.000*
(Understanding transition)							
AT	.022	.013	10.24	.000*	.234	3.52	.003*
AT+SS	.159	.146	9.21	.000*	.523	4.12	.000*
(System design)							
SS	.324	.321	9.64	.000*	.654	2.34	.000*
SS+AT	.214	.205	16.45	.000*	.353	2.64	.001*
(System evaluation)							
SS	.188	.182	12.63	.000*	.742	3.46	.000*
SS+AT	.236	.224	9.32	.000*	.453	2.32	.000*

*significant mean effect

According to the analysis, there are change management variables that influence e-learning implementations. For stakeholders involvement, with all variables entered into the equation, OC yield an adjusted R^2 of .074 ($F(1, 486) = 31.54, p < .005$). AT produced an adjusted R^2 of .096 ($F(2, 486) = 18.78, p < 0.005$). No other variables

entered the equation. For stakeholders' involvement, OC was the primary predictor accounting 7.4 percent of the variance. Other independent variable did not achieve significance. For system view, with all variables entered into the equation, OC yield an adjusted R^2 of .058 ($F(1, 486) = 15.24, p < .005$). AT produced an adjusted R^2 of .063 ($F(2, 486) = 9.48, p < 0.005$). No other variables entered the equation. For system view, OC was the primary predictor accounting 5.8 percent of the variance. Other independent variable did not achieve significance.

For evolving mindset, with all variables entered into the equation, AT yield an adjusted R^2 of .217 ($F(1, 486) = 9.23, p < .005$). SS produced an adjusted R^2 of .184 ($F(2, 486) = 12.53, p < 0.005$). No other variables entered the equation. For evolving mindset, AT was the primary predictor accounting 2.17 percent of the variance. Other independent variable did not achieve significance. For understanding transition, with all variables entered into the equation, AT yield an adjusted R^2 of .013 ($F(1, 486) = 10.24, p < .005$). SS produced an adjusted R^2 of .146 ($F(2, 486) = 9.21, p < 0.005$). No other variables entered the equation. For system view, AT was the primary predictor accounting 1.3 percent of the variance. Other independent variable did not achieve significance.

For system design, with all variables entered into the equation, SS yield an adjusted R^2 of .321 ($F(1, 486) = 9.64, p < .005$). AT produced an adjusted R^2 of .205 ($F(2, 486) = 16.45, p < 0.005$). No other variables entered the equation. For system design, SS was the primary predictor accounting 32.1 percent of the variance. Other independent variable did not achieve significance. For system evaluation, with all variables entered into the equation, SS yield an adjusted R^2 of .182 ($F(1, 486) = 12.63, p < .005$). AT produced an adjusted R^2 of .224 ($F(2, 486) = 9.32, p < 0.005$). No other variables entered the equation. For system evaluation, SS was the primary predictor

accounting 18.2 percent of the variance. Other independent variable did not achieve significance.

Thus, there are some findings in response to the research question on identifying the independent variables that significantly contributed to e-learning implementation. Therefore, the null hypothesis H₀₂ is rejected. In general, it could be concluded that the contribution of independent variables decreases from OC and SS between 31.54 percent to 9.23 percent.

4.15 RQ3: Status and trends of e-learning and change management

The findings regarding the status and trends of e-learning of the group of educators in the context of this study were organized and reported according to the research question three and in the context of this study in the following areas:

- a- Status and trend of e-learning implementation, duration of e-learning implementation and experience of educators to handle e-learning classes in the institution and before working in this institution
- b- Status and trend of e-learning policies, ways to disseminate policies and stakeholders involvement in developing e-learning policy
- c- Status and trend of change management, the impact of change management and ways of institution adapting the change due to e-learning implementation.
- d- Status and trend of current governance structure, person in charge and ways to monitor the change of status, trend due to planning and implementation of e-learning
- e- Status and trend of adapting changes, educators' competency level and current status of courses offering e-learning

- f- Status and trend of institutional vision and mission that in line with e-learning implementation and change impact of e-learning implementation.

4.15.1 Status and trend of e-learning implementation, duration of e-learning implementation and experience of educators to handle e-learning classes in the institution and before working in this institution.

Table 4.22 shows the distribution of frequency and percentage of the years of e-learning implementation start in the institution in selected private higher education institutions. Based on the results in table 4.22, the most respondents (258) or 53.1% stated that e-learning was started 2-5 years ago in their institutions. The results indicated that almost half of the total respondents stated that e-learning implementation started within two to five years. The second most respondents were 156 (32.0%) who stated that e-learning implementation started less than 1 year in their institutions. The institutions that started e-learning 6-10 years duration were 63 (12.9%) respondents. Some 7 (1.4%) respondents stated that their institution implement e-learning 11-15 years back. Only 3 (0.6%) respondents stated that their institution started e-learning implementation for the duration of 16-20 years. None of the respondents stated that e-learning implementation started in their institution for more than 20 years.

Table 4.22: *Distribution of Frequency and Percentage of the Years of e-learning Implementation*

Years of e-learning implementation start in the institution	Frequency	Percentage
Less than 1 year	156	32.0
2-5	258	53.1
6-10	63	12.9
11-15	7	1.4
16-20	3	0.6
More than 20 years	0	0
Total	487	100

Table 4.23 shows the distribution of frequency and percentage of the scores for the years of experience in handling e-learning classes among educators in selected private higher education institutions. Based on the results in table 4.23, the most respondents or 232 (47.3%) were having years 2-5 years of experience in handling e-learning classes. The results indicated that almost half of the total respondents had experience in handling e-learning classes within five years. The second most respondents or 198 (40.7%) were having less than 1 year of experience in handling e-learning classes. Those with 6-10 years of experience in handling e-learning classes numbered 43 respondents (8.8%) while 11 (2.6%) respondents had 11-15 years of experience in handling e-learning classes. These results also indicated that fewer educators (2 respondents) were having 16-20 years of experience in handling e-learning classes. Furthermore, only 1 (0.2%) respondent stated having experience of more than 20 years in handling e-learning classes.

Table 4.23: *Distribution of Frequency and Percentage of the Scores for the Years of Experience in Handling e-learning Classes*

Years of experience in handling e-learning classes	Frequency	Percent (%)
Less than 1 year	198	40.7
2-5	232	47.3
6-10	43	8.8
11-15	11	2.6
16-20	2	0.4
More than 20 years	1	0.2
Total	487	100

Table 4.24 shows the educators distribution and frequency of percentage on stakeholders' involvement in e-learning implementation in selected private higher education institutions. Based on the results in table 4.24, the most respondents strongly agreed 200 (41.07%) that they monitor and manage within a set time frame with clear objectives and method that communicated in advanced and managed in controlled way . However, 33(6.78%) respondents strongly disagree that they monitor and manage within a set time frame with clear objectives and method that communicated in advanced and managed in controlled way. As for distribution and frequency of percentage on stakeholders' involvement in e-learning implementation 156 (32.03%) agree that they consider it as dynamic project which changes in timescales and deliverables. It has also contingency which appreciates the complexity of issues. In the perspectives of to both statements that consist of stakeholders involvement in monitoring and manage within a set time frame with clear objectives , method that communicated in advance, managed in controlled way and also they consider it as a dynamic project 184 (37.78%) agreed to the notion.

Table 4.24: *Distribution and Frequency of Percentage on stakeholders' involvement in e-learning Implementation*

	Strongly	Disagree	Moderate	Agree	Strongly	
Mean						
	Disagree				Agree	S
They monitor and manage within a set time frame with clear objectives and method that communicated in advance and managed in controlled way	33 (6.78%)	46 (9.45%)	72 (14.78%)	136 (27.93%)	200 (41.07%)	2.87 (.345)
They consider it as dynamic project which changes in timescales and deliverables. It has focus on contingency which appreciates the complexity of issues.	64 (13.14%)	69 (14.17%)	94 (19.30%)	156 (32.03%)	62 (12.73%)	2.03 (.432)
Is a combination of the above two statements but not necessarily in equal proportion	44 (9.03%)	74 (15.20%)	81 (16.63%)	184 (37.78%)	104 (21.36%)	3.13 (1.343)

Table 4.25 showed duration to adapt changes in e-learning pedagogy classes before working in current institutions. With regard to the 245 (50%) respondents who stated that they took 2-5 years to adapt to the changes in handling e-learning pedagogy classes in the current respective institutions, 195 (40%) respondents indicated that they took 6 to 10 years to adapt the changes in handling e-learning pedagogy classes in the current institutions. A total of 39 (8%) respondents needed less than a year to adapt to

the changes in handling e-learning pedagogy classes in the current institutions, while 7 (1.4%) respondents stated that they needed 11 to 15 years to adapt to changes in handling e-learning pedagogy classes. Only one respondent needs more than 15 years to adapt to the changes in handling e-learning pedagogy classes.

Table 4.25: *Duration to Adapt to Changes in e-learning pedagogy Classes before Working in Current Institutions*

	Frequency	Percent
Less than 1 year	39	8
2-5 years	245	50.3
6-10 years	195	40.0
11-15 years	7	1.4
More than 15 years	1	0.2
Total	487	100.0

Table 4.26 shows the experience to adapt the changes in handling e-learning pedagogy classes before working in the current institutions. Considering the 353 (72.5%) respondents who stated that they had the experience to adapt the changes in handling e-learning pedagogy classes before working in that respective institution. This showed that the majority of respondents were having the experience to adapt the changes in handling e-learning pedagogy classes. Some 134 (27.5%) did not have any experience to adapt the changes in handling e-learning pedagogy classes. With regard to table 4.26 the 353 respondents who stated that they had the experience to adapt the changes in handling e-learning pedagogy classes before working in that respective institution.

Table 4.26: *Experience to Adapt the Changes in Handling e-learning Pedagogy Classes Before Working in Current Institutions*

	Frequency	Percent
Yes	353	72.5%
No	134	27.5%
Total	487	100.0

While table 4.27 showed duration to adapt the changes in handling e-learning pedagogy classes before working in the current institution. 213 (43.8%) respondents indicated that they took 2 to 5 years to adapt the changes in handling e-learning pedagogy classes before working in the current institutions. A total of 121 (24.8%) respondents used less than a year to adapt the changes in handling e-learning pedagogy classes. 84 (17.2%) respondents stated that 6 to 10 years needed to adapt the changes in handling e-learning pedagogy classes. Only 43 respondents in total need 11 – 15 years and 26 respondents need more than 15 years to adapt the changes in handling e-learning pedagogy classes.

Table 4.27: *Duration to Adapt the Changes in Handling e-Learning Pedagogy Classes Before Working in the Current Institution*

	Frequency	Percent
Less than 1 year	121	24.8
2-5 years	213	43.8
6-10 years	84	17.2
11-15 years	43	8.8
More than 15 years	26	5.4
Total	487	100

4.15.2 Status and trend of e-learning policies, ways to disseminate policies

and stakeholders' involvement in developing e-learning policy

According to table 4.28 most of the respondents (482 or 99%) indicated that there were no policies on e-learning in their institution. Compared to respondents who agreed that there were policies on e-learning in their institutions were only 5 (1%) respondents. This shows that the majority of respondents agreed that there were no policies on e-learning in their respective institutions.

Table 4.28: *Policy on e-Learning at Respondents' Institutions*

Policy on e-learning	Frequency	Percent
Yes	5	1
No	482	99
Total	487	100

Table 4.29 shows the distribution of frequency and percentage in the method of e-learning policy disseminated to the respondents. All respondents who responded there were policies on e-learning also mentioned that it was disseminated to the academic staff by institution website. However, only 1 respondent stated that it was disseminated by the guide book. They confirmed that the policy was not disseminated by written circular or memo, induction programs, formal development training programs and others.

Table 4.29: Method of e-learning policy disseminated to the respondents

Method of e-learning policy disseminated	Frequency	Percent
Institution's website	4	80
Written circular/memo	0	0
Guidebook	1	20
Induction programs	0	0
Training programs	0	0
Others	5	100

Table 4.30 showed the distribution of frequency and percentage on stakeholder involved in developing e-learning policy in institutions. As for stakeholders' involvement, most of the respondents agreed there were policies in their institutions indicating that the stakeholders involved in developing e-learning policy were top management. Some 464 respondents agreed that top management is the stakeholder involved in developing e-learning policy in institutions. Another 12 respondents agreed that stakeholder involved in developing e-learning policy starts at the faculty and department level. Only 11 respondents agreed that alumni as external stakeholder is the stakeholder involved in developing e-learning policy in institutions. None of the respondents agreed that student is the stakeholder involved in developing e-learning policy in institutions.

Table 4.30: Stakeholders Involved in Developing on e-learning Policy at Respondents' Institutions

Stakeholders on e-learning policy	Frequency	Percent
Top management	464	95
Faculty/ Department representative	12	2.5
External stakeholders (Alumni)	11	2.3
Students	0	0
Total	487	100

4.15.3 Status and trend of change management, impact of change

management and ways of institution adapting the change due to e-learning implementation.

The following Table 4.31 shows the distribution of frequency and percentage of the scores for respondents familiar with change management term. With regard to the 465 respondents familiar with change management term, this shows that the majority respondents were familiar with change management term. Only 22 respondents were not familiar with change management term.

Table 4.31: *Familiarity with Change Management Term*

Familiar with change management term	Frequency	Percent
Yes	465	95%
No	22	4.5%
Total	487	100.0%

Table 4.32 shows the distribution and frequency of percentage change management due to e-learning in private higher education institutions with vision and mission on e-learning implementation. According to the analysis, most of the respondents around 192, 39.5% strongly disagree that the educators gain concrete experience in handling change management process. Instead 116, 23.8% respondents were strongly agreed and 173 respondents agree that they gain self evaluate in handling change management.

Table 4.32: *Distribution of Frequency and Percentage on Change Management due to e-Learning Implementation*

	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	SD
Mean						
Accountable to learn the change management process	3 (0.62%)	42 (8.62%)	197 (40.45%)	191 (39.22%)	54 (11.09%)	11.21 (.534)

Self-evaluate in handling change management process	32 (6.57%)	69 (14.17%)	97 (19.92%)	173 (35.52%)	116 (23.82%)	8.31 (.967)
More professional in handling change management	169 (34.70%)	101 (20.74%)	79 (16.22%)	88 (18.07%)	50 (10.27%)	4.33 (1.433)
Gain concrete experience in handling change management process	192 (39.46%)	79 (16.22%)	92 (18.89%)	104 (21.36%)	20 (4.11%)	5.35 (2.576)
More observant while experiencing change management process	49 (10.06%)	62 (12.73%)	76 (15.61%)	202 (41.49%)	98 (20.12%)	6.23 (1.876)
Actively experiment the capabilities to adapt changes in implementing e-learning	14 (2.87%)	11 (2.26%)	209 (42.92%)	153 (31.42%)	100 (20.53%)	5.77 (.567)

With regards to table 4.33 that shows distribution of frequency and percentage on the institution to adapt change due to e-learning implementations 314 respondents strongly disagree that the institution evaluates programs for exposure first before handling change due e-learning implementation. However, only about 44 respondents mentioned that the institution train educators to handle change due to e-learning implementation. Training provided varies from internal to external training.

Table 4.33: *Distribution of Frequency and Percentage on the Institution to Adapt Change due to e-Learning Implementations*

	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	SD
Mean						
The institution ready to handle change due to e-learning implementation.	141 (28.95%)	192 (39.42%)	91 (18.69%)	37 (7.60%)	26 (5.34%)	6.76 (1.789)
The institution plan to handle change due to e-learning	197 (40.45%)	189 (38.81%)	61 (12.53%)	23 (4.72%)	17 (3.49%)	5.87 (.634)

implementation.

The institution develops	182	174	62	60	4	1.873
good change	(37.37%)	(35.73%)	(12.73%)	(12.32%)	(0.82%)	(.621)
management process						
before e-learning						
implementation.						

The institution trains	231	156	32	24	44	3.148
educators' to handle	(47.43%)	(32.03%)	(6.57%)	(4.93%)	(9.03%)	(1.259)
change due to e-learning						
implementation.						

The institution structure	72	31	154	192	38	7.196
program for	(14.78%)	(6.37%)	(31.62%)	(39.43%)	(7.80%)	(.236)
exposure to handle						
change due to e-learning						
implementation.						

The institution evaluates	314	111	27	5	3	4.245
programs for exposure	(64.48%)	(22.79%)	(5.54%)	(1.03%)	(0.62%)	(.977)
to handle change due						
to e-learning implementation.						

The institution does	224	172	85	5	1	4.924
maintenance to handle change	(46.00%)	(35.32%)	(17.45%)	(1.03%)	(0.21%)	(.587)
due to e-learning implementation.						

4.15.4 Status and trend of current governance structure, person and central committee in charge to monitor change of status, trend due to planning and implementation of e-learning

Table 4.34 shows the current governance structure of e-learning at the institution is effective. With regard to the 353 (72.5%) respondents stated that the current governance structure of e-learning was effective in their respective institutions, this shows that the majority of respondents were having the opinion that governance structure of e-learning was effective in their respective institutions. Some 134 (27.5%) respondents stated that the effectiveness of governance structure of e-learning was not effective.

Table 4.34: *Effectiveness of Current Governance Structure of e-Learning in Current Institutions*

	Frequency	Percent
Yes	353	72.5%
No	134	27.5%
Total	487	100.0%

Table 4.35 show the distribution of frequency and percentage on the person in charge to monitor the status and trend of e-learning. Most of the respondents (196) that responded person in charge of monitoring the status and trend of e-learning at their institutions were information technology (IT) directors. Some 134 respondents agreed that person in charge to monitor the status and trend of e-learning in their institutions were director of e-learning. Another 101 respondents stated that the coordinator of e-learning was the person in charge to monitor the status and trend of e-learning at their institutions. 45 respondents stated that quality assurance director was the person in charge to monitor the status and trend of e-learning at institutions. Respondents who

answered other were 6 persons stated that person in charge to monitor the status and trend of e-learning were the head of technology and head of (IT). There was a total of 5 respondents mentioned that person in charge to monitor the status and trend of e-learning were e-learning committee.

Table 4.35: *Distribution of frequency and percentage on person in charge to monitor the status and trend of e-learning*

Person in charge to monitor the status and trend of e-learning.	Frequency	Percent (%)
Coordinator of e-learning	101	20.7
Director of e-learning	134	27.5
Chair of e-learning committee	5	1
IT director	196	40.2
Quality Assurance Director	45	9.2
Other	6	1.2
Total	487	100

Table 4.36 shows the distribution of frequency and percentage of the scores for respondents on the central committee in charge of monitoring the change of status, trend due to planning and implementation. With regard to the 320 respondents who were not having a central committee in charge of monitoring the change of status and trend due to planning and implementation, this shows that the majority of respondents did not have a central committee in charge of monitoring the change of status, trend due to planning and implementation. Only 167 respondents were having a central committee in charge of monitoring the change of status, trend due to planning and implementation.

Table 4.36: *Central Committee in Charge of Monitoring Change of Status After Implementation*

	Frequency	Percent
Yes	167	34.3%
No	320	65.7%
Total	487	100.0%

4.15.5 Status and trend of educators' competency level and current status of courses offering e-learning

Table 4.37 shows the distribution and frequency of percentage on competency level in handling e-learning pedagogy due to e-learning implementation. Based on the results, 196 (40.2%) respondents mentioned that they were competent in adapting to changes due to e-learning implementation. However, 103 (21.1%) respondents mentioned that they were average competent in adapting to changes following to e-learning implementation. Furthermore, 92 (18.9%) respondents have only little competency in adapting to changes due to e-learning implementation. Instead, 77 (15.8%) respondents were highly competent in adapting to changes due to e-learning implementation. Only 19 (3.9%) respondents stated that they were not competent in adapting to various changes due to e-learning implementation.

Table 4.37: *Competency in handling e-learning Pedagogy*

	Frequency	Percent
Not competent	19	3.9%
Little competent	92	18.9%
Average competent	103	21.1%
Competent	196	40.2%
Highly competent	77	15.8%
Total	487	100%

Table 4.38 shows the distribution and frequency of percentage on technological competency level due to e-learning pedagogy. Based on the results, 142 (29.2%) respondents mentioned that they were technological competent in e-learning implementation. However, 134 (27.5%) respondents mentioned that they were average in technological competency in e-learning implementation. Some 107 (22%) respondents perceived themselves as highly technological competent in e-learning implementation. Furthermore, 101 (20.7%) respondents were little technological competency in e-learning implementation. Only 3 (0.6%) respondents stated that they were not technological competent in e-learning implementation.

Table 4.38: *Level of Technological Competence in e-Learning Implementation*

	Frequency	Percent
Not competent	3	0.6%
Little competent	101	20.7%
Average competent	134	27.5%
Competent	142	29.2%
Highly competent	107	22.0%
Total	487	100%

The following table 4.39 displays the percentage of courses at institution that offered online in the respective institutions. With reference to table 4.39, some 103 (21.2%) respondents stated that 21-30% is the current percentage of courses offered online at their institutions. Almost similarly, 102, (20.9%) respondents stated that 31-40% is the current percentages of course were offered online at their institutions. Another 100 (20.5%) respondents stated that more than 50% of courses were offered online. While 91 (18.6%) respondents mentioned that the percentage of courses offered

online was 41-50%. Another 71 respondents stated that 11-20% was the current percentage of courses offered online and least percentages stated 0-10% was the current percentage of courses offered online stated by 20 respondents.

Table 4.39: *Percentage of courses at institution that offered online in the respective institutions*

.	Frequency	Percent
0-10%	20	4.2 %
11-20%	71	14.6%
21-30%	103	21.1%
31-40%	102	20.9%
41-50%	91	18.7%
More than 50%	100	20.5%
Total	487	100%

4.15.6 Status and trend of institutional vision and mission in line with e-learning implementation and change impact of e-learning implementation

Referring to table 4.40, with regard to the 284 (58.3%) respondents who stated that e-learning implementation was not in line with the institutional vision and mission. This showed that the majority of respondents did not agree that e-learning implementation was in line with the institutional vision and mission. Most of the respondents specify the reasons as no time allocation for e-learning implementation, high expectation of the institutions and also inappropriate processes of e-learning implementation. However, 203 (41.7%) respondents stated that e-learning implementation was in line with the institutional vision and mission. Table 4.40 shows the distribution of frequency and percentage of the scores for respondents on e-learning implementation in line with the institutional vision and mission

Table 4.40: *E-learning implementation in line with the institutional vision and mission.*

	Frequency	Percent
Yes	203	41.7%
No	284	58.3%
Total	487	100.0%

The following table 4.41 displays the frequency and percentage of periodically measuring the change impact of e-learning implementation on educators. Referring to the 396 (81.3%) respondents who stated the respective institutions were not measuring periodically the change impact of e-learning implementation on educators. This showed that the majority of respondents were having the opinion that the institution was not measuring periodically the change impact of e-learning implementation on educators. Only 91 respondents agreed that the respective institutions periodically measure the change impact of e-learning implementation on educators.

Table 4.41: *Periodically Measure the Change Impact of e-Learning Implementation on Educators*

	Frequency	Percent
Yes	91	18.7%
No	396	81.3%
Total	487	100.0%

4.16 RQ5:Problems and challenges in overcoming changes due to e-learning

implementation

The findings regarding the problems and challenges due to e-learning implementation of educators in the context of this study are organized and reported according to the fourth research question in the context of this study in the following areas:

- a- Problems and challenges related to change management and e-learning implementation
- b- Problems and challenges related to educators in using e-learning
- c- Problem and challenges related to the institution in conducting effective training to adapt to the changes
- d- Problem and challenges on system performance that affect adaptation of e-learning implementation.
- e- Problem and challenges concerning educators towards change due to e-learning implementation have been mirrored with the previous implementation.

4.16.1 Problems and challenges related to change management and e-learning

implementation

Table 4.42 shows the distribution of frequency and percentage the main problem and challenges faced by their respective institutions in e-learning implementation. A total 110 (22.6%) respondents stated that lack of support from top management is the major problem and challenge related to change management of e-learning implementation at their institutions. About 80 (16.4%) stated that no clear line of responsibility on e-learning planning and implementation is the problem in e-learning

implementation at their institutions. Some 71 (14.6%) respondents stated the main problem and challenges of e-learning implementation in their institution is because of no clear policy on e-learning, while 66 (13.6%) mentioned other reasons such as designing of e-learning platform was not attractive, no leader to support the e-learning implementation, a lot of conflict between top management and educators and not being compulsory to use were the reasons mentioned as obstacles to e-learning implementation in their institutions.

Almost similar to the previous category, 63 respondents stated that lack of trained manpower is the main problem and challenge in e-learning implementation. Some 47 respondents stated that the main problem is the lack of incentive for those involved in the implementation of e-learning and 39 (8.0%) respondents stated that there was no dedicated division or department or unit on e-learning implementation in their institutions. The least or 11 (2.3%) respondents stated that no clear governance structure is the problem and challenge in e-learning implementation in their institution.

Table 4.42: *The percentage the main problem and challenges faced by their respective institutions in e-learning implementation.*

	Frequency	Percent
No clear policy on e-learning	71	14.6
Lack of trained manpower	63	12.9
No clear line of responsibility on the planning/ implementation of e-learning	80	16.4
Lack of incentive for those involved in the implementation of e-learning	47	9.7
Lack of support from top management	110	22.6
No dedicated division/ department/ unit on e-learning	39	8.0
No clear governance structure	11	2.3
Other	66	13.6
Total	487	100

4.16.2 Problems and challenges related to educators using e-learning

Table 4.43 shows the distribution of frequency and percentage the main problem and challenges faced by their respective institutions in e-learning implementation. Some 139 (28.6%) respondents stated that complacent with existing teaching practices is the major problem and challenge related to educators in using the existing e-learning platform at their institutions. About 132 (27.1%) respondents stated that there was no training on the use of e-learning is the problem in getting the educators to use existing e-learning platform at their institutions. While 109 (22.4%) respondents stated the main problem in using the existing e-learning platform in their institution is involvement and being busy with their research and publications. Another 66 (13.6%) respondents mentioned that they were overload with teaching responsibilities. Some 19 (3.9%) respondents stated that preference for open source platforms were the main problem and

challenge in getting the educators to use existing e-learning platform in their institutions.

Ten (2.1%) respondents stated other reasons such as not interested to know, not interested to try new method and age gap towards e-learning as the main problem and challenge in getting educators to use the existing e-learning platform. Another 7 respondents answered they are skeptical about e-learning in getting the educators to use existing e-learning platform in their institutions. The remaining 3 (0.6%) respondents stated that they are not IT savvy or technophobic and 2 respondents stated that e-learning was not user friendly as a main challenges in getting educators to use existing e-learning platforms in their institutions.

Table 4.43: *Percentage of Main Problems and Challenges Faced by Institutions in Getting the Educators to Use the Existing e-Learning Platform*

	Frequency	Percent
Preference over open source platform	19	3.9
Busy with research/publication	109	22.4
Skeptical about e-learning	7	1.4
Not IT savvy/technophobia	3	0.6
Complacent with existing teaching practices	139	28.6
E-learning not user friendly on e-learning	2	0.4
Overload with teaching responsibilities	66	13.6
No training on the use of e-learning	132	27.1
Other	10	2.1
Total	487	100

4.16.3 Problems and challenges related to institution in conducting effective training to adapt the changes

Table 4.44 meanwhile show the distribution of frequency and percentage of the main problems and challenges faced by institutions in conducting effective training for adapting changes in e-learning implementation. Referring to table 4.44, some 109 (22.4%) respondents stated that lack of the motivation among the educators is among the major problems and challenges faced by institutions in conducting effective training that adapt to changes in e-learning implementation. About 102 (20.9%) respondents stated that lack of training modules is the major problem and challenge faced by institutions in conducting effective training to adapt the changes due to e-learning implementation. Another 93 (19.5%) respondents stated the main problem and challenges of faced by institutions in conducting effective training to adapt the changes due to e-learning implementation is insufficient training budget. Some 61 (12.5%) respondents mentioned that lack of competent trainers is the major problem faced by institutions in conducting effective training to adapt to the changes of e-learning implementation.

Furthermore referring to table 4.44, 54 (11.1%) respondents stated insufficient facilities as the main problem and challenges faced by their institution in conducting effective training to adapt the changes due to e-learning implementation. Another 31 (6.4%) respondents stated poor attendance as the main problem and challenges faced by their institutions in conducting effective training to adapt to the changes due to e-learning implementation. While 19 respondents answered the problem and challenges faced by institutions in conducting effective training for adaptation the changes following e-learning implementation is unsuitable training schedule. The remaining 18 (3.7%) respondents stated other reasons such as lack of manpower, lack of suitable

training and lack of motivation in trainer and head of department is not motivating as problem and challenges faced by institutions in conducting effective training for adaptation the changes following e-learning implementation.

Table 4.44: *Distribution of frequency and percentage the main problem and challenges faced by institution*

	Frequency	Percent
Poor attendance	31	6.4%
Unsuitable training schedule	19	3.9%
Insufficient facilities	54	11.1%
Lack of competent trainers	61	12.5%
Insufficient training budget	93	19.1%
Lack of training modules	102	20.9%
Overload with teaching responsibilities among educators	109	22.4%
Other	18	3.7%
Total	487	100%

4.16.4 Problems and challenges on system performance that affect adaptation of e-learning implementation

As stated in open ended question in the questionnaire, more than 70% of the respondents stated that the key issue is educator do not possess the technical skills to use e-learning tools. They also stated that the educators need to educators must redesign their course curricula to incorporate e-learning tools once they are introducing in the institution. Some of the respondents stated that institutions must provide an adequate and reliable technical infrastructure to support e-learning activities.

4.16.5 Problem and challenges concerning educators towards change due to e-learning implementation has been mirrored with previous implementation.

As stated in open ended question in the questionnaire, educator interest to improve teaching method in general, to make course more interesting for students, or to keep updated in their academic field, spurs e-learning adoption at others. They also noted students' technical infrastructure limitations such as lack of computer hardware. Same difficulties were faced when courses through the mail were introduced in case of technical problems.

4.17 RQ6: Ways to initiate change management for e-learning implementation by educator

The findings regarding the ways to adapt change management due to e-learning implementation for educators in the context of this study were organized and reported according to the sixth research question in the context of this study in the following areas:

- a- Ways and tools and techniques to facilitate educators' in e-learning implementation
- b- Ways to adapt change management due to e-learning implementation and job role
- c- Ways to adapt change management in order of importance

4.17.1 Ways and tools and techniques to facilitate educators' in e-learning implementation

Table 4.45 shows the distribution and frequency of percentage on the management of e-learning implementation. According to the analysis majority of the respondents 392, 80.5% strongly disagreed that e-learning strategy, system design, and processes are determined completely outside of faculty control. However, the 243 respondents strongly agreed that the communications about the implementation are not given in advance. Similarly, around 241 respondents that the leadership role is unclear and the champion for e-learning implementations are not utilized effectively.

Table 4.45: *Distribution of Frequency and Percentage on system design of e-Learning Implementations*

	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	(SD)
Mean						
Once the implementation has taken place, user involvement in the project begins.	102 (20.94%)	171 (35.11%)	109 (22.38%)	56 (11.50%)	49 (10.06%)	2.586 (1.978)
Communications about the implementation are not given in advance and not relevant.	15 (3.08%)	27 (5.54%)	95 (19.51%)	107 (21.97%)	243 (49.90%)	5.897 (.298)
The direction of the implementation is influenced by resistance.	33 (6.77%)	19 (3.90%)	178 (36.55%)	214 (43.94%)	43 (8.83%)	4.246 (.944)

Each release begins with 21 143 97 129 97 3.215
no anticipated planning (4.31%) (29.36%) (19.92%) (26.49%) (19.91%) (1.366)

Incentives are linked with 5 11 291 69 111 2.789
the implementation to aid (1.02%) (2.26%) (59.75%) (14.17%) (22.79%) (.287)
the process of change.

Implementation 61 64 107 156 99 2.660
communications are open (12.53%) (13.14%) (21.97%) (32.03%) (20.33%) (.296)
and readily available.

Wide timescales for the 14 21 21 231 200 1.856
implementation deliverables (2.87%) (4.31%) (4.31%) (47.43%) (41.07%) (.547)
are set and goals are met.

There are predetermined 25 71 89 131 171 3.787
Guidelines for how the system (5.13%) (14.58%) (18.28%) (26.90%) (35.11%) (.577)
implementation is to be
managed and these are followed.

Ideas are openly communicated 19 34 102 107 225 2.646
and encouraged within the (3.90%) (6.98%) (20.94%) (21.97%) (46.20%) (1.979)
implementation.

Training is frequently given 42 69 71 195 110 3.562
with supporting materials (8.62%) (14.17%) (14.58%) (40.04%) (22.59%) (.213)
creating confidence with the
system and the processes.

Key implementation personnel are chosen, put in charge and left unchanged	171 (35.11%)	194 (39.84%)	79 (16.22%)	21 (4.31%)	22 (4.52%)	2.342 (.284)
Conflicts within the implementation are avoided	99 (20.33%)	71 (14.58%)	61 (12.53%)	142 (29.16%)	114 (23.41%)	2.729 (.587)
The reasons for change are unclear and there are different views of the goals of the implementation	19 (3.90%)	39 (8.01%)	162 (33.26%)	191 (39.22%)	76 (15.61%)	3.793 (1.571)
Implementation leadership is unclear and e-learning champion are not utilized effectively	3 (0.62%)	42 (8.62%)	109 (22.39%)	92 (18.89%)	241 (49.49%)	2.653 (.966)
The e-learning strategy, system design and processes are determined completely outside of faculty control.	392 (80.49%)	72 (14.78%)	13 (2.67%)	7 (1.44%)	3 (0.62%)	2.678 (1.366)
Research & development done to enhance educators' adaptation towards the change	92 (0.19%)	46 (9.45%)	33 (6.78%)	192 (39.43%)	124 (25.46%)	1.539 (.394)

Table 4.46 shows the distribution of frequency and percentage indicates the tools that use in e-learning. Most of the respondents indicated that email and electronic chat as a tool used in e-learning, 394 (80.9%) and 392 (80.4%) respondents respectively. Compared to online tutorials 180 (37.0%) respondents and forum discussion were only 109 (22.4%) respondents. There were 45 (9.2%) respondents using video conferencing

as tools in e-learning. None of the respondent was using voice mail as tool used in e-learning. 148 (30.4%) respondents were using other tools such as mind flash, quizzing and other software stimulation. Most of the respondents stated that they create a shared goal. The head of department or deans will head a meeting among the lecturers across the faculty to define the old process and its change involved. They will also include discussion of value in implementing e-learning. Collaborative ideas on the solution with the team member create the impact on the change management.

A quarter of the respondents stated that once staff have been informed about the e-learning implementation they start to adapt to the change and want improvements, actively seek input and test ideas to see how they affect the institution. This process not only uncovers their concerns, but it also allows everyone to have a voice in developing the solution, which increases overall co-operation to change in the institution. Communicate the proposed solution and benefits were also mentioned by the respondents in conjunction with change management. The purpose of communication is to deliver a solution that solves the original issue and addresses everyone's concerns. While change is rarely an easy process, by clearly showing how the proposed solution meets the shared goal, the change seemed worth the effort. Respondents also stated that they celebrate the minor successes along the way by keeping track of who is responding well to the change and recognize them for their efforts.

Table 4.46: Tools Used in e-Learning by Respondents

Tools that use in e-learning	Frequency	Percent
Online tutorials	180	37%
Video conferencing	45	9.2%
E-mail	394	80.9%
Voice mail	0	0%
Discussion forum	109	22.4%
Electronic chat	392	80.4%
Others	148	30.4%

4.17.2 Ways to adapt change management due to e-learning implementation and job role

Table 4.47 shows the distribution and frequency of percentage on managing change at the institution due to e-learning implementation. With regards to the data analysis shows that a number of 271 which is more than 50% of the respondents strongly disagree that they were constantly undergoing changes due to e-learning implementation. Contrast, they were 50 respondents strongly agreed that to deals with change incremental development and the ability of top management to deals with issues separately were needed.

Table 4.47: *Distribution of frequency and percentage on managing change at the institution due to e-learning implementation*

	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Mean (SD)
Exists in a state of rapid and continues change.	246 (50.51%)	142 (29.16%)	96 (19.71%)	2 (0.41%)	1 (0.21%)	7.131 (.911)
Evolves through long periods of stability with short bursts of fundamental changes	213 (43.74%)	172 (35.32%)	52 (10.68%)	34 (6.98%)	16 (3.29%)	4.133 (1.467)
Deals with change incrementally and separately.	142 (29.16%)	103 (21.15%)	143 (29.36%)	49 (10.06%)	50 (10.23%)	1.533 (1.824)
Constantly undergoing changes step by step.	271 (55.65%)	206 (42.30%)	8 (1.64%)	1 (0.21%)	1 (0.21%)	2.825 (.379)

Table 4.48 shows distribution and frequency of percentage on the management of change affecting the job role at the institution due to e-learning implementation. According to table it is clearly seen that the 249 respondents were strongly disagreed that there are delays in the timescale set in the change project. The respondents who were strongly agreed, on the other hand were 314 respondents that those educators concerned with the outcome of the change project will need involve educators from beginning part of planning itself.

Table 4.48: *Distribution and frequency of percentage on the management of change affecting the job role at the institution due to e-learning implementation.*

	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Mean (SD)
There are logical reasons for change which are visible and the goals are transparent.	20 (4.11%)	103 (21.15%)	179 (36.76%)	96 (19.71%)	89 (18.28%)	3.585 (.834)
Change projects create resistance which has to be broken.	9 (1.85%)	10 (2.05%)	101 (20.74%)	176 (36.14%)	191 (39.22%)	2.333 (1.255)
There are long periods of planning before the change is delivered.	102 (20.94%)	92 (18.89%)	81 (16.63%)	79 (16.22%)	133 (27.31%)	4.388 (1.757)
Change is expected without being linked to incentives.	108 (22.18%)	32 (6.57%)	32 (6.57%)	102 (20.94%)	213 (43.74%)	2.283 (.199)
The project lead for the change is known and project champions aid the planning and implementation.	72 (14.78%)	142 (29.16%)	106 (21.77%)	107 (21.97%)	60 (12.32%)	1.444 (2.937)
Good ideas for change are hidden and used for personal agendas.	41 (8.42%)	37 (7.60%)	194 (39.84%)	119 (24.44%)	96 (19.71%)	2.311 (1.733)

The implementation of the change within your role is managed solely by your institution.

2	43	297	105	40	1.831
(0.41%)	(8.83%)	(60.99%)	(21.56%)	(8.21%)	(.922)

Training is adequate to answer the questions about change.

239	119	107	12	10	2.162
(49.08%)	(24.44%)	(21.97%)	(2.46%)	(2.05%)	(1.021)

The process of implementation for the change is flexible and reactive.

34	42	69	300	42	1.022
(6.98%)	(8.62%)	(14.17%)	(61.60%)	(8.62%)	(.833)

There are delays in timescale set in the change project

249	171	52	9	6	1.622
(50.51%)	(35.11%)	(10.68%)	(1.85%)	(1.23%)	(.922)

Project teams have sometimes lack of consequence and consistency in regards to the change

31	57	187	162	50	1.033
(6.37%)	(11.70%)	(38.40%)	(33.26%)	(10.27%)	(.821)

Communication about the change is limited to only those directly concerned with the project.

11	29	131	126	190	1.233
(2.26%)	(5.95%)	(26.90%)	(25.87%)	(3.90%)	(.655)

Those concerned with the outcome of the change project take part in planning.

6	12	42	113	314	1.777
(1.23%)	(2.46%)	(8.62%)	(23.20%)	(64.48%)	(.677)

Communications about the change are timely and relevant

57	68	71	190	101	1.007
(11.70%)	(13.96%)	(14.58%)	(39.01%)	(20.74%)	(1.533)

Conflicts within the change are	72	71	62	164	118	1.995
looked for and try to be solved.	(14.78%)	(14.58%)	(12.73%)	(33.68%)	(24.23%)	(.244)
Involvement in the change project	12	17	194	76	188	1.991
before delivery takes place	(2.46%)	(3.49%)	(39.84%)	(15.61%)	(38.60%)	(.598)

4.17.3 Ways to adapt change management in order of importance

Recognize the e-learning is being implemented by people with the necessary core skills in a clearly defined and tracked manner is the most important requirement about changes in the order of importance. Understanding why change is happening and why it is necessary is listed as the second important requirement about changes in the order of importance. Awareness of who is ultimately responsible for the project is listed as the third important requirement about changes. Knowing the project recognizes organization wide dependencies and gives caution to people, process and infrastructure is stated as the fourth importance and having assistance from the project owners, project infrastructure, training specialist to create a supportive environment is the fifth most important as requirements about change in order of importance.

Being able to take ownership and influence details of the change is stated as the sixth requirement about change in the order of importance. Appreciation of how the change will take place and be effectively communicated stated was given as seventh requirement about change in the order of importance. The requirement about changes in the order of importance was conscious that key individuals are involved in the project as eighth importance. The least requirement about change in the order of importance is feeling that everyone is focused on the same goals and objectives.

Table 4.49: Ways to adapt Change Management in the Order of Importance

	1	2	3	4	5	6	7	8	9
Recognize the e-learning is being implemented by people with the necessary core skills in a clearly defined and tracked manner	207 42.5%	192 39.4%	43 8.8%	20 4.1%	11 2.3%	8 1.6%	3 0.6%	2 0.4%	1 0.2%
Understanding why change is happening and why it is necessary	123 25.3%	196 40.2%	65 13.3%	52 10.7%	32 6.6%	9 1.8%	5 1.0%	3 0.6%	2 0.4%
Awareness of who is ultimately responsible for the project	101 20.7%	106 21.8%	183 37.6%	81 16.6%	6 1.2%	5 1.0%	3 0.6%	1 0.2%	1 0.2%
Knowing the project recognizes organization wide dependencies and gives caution to people, process and infrastructure	64 13.1%	103 21.1%	92 18.9%	172 35.3%	42 8.6%	8 1.6%	2 0.4%	2 0.4%	2 0.4%
Having assistance from the project owners, project infrastructure, training specialist to create a supportive environment	21 4.3%	62 12.7%	62 12.7%	32 6.6%	211 43.3%	43 8.8%	31 6.4%	12 2.5%	13 2.7%
Being able to take ownership and influence details of the change	102 20.9%	92 18.9%	76 15.6%	24 4.9%	35 7.2%	133 27.3%	16 3.3%	3 0.6%	6 1.2%
Appreciation of how the change will take place and be effectively communicated	41 8.4%	103 21.1%	56 11.5%	12 2.5%	11 2.3%	57 11.7%	148 30.4%	15 3.1%	44 9.0%
Conscious that key individuals are involved in the project	27 5.5%	31 6.4%	13 2.7%	120 24.6%	43 8.8%	32 6.6%	76 15.6%	141 29.0%	4 0.8%

Is feeling that everyone is	26	37	48	66	74	47	57	21	111
focused on the same goals and objectives.	5.3%	7.6%	9.9%	13.6%	15.2%	9.7%	11.7%	4.3%	22.8%

4.18 Findings of Qualitative Part

The main purpose of the qualitative part of the research was to examine the key aspects of change management strategies for e-learning implementations in private higher education institutions. Data for the qualitative study was collected through interviews with four individuals, the Deputy Vice Chancellor, a committee member of MAPCU, a senior lecturer and an e-learning coordinator. Besides interviews, data were also collected through direct observation in the field, as well as through the analysis of official documents from the universities. This chapter presents a detailed analysis of the data analysis and the consequent findings for research questions 1, 2, 3 and, especially, question 4.

In order to answer the questions in a systematic manner, the findings were organised and guided by the main themes of this study, which are also the main components of change management in an e-learning implementation in private higher education institutions in Malaysia. This chapter elaborates on these components, from the educators' perspective. Each component was analysed based on the focus of the top management on the main management functions including planning, organising, guiding and monitoring.

4.18.1 RQ3: Change management in status and trend of e-learning implementation

4.18.1.1 Vision and mission for strategic change

Table 4.50 shows a vision and the mission of institutions related to e-learning implementation. Based on the data analysis, this study found that in managing the change process, the first step was to create a clear vision and mission for the institution. Identifying, or updating the mission, vision and values statements are done during strategic planning. These statements summarised the institutions educational goals and objectives. The vision and the mission serve different purposes. The mission statement describes what the institution wants to do now, while vision statement outlines the educational institution regards as its future goals. In this study, the vision statement of an education institution is taken to focus on the future, and the mission statement, to concentrate on the present. It defines the students, critical processes, and it informs about the desired level of performance in the private higher education institutions. In line with this finding, the the senior lecturer of a private higher education institution commented:

“It is a source of inspiration and motivation. Often it describes not just the future of the education institutions but the future of the education industry or society in which the organization hopes to effect changes. Mission statement guides the short term operations and decision making of the educational institutions. It helps in tactical planning and around common short term goal. The mission statement helps educators of the organization get on the same page on what they should do and how they should do it. The vision statement outlines the worldview on education.” [DM-1-1-991-61].

A private higher education institution conducts its programmes and activities guided by an overarching vision, mission, goals, values, and belief statements. All programmes are revisited periodically, and revised if necessary. Document review shows that private higher education institutions normally envisioned being a world leader in the advancement of knowledge based on e-learning and scholarship as well as leadership in service and outreach. These institutions need to prepare professionals who

in turn can provide leadership and exemplary educational services to coach students for a changing and complex global society. They have an allied mission to advance the profession of education, through research on the science and art of teaching and learning, effective uses of technology, and the development of leadership and educational policies. Correspondingly, the analysis found that four universities had propounded a clear and specific vision to guide the progress of the institution, also to enable the top management to steer the university toward its future growth and development. This finding was corroborated by the Deputy Vice Chancellor when he stated:

“At all times involve and agree support from educators within the education system, and processes. Understand the position of the institution at the moment. Understanding where, when, why, and what the measures will be for the journey. Plan to develop towards appropriate achievable measurable stages. Communicate, involve, enable and facilitate involvement from people, as early and openly. All of those steps can only be done with clear vision and mission of private higher education institutions.” [PM-1-1-990-161]

Data indicated that a clear and strong vision was one of the main elements for encouraging members of the educational institutions to participate in the change process. By articulating what it hopes to achieve, the ‘vision’ gave direction sense to the goals and objectives.

Table 4.50: Vision and Mission of Institutions that Have Related e-Learning Implementation

No	Institution	Vision/Mission
1	A	To be a leader and a premier educational hub in the promotion of affordable and quality dual mode learning in Asia and the mission is to work in collaboration with universities, institutions and corporations, drawing upon their collective expertise, prestige and resources to provide quality higher education and lifelong learning.
2	B	To discover the university, where technology and innovation come together to prepare tomorrow’s workers and citizens of the world. With more than a decade of excellence in professional higher education and training coupled with a strong track record in Research and Development they

		determine to be one of the region's top educational institutions offering very good graduate employment prospects, industry- aligned research and development opportunities, practice of professionalism and innovative teaching and learning experiences.
3	C	To be the leading provider of flexible learning and the mission of is to widen access to quality education and provide lifelong learning opportunities by leveraging on technology, adopting flexible mode of learning and providing a conducive and engaging learning environment at competitive and affordable cost.
4	D	To be a premier university aspiring to achieve excellence in advancement and dissemination of knowledge and expertise, emphasizing nurturing and holistic development of the individual towards nation building. The mission of is to be a leading university offering education of the highest standard in all significant fields aimed at fully developing the individual and better serving the nation. Shall pursue a rigorous academic approach towards producing disciplined graduates critical in their thinking and dedicated to the quest of continuous learning and pursuit of excellence. Shall collaborate with international universities, research institutions, and industries in pushing the frontiers of the humanities and embarking on scientific discoveries, medical breakthroughs and technological innovations. The university is dedicated to inculcating among the community high moral values, appreciation of rich diversity in a multiethnic society and an abiding concern for the betterment of all humankind.

4.18.1.2 Education market

This finding was corroborated by the e-learning coordinator when he stated that,

“The only mistake we made was not to have such support with a planned change management. We are actually still lacking in a body of knowledge that complied with content and process. For instance, when e-learning courses for professional advancement in Continuing Education division were introduced, we had difficulty to introduce a linked set of e-learning courses with pre-requisites as an online course. It is, yet again, a different one to introduce a blended e-learning and traditional curriculum with pre-requisite courses being either online or traditional. Examples, of wide changes include modification of the organization's mission, restructuring of the operations, and introduction of new technologies and programs. We are actually working on it.” [D.C-1-1-765-467]

According to the findings, change management and transformation have become permanent features of the educational landscape. The coordinator also added that

generally, the scope of change narrowed from each faculty to a departmental or group level. New education markets and labour pools have opened up, while innovative technologies demanded strong educational models. Capital flows and investor demand also have become less predictable. In overcoming these challenges, educational institutions have become more sophisticated in the best practices for change management. They are far more keenly aware of the role that they played. The educators also had to get much better on their follow through.

The findings also viewed e-learning as an education industry-wide transformation. He also added that usually, the most significant changes in the way private higher education institution operated were motivated by factors such as cuts or infusion of funding, technological innovations, competitor actions, and the need for dramatic increases in services.

The senior lecturer also highlighted that:

"As a senior lecturer of a faculty I experienced with organizational change management suggests that there are several obstacles to overcome. The major is "change fatigue," the exhaustion that sets in when educators feel pressured to make too many transitions at once. The change initiatives for educators suffered through poorly in information technology through insufficient preparation. Fatigue is a familiar problem in change management, especially when the educators need new initiatives that are driven from the top. Change initiatives also flounder, because companies lack the skills to ensure that change can be sustained over time. Leaders or deans might set out eagerly to raise education quality, but when production schedules slow and the pipeline start looking sparse.. The next major obstacle is that transformation efforts are normally decided upon, planned, and implemented, with little input from those at lower levels. This filters out information that could be helpful in designing the change while also limiting opportunities to get frontline ownership of the change. ."[DM-1-1-788-86]

According to the senior lecturer, lacking an effective way to deal with problems caused by e-learning implementation makes the management to decide their targets were unrealistic and blame the production technology, or their frontline people for not being up to the task. Therefore better way to solve the problem is to invest in the institutions operational improvements, such as process design and training, to instill new practical approaches and give educators the knowledge and to support their needs.

4.18.1.3 Knowledge support

Further, according to the findings, knowledge in implementation of e-learning was more critical to the success of the change management, than strategy or operating models. Yet change leaders often fail to address this, in terms of neither overcoming the resistance nor making the most of knowledge support. Among educators whose institutions were unable to sustain change over time, findings showed that this could have been because the change management strategy viewed their education institution culture as a legacy of from the past from which they should move on. Some of the deans and heads of department were so focused on structural details, like reporting lines, decision rights, formal processes, that they forgot that educators were human beings with strong emotional connections to the culture, and it is they who would be enacting these changes.

The Deputy Vice Chancellor highlighted that:

“Yet skilled change managers or the deans and head of department, conscious of change management best practices, always make the most of the education institution’s existing culture. Instead of trying to change the practice itself, the educators draw emotion from it. It provide a boost to the change initiative to the educators towards the way they think, behave, work, and feel. In my institution that undergoing merging, practices led to the integration. Using a practice related diagnostic method; the change management team asked educators to describe each education institution operating style and mapped the responses from the two private higher education institutions to get a sense of their combined strengths and challenges. It quickly became clear that where one higher education institution had a culture attuned to bottom line results, the other tended to focus on process. Optimally, the new company would need to skillfully use processes to deliver clear results. Recognize and acknowledge each institution’s, leaders would strengths the change and avoided the incoherence that could have resulted from a less redesign process in order to initiate e-learning.”[PM-1-1-424-241]

In line with this, the e-learning coordinator explained that although it was important to engage educators at every level right from the start, all successful change management initiatives start at the top, with a committed, well aligned team of leaders who are strongly supported by the deans and heads of department. This alignment

cannot be taken for granted. Rather, work must be done in advance to ensure that everyone agrees to the case for the change, and the particulars for implementing it. This practice included conducting an effectiveness survey on the leadership team. This survey revealed, that these leaders called themselves as a team they did not really see themselves as one. Instead, they mostly operated as lone rangers in their own way. According to the Deputy Vice Chancellor, to express emotions are important and the deans and head of department must look for the factors that caused the expression of emotion that aligned to the changes that being introduce from their educators team and try to solve it.

The e-learning coordinator commented that:

“Each of the educators in the group made a thoughtful presentation about the case of change. Most of them agreed on the general direction that the educational institution needed to achieve rapid growth. However, their descriptions of how to move in that direction for example, what the first concrete steps should be were all being mapped. The team leaders that lead e-learning implementation were then asked to work together to develop a best practice for change that every one of the educators could support. At the end of the meeting, they found that educators were all using the same language to describe education institution needs.” [DC-1-1-275-239]

According to e-learning coordinator the top list on the position as for example the deans and head of department had to listen closely to their colleagues and find out the conflicting points of view. Most importantly, the experience of working together will led the educators, collaborates and committed as a team.

4.18.1.4 Strategic planning

Strategic planners often fail to take into account the extent to which midlevel and frontline educators can make, or break a change initiative in e-learning implementation. The path of rolling out changes made measurably smoother if these educators are tapped earlier on for their input on issues that will affect their jobs. Frontline educators tend to be rich repositories of knowledge about where potential glitches may occur, what technical and logistical issues need to be addressed, and how

educators may react to changes. In addition, their full-hearted engagement can smoothen the way for complex change initiatives, whereas their resistance will make implementation an ongoing challenge.

Findings also discovered that planners resisted early engagement at multiple levels of the hierarchy, because they believed the process would be more efficient if fewer educators were involved in the planning. Although it may take longer in the beginning, this practice can ensure broad involvement. Not only would more information surface, but educators have a more vested interest when they have had a hand in developing a plan. The leadership team that initiated the e-learning implementation had met extensively to develop clear definitions of the traits the educational institution would need to acquire, going forward. They should set up a portal where anyone could post comments, responses, suggestions, or concerns regarding e-learning implementation. The leaders would then made key changes based on the feedback they received, and communicated clearly how the input they received was being incorporated.

Some findings also emphasised that there was a trend for leaders to make the case for major change on the sole basis of strategic education objectives, such as “we will fully implement e-learning next year” or “we will grow the percentage of e-learning that has been used by the educators in the next three years.” Such objectives are fine as far as they go, but they rarely touch educators emotionally in a way that ensures a genuine commitment to the cause. Many change initiatives seemed to assume that educators will begin to shift their behaviours, as soon as formal elements like directives and incentives have been put in place. Educators who work together on cross functional teams start collaborating because the lines on the chart show they are supposed to do so. In this scenario, deans and heads of department plays an important role to become clear communicators because they have a mandate to deliver a message on new strategy.

According to the analysed data, the leader in each faculty played an important role in encouraging the team to change their attitude towards e-learning. The leader should be great at motivating the educators and inspiring them to take pride in incorporating e-learning into their teaching practice. Educators influenced by them should feel good about working for the institution, and develop a desire to go above and beyond what is expected. The leaders should also be repositories of the education institution's culture. These leaders are the ones who are approached by educators, who want to know what is really happening in that institution. The leaders must also serve as both exemplars and communicators, spreading the word about why change due to e-learning is important. The Deputy Vice Chancellor suggested that:

"The lead partner group recognized that associates needed more formal mentoring and development. The existing system in that higher education institution, in which partners who headed the practice groups conducted all the training on e-learning, had led to uneven results. Therefore, the transformation team created a development committee and put out a call for experienced staff members willing to help the other educators. The team was delighted when a strong group of e-learning expert volunteered and put the time required to design a robust development program and start engaging associates on e-learning implementation."[PM-1-1-124-24]

According to the findings, persuading people to change their behaviour will not suffice for transformation unless formal elements such as structure, reward systems, ways of operating, training, and development are redesigned to support them.

4.18.5 Leadership

When debriefing the educators who are involved, leaders should be able to identify the problem. This depending on higher education institution's to start the changes with a mechanism that compensation committee that could use to take into account the contributions made by those educators who were involved in training the others. Even when the formal elements needed for change due to e-learning implementation are present, the established culture can undermine the educator, if

people revert to long-held but unconscious ways of behaving. Many new procedures were put in place, along with metrics, to identify gaps in the development of e-learning and the cross-teaming that supports e-learning in the front lines. By asking educators at every level to be responsible for quality, and by celebrating and rewarding improvements due to e-learning, change leaders were able to create an ethic of ownership in the product, of their new way of teaching and learning, and vanquish the old. Findings also showed that many educational institutions involved in transformation efforts fail to measure their success before moving on to the next step of e-learning implementation.

The Deputy Vice Chancellor also mentioned that:

“The leaders are so eager to claim victory that they don’t take the time to find out what’s working and what’s not, and to adjust their next steps accordingly. This failure to follow through results in inconsistent and deprives the educational institutions of needed information about how to support the process of change due to e-learning throughout the life cycle.”[PM-1-1-246-575]

According to the Deputy Vice Chancellor, the leaders designed a robust change structure based on an e-learning template and implemented it widely. The metrics had indicated that the management would succeed with the transition. Findings showed that educational institutions need to be sure that people understood the ongoing nature of this commitment. The change management process is the sequence of steps or activities that a change management team or project leader would follow, to apply and manage the change due to e-learning.

According to the findings, employee involvement is a necessary and integral part of managing change. Managing change due to e-learning was not a one way street. Employee feedback was a key element of the change management process. Analysis and corrective action based on this feedback provided a robust cycle for implementing change. Early successes and long-term wins from e-learning implementation must be

recognised and celebrated. Individual and group recognition is also a necessary component of change management, in order to cement and reinforce the change implementing e-learning brings.

Successes and failures are evaluated, and is equally important to identify changes in process for the next steps, to determine the success of the e-learning implementation. This cycle is part of the ongoing, continuous improvement of change management for the educational institution, and ultimately leads to change competency.

The Deputy Vice Chancellor commented that:

“Bringing about planned change within organizations especially educational organization efforts, whether facilitated by an outside expert or institutionalized However, the change that occurs in this university is, both planned and unplanned and can occur in every dimension of the faculty. Status and trend of staff support was dramatically altering the character of an education organization. Planned changes take conscious and diligent effort on the part of the educator. They should do analysis to help in planning and managing organizational change. As we all know change would only occur when the balance shifted between driving forces and restraining forces balance. That means those forces which positively affect and enhance the desired change such as persons, trends, resources, or information and obstacles needed to create certain equilibrium.”[PM-1-1-546-345]

In line with the comments from the Deputy Vice Chancellor, findings showed that it was important to recognise the status and trend of e-learning in the university, to determine its direction, as there was a complexity and diversity of programmes across all faculties. E-learning is not a platform that will fit the entire programme. According to the Deputy Vice Chancellor, management should have the skill of anticipating the need for to lead productive change. As a way to reinforce the educator’s role in the change process, before embarking on an organizational change initiative, according to Deputy Vice Chancellor it is wise to carefully plan strategies and anticipate potential problems. Each course and programme had its unique business, staff and technology environments. By looking at status of e-learning, it was actually easy to assess the appropriateness of the process and the programme to the organisation.

4.19 RO4: Changes occurred in private higher education institutions within Malaysia

in e-learning implementation focusing on educators' perspective

The following quotation by the senior lecturer supported the finding that:

“When e-learning implementation started the awareness of change management lies outside the range of understanding or control. I believe the problem here is that individuals are unable to adequately picture of the environment after the changes took place. They do not have enough information to allow the educators to anticipate behaving in a different way within the new changes that created new look to the institution. They are unsure how to adequately construe acting in the new working environment and social situations. How we then deal with this dictates? How we progress through the rest of the curve? The awareness of educators' viewpoint need to be recognized and shared by all the other educators. The impact of this is twofold. At the basic level, there is a feeling of relief that teaching and learning style is going to change and not continue as before. Whether the past is perceived positively or negatively, there is still a feeling of anticipation and excitement of the improvement. Many lecturers at that time have a view that there is the satisfaction of knowing that some of the thoughts about the old system were correct. Generally, there was no matter how well we like the status quo of the change due to e-learning there is something that is unsatisfactory about it, We generally expect the best and anticipate a bright future, placing our own construct system onto the change and seeing ourselves succeeding. After the first semester we perceive more to the change and believe we will get more from the change than in the actual case.” [DM-1-1-57-8987]

According to the senior lecturer, the institution needs to manage and ensure expectations and redefined the job scope and educators status. Job reorganisation, task analysis, and job transfers due to e-learning implementation and development are principles that underpin successful change. The interview data confirms that change is not always easy, or perhaps even possible. However, educators need to be persuaded to think about the fundamental integrity of the situation, instead of short-term profit, or for stakeholder satisfaction. There are various approaches to task analysis and job reorganisation that have been prompted by e-learning implementations.

This finding was corroborated by a lecturer from a private higher education as he said:

“.....the awareness of an imminent incidental change in educators’ behavioral system. Educators will need to act in a different manner and this will have an impact on both their self-perception and on how other private higher education institution view them. However, in the main, the educators see little change in their normal interactions and believe they will be operating in much the same way, merely choosing a more appropriate action.”[DW-1-1-898-3243]

In keeping with these findings, it can be concluded that there are some key emotions that will cause an educator to resist change. The awareness of comprehensive change is core behavioural. Educators perceive a major change to what they believe is their core identity or sense of self. The realization that e-learning is that change will have a fundamental impact on who the educators are, how they see themselves and what is key to their personality as individuals.

The Deputy Vice Chancellor who taught a subject in the institution thought that it was a sudden shock when educators discovered they were not who they had hitherto thought themselves to be, a self discovery due to the changes following e-learning implementations. Following these findings, the Deputy Vice Chancellor said that:

“It is a radical alteration to the lecturers’ future choices and other educator's perspective of them as individuals. The old way of teaching are no longer will work. In many ways this is life-changing experience to the educators. In this phase, educators are unsure as to how they will be able to act and react towards potential new environment. This, generally, involves identifying what are their core beliefs and how closely they have been. Recognition of the inappropriateness of their previous actions and the implications for them cause them to realize the impact of their behavior. Another of the emotions that may have an impact due to e-learning implementation is the awareness of a negative change in the team of educator’s opinion due to e-learning implementation. The recognition of this shift in educators’ opinion then leads into the next stage of depression. The awareness that our past attitude towards change management due to e-learning implementation are incompatible with our core construct of our old way of teaching and learning. This phase is characterized as lack of motivation and confusion from the educator due to sudden introduction of change. This phase period takes up almost half of the year in this university. Then the educators begin to make sense of the environment” [PM-1-1-808-31]

Findings showed that planning for the long term was a sound strategic vision, and a specific detailed plan was the key to success. According to Deputy Vice Chancellor, educators need appropriate time to begin their validation of thoughts, actions and the direction. The educators who were at the start of managing change will also need to interact with many people. Change managers must focus on details for establishing and measuring delivery of immediate actions, and from medium to long term plans. From the data analysis in this study, it was discovered that there is a need to establish forums and communicating methods to enable immediate review and decision making. Participation of interested educators was essential. This enabled the educators to give much needed input, secured their approval and commitment, and automatically took care of communicating the actions and expectations.

4.19.1 Understanding change management due to e-learning implementation

In the context of the universities that participated in this research, managing change was more successful with simple principles that entailed thoughtful planning and sensitive implementation, in consultation with the educators affected by the changes. Achieving change will be successful with the use of the same approach where relevant. This fact was corroborated by many interviewees. One of the educators said:

"If change has been force to educator than normally problems will arise. Implementation of e-learning must be realistic so that change can be achievable. These aspects are especially relevant to managing change. Before starting to change, some of the tasks need to be diverted for educator. Do not 'sell' change to educators as a way of accelerating 'agreement' towards implementation. 'Selling' change to educators is not a sustainable strategy for success. When educators identifies that the dean 'selling' them a change, quietly will be thinking, 'I don't like this. I've not been consulted or involved. I am being manipulated. This change will benefit the directors and owners, not me, so actually I won't cooperate, and I might resist and obstruct this change, in every way that I can. This is the main pros when e-learning implementation was initiated in the institution and more forceful educators embark on a more serious transition" [DW-1-1-268-67].

This study found that it was an immensely powerful methodology for understanding how and why educators think the way they do, and make the decisions they make, potentially on a very large scale. According to the educator, the management should be answering question of what to achieve with this change, why, and how the educators will know that the change has been achieved and how will they react to it before introducing change to educators. Ranges of change that can be achieved and what parts of the change do the educators need also important to take note, as according to the educator. Change due to e-learning implementation needs to be understood and managed in a way that educators can cope effectively with it. Change can be unsettling, so the educators logically need themselves to be a settling influence. As illustrated in the following quotation by the committee member of MAPCU, the educational institution should check that educators affected by the change agree with, or at least understand, the need for change, and have a chance to decide how the change will be managed, and to be involved in the planning and implementation of the change.

“The deans must use face-to-face communications to handle sensitive aspects of educators towards change management. Educators who lead e-learning implementation should encourage other educators to communicate face-to-face. Email and written notices are extremely weak at conveying and developing understanding. If the educational institution management needs to make change to happen quickly. A more sensible time-frame is more disastrous than presiding over a change. Quick change without proper consultation and involvement, will leads to difficulties”. [PG-1-1-798-343]

Change due to e-learning implementation is a complex change. Change managers must ensure they augment the complex changes with consultative communications to agree and gain support for the reasons to change. Involving and informing educators also creates opportunities for others to participate in planning and implementing the changes, which spreads the organizational load, and creates a sense of ownership and familiarity among the affected educators.

As mentioned by the e-learning coordinator:

“For educational institutions, change that entails new actions, objectives and processes for a group or team of people, use workshops to achieve understanding, involvement, plans, measurable aims, actions and commitment. Encourage management team that coordinates e-learning use workshops.”
[DC- 1-1-633-664]

Those principles mentioned by the e-learning coordinator can also even be applied to very tough change like making educators redundant, closures and integrate merging. Hiding behind memos and middle managers in charge for e-learning implementation will worsen the change process. Consulting with educators and helping them to understand does not weaken the position of change. The facts also repeated by the senior lecturer:

“Those are responsible for managing change, need to remember that educators do not relish change, they find it deeply disturbing and threatening. Educators' fear of change is as great as their fear of failure.” [DM-1-1-522-543]

Leaders who failed to consult and involve the educators under their responsibility, when managing e-learning implementation are perceived to be weak and lacking in integrity. The chief insecurity of most educators was the change itself. Senior managers and directors also have to play their roles.

4.20 RO5: Problems and challenges faced by educators in adopting the changes due to e- learning implementation in private higher education

institutions within Malaysia

If the management were ever given the job of “troubleshooting” or investigating poor performance towards change in their own educational institutions, they could well find that the main issue to be the educator's resistance and defensiveness in the face of the changes coming to their institution. This finding was validated by the Deputy Vice Chancellor when he stated:

“When we overcome that challenge, then we can start comparing what's happening with what the institution sets out to do such as from the mission, values, goals, priorities, targets, key

performance indicators, processes, measures, staff turnover, retention, morale, attitudes and how customers and stakeholders feel about the change.”[PM-1-1-566-234]

According to the data analysis, the protocol was to start with educators, explaining who about themselves and what they were doing. Always seeking help, asking permission, being polite, courteous and respectful of the academic staff are good indicators for change, especially in educational institutions. Findings showed that educators tend to deny that there was an impact due to lack of acceptance of change. A senior lecturer mentioned that, “educators will keep acting as if the change that not happened, using old practices and processes and ignoring evidence or information contrary to their ordinary systems. In many ways educators faced with problems due to e-learning implementation is too challenging and narrow our range of construction.” In this way, continued the senior lecturer, they will try to eliminate the problem from their awareness.

The senior lecturer also commented that:

“The educators have to recognize over time that there seems to be some anger associated with transition curve, especially in the earlier stages as they start to recognize the wider implications of change due to e-learning implementation the deeper the anger is This is not always present as it seems to be depending on the amount overall anger towards changes over time due to e-learning implementation.”[DM-1-1-46-447]

Findings showed that in the first instance, where change is “forced” on educators, the anger appeared to be directed outward at the system. It was found that some educators survived the change, rationalised the events, incorporated them into their new construct and generally got used to the new reality. The educators always feel that they have moved into their comfort zone, and that they will not encounter any event that is either outside their system construct, or one that they cannot incorporate with ease. Educators can identify the right decisions and can predict future events with a high degree of certainty.

4.20.1 Trapped in comfort zone

Educators are subsequently laid back, not really interested in what is going on around them. They coast through the job, almost oblivious to what is actually happening around them. They operate well within their comfort zone. The study emphasized, as can be seen from a transition curve, that it was important for an educator to understand the impact that the change will have on their own personal system constructs, and for them to be able to work through the implications for their self perception. Change due to e-learning can affect an individual by generating conflict between existing values, beliefs and anticipations.

As illustrated in the following quotation by an e-learning coordinator:

“To help educators to move through the transition effectively they need to understand the perception of the past, before e-learning was introduced, present after e-learning was introduced and the future. What is their past experience of change and how has it impacted on them? How did they cope? What will they be losing as part of the change and what will they be gaining?” Finding showed that the goal of the change agent is to help with the transition as effective as possible. By providing education, information and support the e-learning coordinator can help through the on the emerging technology. This could cause us to react, adopt a coping strategy of and complaining to anyone who will listen.”[DC-1-1-34-232]

As found in the study, educators will progress through all the phases in a linear or sequential way. Although they may move in either direction as circumstances change, each stage of progress is built on the previous and incorporates all, whether learning positive and negative, from their experience. Educators could go into depression when their intellectual ideas do not have an impact progression of learning and teaching.

Likewise, the senior lecturer added that:

“When it is going through multiple transitions at the same time these could have a cumulative impact on the educators as individuals. As the educators going through all the different transitions almost simultaneously, it then becomes a rapidly dropping self-confidence and increasingly negative self-image” [DM-1-1-06-976]

Findings show that as with any personal transformation, there are no clear boundaries to any of the stages of change management. It is more of a gradual realisation that things have subtly changed in the teaching and learning. Each of the lecturers experienced the transition through the curve, at slightly different speeds. Much of the speed of transition depended on the individual lecturer's self perception, locus of control, and other past experiences, and how it combined to create the anticipation of future events. This was supported by a MAPCU Committee member when he pointed out that,

"The educators do not have enough information to allow them to anticipate behaviour in a different way within the new organization. They are unsure how to adequately acting in the new working and social situations. The more positive educators see the outcome, the more control they have over both the process and the final result the less difficult and negative journey they have."[PG-1-1-43-531]

4.20.2 Lack of awareness in importances change management

According to the senior lecturer, the awareness of the importance of change management was recognised and shared by many other scholars. As they described it, there was a feeling of relief at the basic level that something was going to change and not continue as before. Whether the past was perceived positively or negatively, there was still a feeling of anticipation, and possibly excitement, at the prospect of an improvement in the teaching and learning methods. In this phase, the educators generally expect the best and anticipate a brighter future, placing their own system constructs onto the change framework and seeing themselves succeeding.

According to the findings, an effective change management in e-learning that makes all employees participate is essential in our world of turbulence and short cycles of innovation. These changes may affect every faculty and every organisational function. In every educational institution, management knows the external environment and the organisation's vision. This knowledge is the basis for developing appropriate

strategies. Findings also pointed out that although these changes were challenging, the management will be able to successfully implement a new strategic direction if they managed to gain the commitment of everyone within the organisation. The point was to develop processes that enabled all employees to learn about the changes, develop a culture of dialogue between management and educator.

The Deputy Vice Chancellor commented that:

“Change management means to make the changes to happen and to flexibly adapt the organization to ongoing external changes. The process of change has impact on the whole organization and on all individuals working there. Human resource management has an important role in any change process. Change in higher educational institution especially private higher education institution always needs educator for developing objectives, for identifying the need for change, for developing solutions and for implementing these solutions. Technology can support and influence change, but it can never replace people. Another challenge of managing change due to e-learning is that there is no chance to correct the mistakes once they were made in this institution because it cost money. If the educator allocates resources in an inefficient way, then the educator still have the option to provide additional resources in order to achieve their objective. If the management failed to make their employees participate in the change process, they will hardly be able to motivate the educators again.”[PM-1-1-534-567]

The data analysis yielded a well-known insight that top management support is one of the most critical success factors for any change effort. Perceptual problems due to e-learning most often occur during analysis of their own situation, such as internal analysis, identification of internal weaknesses, and evaluation of options. This could lead to a sub-optimal solution that did not really tackle the causes of the problem. The result is a waste of resources in terms of finance, time and commitment. The finding also found that there was a lack of ability to process incomplete or contradictory information. Incomplete information may lead to an elimination of promising ideas.

On top of that, a preference for evaluating existing ideas may sort out creative ideas. People usually find it easier to come up with reasons for rejecting an idea, rather than supporting it. Similarly, findings also indicated that educators were unable to act

fast and think about problems due to the changes, because they felt under pressure to deliver results quickly. These emotional barriers may cause serious problems in change processes since they hinder the generation of new ideas and approaches. According to the findings, it is generally accepted that objective analysis, logic, figures and facts are good way to monitor improvement.

The e-learning coordinator in line with that commented that:

“It is a challenging task to overcome traditions. This is especially true when educators do not see the relation between their traditions and an existing change due to e-learning. On the other hand, traditions of teaching and learning with e-learning can be the basis for educators’ commitment in change processes.” [DC-1-1-586-786]

These barriers hinder the development and evaluation of solutions for problems in the institution. They also limit the options for new approaches to change processes. Many educators perceive changes as a threat to their personal status. The results showed that changes due to e-learning moved the whole organization, as well as every educator, out of their comfort zone. Therefore, there will always be some people who will try to stop or ignore the process. Those who created new ideas may set up new barriers when they ignore justifiable criticism. Findings also stressed the ability to accept criticism as a major precondition for establishing trust and for gaining support. Some deans and heads of department are successful because they have good ideas and are able to implement them. The management who initiated e-learning can create a feeling of togetherness and mutual support, as well as competition.

The senior lecturer added to the statement that:

“The implementation of any change process in e-learning implementation has effects on the employees in private higher education institutions. Hence, there is a feedback from the change process to the educators involved. Their experiences with a particular change project due to e-learning will have impact on further actions and their acceptance of further changes. There are few tips may improve acceptance of change due to e-learning in an private higher education institution such as be open-minded for new ideas, not sort out options until a final decision has

to be taken, protect new ideas from criticism, listen to suggestions and appreciate good ideas. We have always do it by learn from mistakes in the past, focus on the good aspects of a new idea rather than on potential problems, share risks, build upon ideas, do not make your judgment on ideas and suggestions too early and let the educators to participate in all phases of the change process of e-learning implementation.”[DM-1-1-87-689]

Change management affected not only the education providers, but the recipients as well. Educational excellence has become a moving target. While basic skills such as reading, writing, and mathematics are likely to remain at the core of any curriculum, the methods and technological tools employed to acquire these skills will inevitably change. The abilities built on this foundation will also change for our educators. However, undue focus on technology can also cause misplaced priorities.

In line with the comment, the Deputy Vice Chancellor corroborated that:

“So far in this university, the developers of e-learning academic programs have been pre-occupied by the ease of use in technology, rather than the needs of learners or educators. E-learning implementation programs have been promoted as a way to reduce the universities’ costs. The main thrust has been on the development of generic material for students with the consultancy of educators. This is logical given on the importance of cost savings, but it has resulted in a painful lesson for the profession of educators. Developing generic web-based courseware and making it available through the internet while hoping that the learners will somehow absorb the material is not working anymore. Short-term cost reductions can be attained that way, but with the exception of rare circumstances, long-term payback will not materialize.”[PM-1-1-86-887]

4.20.3 Dynamic processes in e-learning implementation

The e-learning process, the study remarked, must be customised to the complex characteristics of the learning subjects, students’ skills, and job market needs. E-learning is a component of a wider solution, or what is known as “blended” learning. Researchers commonly agree that, contrary to static online courseware, e-learning emerges with more dynamic content, driven by better authoring programs and supported by tools for measuring the e-learning progress against specific learning objectives. Additionally, the acceptance of standards for e-learning content will be a key

step in allowing content transfer between faculties. This will encourage collaboration and cooperation between different faculties resulting in better and more suitable content.

Still, three difficulties were thought to result from the e-learning process, speed, ease, and durability of knowledge acquisition. An interesting aspect of the change was the need to speed up the rate of knowledge acquisition. This was achieved through “miniaturization” of e-learning components, which resulted in content simplification, effortless presentations, and ease of reusability and re-packaging. Technology is actually just a vehicle for performance acceleration knowledge acquisition via e-learning. Ultimately, the success in developing a highly effective workforce comes from aligning the strategic intent with people, processes, and technology. E-learning components will be useless unless the environment within the organisation rewarded knowledge sharing and personal development. In short, educators should be rewarded.

4.20.4 Limitations in adaptation of change in e-learning implementation

According to the findings, change due to e-learning is an institutional reality. External forces for change include the marketplace, government laws and regulations, technology, labour markets, and economic shifts. Internal forces of change include organisational strategy, equipment, the workforce, and employee attitudes. Change is generally a response to some significant threat or opportunity, from outside the institution. Sandulli (2003) noted that changes within an institution took place, both in response to educational events and to processes of managerial actions. Managers in this sense see events taking place that, to them, signal the need for change.

According to the senior lecturer:

“The change faced by educator will be challenging because of the fact that it related to experience in the implementation processes which involves a processing technology. This state

could have cause difficulties of changing from the status quo as transformational and disorientation. This change was caused by the unfamiliarity and alienation of the new technology to the investment delivery team and operations. My institution tackled the problem by recognizing the fact that the disorientation from the current technology can be eliminated by exploiting the knowledge base residing in the supply base developed a number of characteristics which eventually become its weakness. This was to have two tiers affect; firstly, it finds the solution of lack of prior knowledge of the change, secondly, it helps in making technologies were increasingly cost-competitive.”[DM-1-1-665-57]

The findings at a first level suggest it is necessary to identify the type of knowledge required for the specific changes due to e-learning. In this direction, Sharon (2010, p. 15) noticed that “the knowledge possessed by an organization and its members can be classified as explicit or tacit, explicit knowledge can be codified and communicated without much difficulty while tacit knowledge such as the manner of operating sensitive equipment or interpersonal skills was not so easily articulated.” On the other hand, Sims (2008, p. 149) noticed that “change efforts are often conceived as waves of initiatives that sweep through an organization from the top down, or the bottom up, or both.” In other words, change initiatives in most institutional plans were not accepted by the employees, at least for a specific period. This specific issue was also highlighted by Sekaran (2003, p. 31) who supported that ‘fundamental change in personnel, strategy, organizational identity, or established work roles and interests often triggers intense emotions’. For this reason, it is necessary that managers, who lead e-learning, make necessary preparations before attempting any change within the organisational environment. They must identify plans fit for achieving the various institutional targets, and still keep within a budget that will have been set in advance. As a senior lecturer commented:

“These problems stem from employee perspectives about how they are treated at work and the match between individual and institutional needs. Dissatisfaction is a symptom of an underlying educator’s problem that should be addressed. Unusual or high levels of absenteeism and turnover also represent forces for change. Problem for those who embraced change due to e-learning and those who looking for promotion and other incentives while the change initiated. There were also a strategy of consultation and participation of individual. Institution might

respond to these problems by using the various approaches to job design, by implementing realistic job previews, reducing educators role conflict, overload, ambiguity, and by removing the different stressors.”[DM-1-1-798-787]

The specific issue in e-learning was examined by Adesope, Olubunmi and McCracken (2007,p. 155) who held the opinion that ‘many organization change initiatives start at the top and deal strongly with any resistance from system agents that blocks progress common ways of responding to resistance including downsizing, restructuring, and re-engineering’. Methods for dealing with resistance within modern institutions against specific plans of change are also available to private education institutions. Managers will choose the method employed at each particular stage of change, who will also identify the risks and advantages related to the stage of implementing each relevant change in the e-learning implementation. The management also has to have substantial information to make investment decisions, which was of strategic importance in terms of its volume. Even if the policies applied to various organisational activities were appropriate given the targets set by the e-learning managers, in practice many of these policies had to be rejected. They were found to be unjustified based on the resources required for their realisation. It is for this reason that Aharony (2009) remarked that change initiatives could be characterised as ‘an outcome jointly determined by motivation to change, opportunity to change, and capability to change’. According to the Deputy Vice Chancellor:

“Before the implementation of any plan of change within a particular organization it is necessary that the entire organizational context is carefully reviewed taking into account the fact that the conditions in the education industry can change at any time creating new terms regarding the success of any attempted change. The sector of institutional activities influenced by specific plans that cannot be precisely identified. It is very likely that different organizational sectors are targeted by each specific plan of change and the needs of the organization and trends of the market are the main criteria for relevant choices. Towards this direction, it is noticed that when change is needed in an organization it is likely the learning or identity of the organization will be targeted for change. The transformed organization, whether it is minor change or major change, will not be the same as its predecessor.” [PM-1-1-65-678]

In other words, one of the most important consequences of plans in institutional change was that their effects on the various aspects of the institutional activities were likely to be permanent and extensive. Through the attempted change, a new organisational environment is created, new plans are then very likely to be implemented in accordance with the firm's new culture and characteristics, and current market trends. It should be noted that the implementation of plans of change within modern institutions is a challenging task, usually requiring an extensive net of reforms within the institutional body.

According to the e-learning coordinator:

"The absence of competition produced a surreal climate of merely preparing for a possibility rather than a reality in the higher education institution. Still another was the identification of integration issues between the other parts of the organization and the management such as changes in the wide operating procedures, restructuring was seen as necessary by both senior management various consultants the pre-existing structure were never clearly identified or articulated."[DC-1-1-678-97]

Commitment to the change must be universal, including all involved. Senior management must demonstrate commitment in terms of resources allocation (people, money, time etc.) to achieve this change due to e-learning. A lack in this might have been caused by the inherent characteristics of the capital goods industry of education. They which acknowledge knowledge management as hamstrung due to the structural fragmentation inherent in an organisation, the one-off nature of the projects, the presence of the culturally disparate professions and the low level of trust.

As the Deputy Vice Chancellor commented:

"Training is a major limitation. Training implies skills into educators, when actually they should be developing them from the inside out, beyond skills, and facilitating learning. However the limitation here is the training that provided to focus on facilitating learning and not imposing training. For educators' emotional maturity, integrity, and compassion are more important than skills and processes. In my previous study, for the root causes of each faculties problem and challenges where it is the lacking in skills and do not understand the processes. Management in

private higher education should enable and encourages the development of the educators in any way that they can. Training is something that happens at work. Learning is something that people pursue by choice at their own cost in their own time. You can ask me back that does it not make sense for employers to help and enable that process of changes. Of course it does. The word 'learning' is significant. It suggests that people are driving their own development for themselves, through relevant experience, beyond work related skills and knowledge and processes. 'Learning' extends the idea of personal development to beliefs, values, wisdom, compassion, emotional maturity, ethics, integrity and most importantly , to help others to identify, aspire, achieve and fulfill their own unique individual personal potential. Learning describes a person growing."[PM-1-1-68-787]

According to the findings, the limitation was to develop educators as educators. He also added that educator learn how to adapt to changes in different ways with different potential. Focus on the educators needed crucially to offer opportunities for them to develop themselves in many ways. According to the findings, training will not be a limitation to develop people so they achieve their own individual potential. Training is a chore to appropriate learning because it benefits and interests them to grow and to develop their abilities. University create position that meaningful for their staffs at work, also build and strengthen platform and readiness for any amount of skills, processes, and knowledge of development. Limitations obviously did not ignore basic skills and knowledge training, and made the difference. Focus on facilitating learning and development for the person, beyond the work skills, helped them grow and develop for life.

The committee member of MAPCU commented that:

"I found that the limitation in e-learning will be a training policy that set of procedures or a manual that set more detailed to support operating procedures and notes for trainers and trainees. The policy should be in two different formats which is one for e-learning support team and one for educators. Policy that reflects philosophy, values and fundamental aims is the major limitations. Our limitation is also lacking in manual that deals with the aims to achieve the specific tasks and duties. This is because training manuals contain operating procedures, instructions and supporting notes that are specific to the training. Most training manuals are more liable to change than a policy, and it is also flexibility for changing and updating content as an important aspect in deciding the overall system for producing and administrating training

manual documentation, which is best addressed and defined in the training policy.”[PG-1-1-767-876]

According to the finding, broadly e-learning policy will cover the aspects of purpose, reach of policy, values, vision, ethos, guiding principles, where people stand in organizational priorities, input, care, compassion, methods, systems, tools, operations, financial planning, responsibility, review and measurement. Importantly also, Deputy Vice Chancellor added that e-learning policy must provide the basic system and management guide for the people who design and develop training manuals within the university.

4.21 RO6: Ways to initiate change management for e-learning implementation by educators in private higher education institutions within Malaysia.

4.21.1 Sufficient transition period

Based on the data analysis, age was considered a factor adapting to changes due to e-learning. The Deputy Vice Chancellor observed that one needed to understand that the educator's priorities and motivations differed, depending on the stage of the change they were in, or its status.

“The more you understand educator's needs, the better the management will be able to manage change. Be mindful of educator's strengths and weaknesses. Not all the educator's welcomes change.”[PM-1-1-36-877]

The management needs to take the time to understand the educators they are dealing with, before taking action. This study found that planning, implementing and managing change in a fast-changing environment was increasingly the situation in which most educational institutions found themselves currently in. Dynamic environments created

by e-learning that require dynamic processes, people, systems and culture, especially for managing change successfully, notably effectively optimizing educational institutions response to the changes.

4.21.2 Empower educators

Successful change managers empowered people at a local operating level. Delegating responsibility and power as much as possible or at least encouraging people to make recommendations which can be quickly approved. They remove themselves as far as possible from the change and approval processes. Interference is the biggest obstacle to establishing a successful and sustainable culture of capability. The top management's beliefs that change management could encourage capable educators to be active in other areas of the organisation.

E-learning coordinator reminded that:

"The institution needs to manage this phase and ensure unrealistic expectations were managed and redefined in the institutional terms, without alienating the individual. The awareness needed in an incidental change in educators' behavior system."[DC-I-1-676-456]

Along the line of the findings, it emerged that when educators act in a different manner towards the change due to e-learning, it had two impacts. One was on their self-perception, and the other on how their peers from universities which do not practice e-learning, viewed these changes. Educators perceive a major lifestyle change due to e-learning that will radically alter their future choices, and other people's perception of them. The educators sometimes are unsure as to how they will be able to act and react in what is, potentially, a new environment.

Likewise E-learning coordinator added that,

'Part of the problem due to e-learning is that the educator does not recognize which element of the curve that they may be in. The goal of the 'manager'/change agent is to help make the

transition as effective and painless as possible. The dean or head of department should have to play the role of change agent.”[DC-1-1-89-246]

According to the data analysis the change agent provided education, information and support, to help educators in the transition, through the curve, and emerge on the other side. One possible danger is that when the dean and heads of department are caught up in the emotion of the change, they might miss any sign of threat, anxiety, and adverse 'reaction'.

4.21.3 Improve transmission of knowledge

Data analysis results demonstrated that e-learning is transmission of knowledge, whereby instructor and student participate in the learning process from different places and at different times. Many organisations have adopted e-learning with a hope of facilitating the learning process.

This finding was supported by the senior lecturer who pointed out that:

“When we started e-learning platform which was a Moodle platform and built in-house, almost 85% of lecturers participated in e-learning mode of teaching could not complete the syllabus in classes. Low completion leads to low retention, which then leads to low performance of the educators. The problem, worsened by rapid changes in pace of information technology, affects both the students and the lecturers. The university faculty attempts to deal with these radical technological and managerial changes by scaling instructions down to lectures with primary focus on the delivery of instructional materials. We updated the e-learning platform by considering students’ and educators’ needs. We also found out that for educators, e-learning may result in a limited experience coupled with little known technologies which needs extra guidance and ongoing support. The fundamental challenge is how to employ this new technology to provide educators with the help they need.”[DM-1-1-332-12]

Similarly, the Deputy Vice Chancellor of a private university emphasised that:

“We started 5 years ago with a Learning Management System (LMS). I was a head of senior lecturers at that time. In reality, however, we as private higher education institutions are often ill prepared for pro-active management of changes, defensive responses to the IT changes focusing on the situation, procedural objectives and on the strategic educational goals. In this university e-learning involves a shift in culture and requires a change in management. Resistance to e-learning technology and methods originates mainly from a fear of risk. As we have gone through

hard times in my opinion change management should focus on issues like which are the task of managing change is internal but usually triggered by external factors. Changes prompted by implementation of e-learning practices must be anticipated in advance. University should have any planned responses.” [PM-1-1-32-21]

According to the findings, e-learning that was introduced in this university was a highly specialised, customer-oriented modified system, which requires methodological support.

A Committee member of MAPCU commented that,

“Change management is the application of a structured process and set of tools for leading the people side of change to achieve desired outcomes. Change management is not a stand-alone process for designing a solution. Change management is the process, tools and techniques for managing the people-side of change. Change management is not a process that involve methods for improvement. Change management is a method for reducing and managing resistance to change when implementing process, technology or organizational change. Change management is not a stand-alone technique for improving organizational performance. Change management is a necessary component for any organizational performance improvement process to succeed. Change management is how we drive the adoption and usage as we need to realize the business results of it.” [PG-1-1-14-311]

4.21.4 Enhance tools and techniques

The results found, assessments were tools used by a change management team or project leader to assess the education institution's readiness to change. Readiness assessments can include organisational, employee and change assessments. Each tool provides the project team with an understanding of the opportunities available during the change process. Similar to the senior lecturer's opinion, many assume that their job is done, if they just communicated clearly with the educator. He also added that effective communicators always considered three components, the audience, what is to be said, and when it is said.

The senior lecturer added that:

“For example, the first step in managing change is building awareness around the need for change due to e-learning and creating a desire among educators. Therefore, initial communications are typically designed to create awareness around the change and the risk. Likewise, at each step in the process, communications should be designed to share the right messages at the right time.” [DM-1-1-14-252]

The findings also showed that the status and trend of communication planning, should therefore, begin with a careful analysis of the audiences, key messages and the timing for giving those messages. The change management team or project leaders must design a communication plan that addresses the needs of educators, supervisors and executives. Each audience has different needs for information according to their role in implementing the change due to e-learning. Similarly, the senior lecturer also mentioned that,

“You must aim to help, enable and facilitate discovery and clarity, not work in isolation, as an outsider, who's come to complete tasks. After the changes occur then the educators are led by the team who are the champion from the previous practice of e-learning. Educators' role is now as a researcher and enabler rather than a problem solver. They have to plan lots of questions that will help students to tell how they feel about the class, delivery of the topic and what they think can be done to improve.” [DM-1-1-793-178]

An implication of these findings is that educators need to look at student materials as well as focus on the student. This will give an early opportunity to facilitate improvement responses. The educators' motivation was important. They were encouraged to write a report and make recommendations the new method due to e-learning implementation. Correspondingly, the interviewees agreed that managing change would be successful if the educators applied the relevant principles. As in the findings, the senior lecturer pointed out that:

“Achieving personal change will be successful if the educators use the same approach towards the simplest way where relevant. Change management entails thoughtful planning and sensitive implementation, and consultation that involvement, the team of educators affected by the changes. If educators force change on people normally problems will arise.” [DM-1-1-689-56]

4.21.5 Accountabilities in handling change management

While the senior lecturer's view is that accountability or responsibility is no more than doing their best, it differed for every person. It was also dependent on a wide variety of factors such as health, maturity, stability, experience, personality and motivation.

"Responsibility for managing change is with management and executives of the institutions. Educators must manage the change in a way that they can cope with. The dean and head of department has a responsibility to facilitate and enable change, and all that is implied within the statement that, understand the situation from an objective standpoint, and then to help the educators understand reasons, aims, and ways of responding positively according to employees' own situations and capabilities." [DM-1-1-523-287]

As per the study, heads of department must communicate with their subordinates, in order to obtain the educators' total involvement and not have change imposed on them. This fact was corroborated by many interviewees. One said:

"Management team that initiate change due to e-learning be wary of expressions like 'mindset to change', and changing educator's mindsets or changing attitudes, because this language often indicates a tendency towards imposed or enforced change, and it implies strongly that the organization believes that the educators have the wrong mindset.. However in my opinion, if educators are not approaching their tasks or the institutions effectively, then the institutions have the wrong mindset, not the educators." [DE-1-1-522-826].

Change such as e-learning implementation, with new systems and environments, needs to be explained to educators as early as possible, in order to get their involvement in validating and refining the changes. There are always difficulties whenever a private higher education institution imposed new things on educators. Participation, involvement and early, open, communication are the important factors. Workshops are very useful processes to help develop a collective understanding, for the new ideas for e-learning implementation. Staff surveys are another helpful way to repair damage and mistrust among educators provided they are allowed to complete them anonymously. The results of these surveys should then be published and acted upon. In line with this

finding the Deputy Vice Chancellor of a private higher education institution commented:

“Management training, empathy and facilitative capability are priority for managers that crucial to the change process. They must enable and facilitate, not merely convey and implement policy from the deans and head of departments.” [PM-1-1-236-563]

Deans and heads of department ought not to impose change without support from educators. Educators and the team need to be empowered to find their own solutions and responses, with facilitation and support from managers and leaders. Management and leadership style and behavior are more important in an e-learning implementation than process and policy. As a senior lecturer said:

“Educators basically need to be able to trust the institution. The leader must agree and work with these ideas, or change is likely to be very painful, and the best educators will lose in the process.” [DM-1-1-685-732]

Leaders and executives play a critical sponsor's role in change management. The change management team needs a plan for sponsor activities and help key e-learning leaders carry out their responsibilities. Sponsorship should be viewed as the most important success factor. Sponsorship involves active and visible participation by senior leaders throughout the process. A change agent's or project leader's role included helping educators to do the right things to sponsor the project.

Ultimately, the direct supervisor has more influence over an employee's motivation to change, than any other person at work. Unfortunately, as seen from the findings, senior lecturers and deans as groups, can be among the most difficult to convince of the need for change and was a potential source of resistance. It is important that the change management team and executive sponsors gained the support of supervisors to enhance change leadership. Once managers and supervisors were on board, the change management team had to have a coaching strategy in place. They needed to provide training for supervisors, including how to use individual change

management tools with their employees. Training is the cornerstone for building knowledge about the change and the required skills.

Project team members developed training requirements based on the skills, knowledge and behaviors necessary to implement the changes due to e-learning. These training requirements will be the starting point to develop the requisite training programmes. The change management team should identify, understand and manage resistance throughout the educational institution. Resistance management refers to the processes and tools used by managers and executives, with the support of the project team, to manage employee resistance.

4.21.6 Realistic, achievable and measurable change

Likewise, the e-learning coordinator also emphasised that change must be realistic, achievable and measurable. He said:

“These aspects are especially relevant to managing change. Before starting change especially for educators, they must ask themselves. What do we want to achieve with this change, why, and how will we know that the change has been achieved? Who is affected by this change, and how will they react to it? How much of this change can be achieve, and what parts of the change do we need help with? These aspects also relate strongly to the management of personal as well as change in education industry.” [DC-1-1-778-35]

In-depth data analysis showed that change due to e-learning in private higher education was the driving force of progress but educators’ reactions to change was often irrational and defensive. Thus, change management is an essential to the evolution of education. Changes are actually slow to be adopted in private higher education. However, in recent years, educators have become more receptive because of external factors such as the expansion of the Internet, emergence of a new student body, and the continued decline in government subsidies.

In line with the findings, equally critical to the success of any change initiative was ensuring that the educator’s daily behaviours reflect the necessity of change.

Institutions can start by defining a few behaviours that will be essential to the success of the initiative. Senior educators must visibly model these new behaviours themselves, from the start, because employees will believe real change is occurring only when educators see it happening at the top of the educational institution hierarchy. Change managers need to spend time with people at frontline leadership or supervisory level, asking for input and engaging them in frank discussions. These to ensure the middle and lower ranks have direct contact with educators. This will help because when expected behavioural shifts were clearly spelt out, they were implemented quickly. Leaders were asked to act “as if” the education institution did things this way, rather than trying to think their way out of old ways of being.

The Deputy Vice Chancellor corroborated that:

“Leaders that initiate e-learning often make the mistake of imagining that if they convey a strong message of change at the start of an initiative, educators will understand what to do. In another word finding showed that powerful and sustained change requires constant communication, not only throughout the rollout but after the major elements of the plan are in place. The more kinds of communication employed more effective educators which will undertake a major initiative to become more digitalise, put in place far-reaching structural changes. The leaders will usually decide to engage the educators throughout the educational institution at a variety of levels. The multifaceted and ongoing communications effort will keep the change alive, giving every educator an understanding of the change and a stake in the outcome.” [PM -1-1-73-875]

Change due to e-learning, it was found, has the best chance of cascading through an educational institution when everyone with authority and influence is involved. In addition to those who the institution recognised as a leader, this group also included people whose power is more informal and related more to their expertise, the breadth of their network, or to personal qualities that engendered trust.

The senior lecturer commented that:

“We all know the challenges that come with organizational change. Depending on the source of change, it’s well documented that 70-85% of all projects and programs requiring people to adapt to a new way of doing things. Change due to e-learning is constant and these universities

continue to spend millions of dollars on things associated with change. Change expected to come to them at a higher speed, and the unaccounted cost of poorly managed change is far greater than the direct cost. Educators get frustrated and burned out and begin to adopt change resistant behaviors. This resistance is rarely understood and hardly ever assessed. As a leader, I am asked to help the staff move successfully through change. I am often “accountable” and our performance pay is frequently tied to our ability to ensure the new ways of doing things that adopted successfully. I need to know a little about the nature of change due to e-learning. I also have a basic understanding of change management practices. In addition I need to know if there is a better way to navigate the challenges of change and move myself together with the other educators through change faster and more effectively. Change has changed!”[DM-1-1-68-786]

The findings also suggested that in the new environment of rapid change in teaching and learning, there will be new expectations because the nature of work had changed. According to the findings, there is an absolute requirement to ensure that changes due to e-learning efforts are successful. So that institutions will consider the consolidation or expansion, to face macro changes like increasing global competition, and becoming leaders of change.

The committee member of MAPCU mentioned that:

“There is an old saying that states “organizations don’t change; people change and they change the organization. Facilitation is the key to ensuring that the educators understand the change, participate successfully to create the desired future and accept that the real change requires changes in their own thoughts, attitudes and behaviors.”[PG-1-1-65-546]

The findings described facilitation as the key because it was based on the power of the question. The power of the question is what makes things happen. Educators can handle change, even if it is thrust upon them if they can answer fundamental and meaningful questions for themselves.

As the committee member of MAPCU commented:

“Visioning session with senior leaders to clearly identify both the agenda that need to happen, typically the source of the change, and the potential impact on educators in the institution clearly articulated description of the change. Facilitating small group education sessions to ensure educators understand the nature of the change. This begins the process of gaining their understanding of their ability and willingness to move successfully through change due to e-

learning implementation. Project planning sessions which designed to build the project structure, developing project plans to ensure tasks are completed on-time and to standard sessions designed to build the “people structure”. This includes identifying risks and assigning roles such as change sponsors and change agents, assessing the impact of the change on processes, educators, customers and stakeholders, assessing the culture and identifying systemic barriers to change and the strengths and weaknesses of the culture to navigate through the change and developing communication plans for both formal and informal communications with feedback mechanism.” [PG-1-1-24-765]

4.21.7 Training and coaching

According to the data analysis, individual and team coaching session are needed to continuously reinforce commitment by providing feedback and encouragement. Regular monitoring sessions ensured that the project plan being executed successfully. Change is difficult but it is actually the only constant. If educators are to navigate its complexity, they need to understand the nature of change, possess effective change management skills. Change in curriculum will inevitably demand from the faculty, a different style of instruction. Faculty training will be needed to overcome any lack of technical skills. Student services must be expanded to support e-learning as an experience equivalent to the on-campus courses. Due to e-learning’s heavy dependency on technology, organised, basic technology training and support for students are extremely important. Offloading such support, like a vendor help-desk, to instructors is a major deterrent for those instructors who consider teaching online classes.

The issues of copyrights and fair use of published materials belonging to others are challenging to online instructors, and may require updating of university policies and procedures. Above all, a change in the organisational environment is required for e-learning implementation. The familiar attributes of this process include a systematic approach to planning of changes, faculty involvement, learning and adaptation to the new technologies, and a shift of resources.

4.21.8 Values and beliefs

University wide changes frequently are in opposition to the values and practices that the faculty members are accustomed to. That is why much of organisational change literature discusses the changes needed in the culture of the organisation, including changes in the members' values and beliefs. A strategic overview starts from the e-learning vision and mission statements, and is further shaped by technology. Many of the technology driven changes have already affected day to day operations of educational institutions. There is still, however, a widespread lack of realisation among administrative ranks of how comprehensive the imminent technological shifts and strategic challenges are. Strategic planning, which maps technology trends in various online educational processes, will help create better understanding of this technological transformation in e-learning. A fundamental switch towards an anywhere, anytime, transparent computing, based on global networks, will make highly interactive courses of the future more convenient and entertaining than in-class courses. Online universities with their flexible online degrees have already created global competition for students.

Rising tuition fees, coupled with declining federal aid, makes the e-learning option more viable and appealing for brick-and-mortar universities. The need for lifelong learning and re-education will add a new, older student population at a majority of universities. These adult students, the fastest growing educational demographic group, live off campus, have full time jobs, prefer part time studies, demand more time and location flexibility. They regard online courses as an open market commodity.

In line with the finding, the e-learning coordinator commented that,

“Corporations and entrepreneurs compete with universities in reaping profit from professional education by offering speed to graduate. Rising needs for new knowledge and skills of 21st century such as powerful computers and networks will create the highest yield opportunities for universities in the educational market. The impact of e-learning in this area has not been fully addressed yet. E-learning tools and methods are indispensable even if used only in supporting

infrastructure. Every higher education institution has already evolved into an e-business by communicating, servicing, and supporting courses on the web. Real time agility, how fast a university can embrace leading-edge technology, will determine the efficiency, speed, and cost-effectiveness of its operations. Management of these changes will be critical in the perspectives of university administration about how to optimally apply technology to meet strategies and attain targets which is often much slower than the dynamics of technological innovations. As a result, slowness in change management becomes a barrier on the way of technology implementation. Although for some businesses technological conservatism is a way to ensure high operational reliability proponents of innovations that including the technology.”[DC-1-1-687-876]

According to the finding, institutions that initiate change management must be as dynamic and domains of knowledge and research. The finding also stressed that they are encouraging educators to do more research in change management because it is a fundamental in shaping the organization’s strategies, policies, and procedures. He added that like any other major organizations, educational institutions needs to seek ways to restructure and increase their flexibility and effectiveness.

4.22 Future prospect on change management due to e-learning implementation

The senior lecturer commented that:

“Previous research studies show that those universities wishing to successfully engage in online learning will have to adopt and implement tactics that have the capacity to overcome existing social and cultural constraints. An inclusive, consultative framework needs to be established, and Continuing Professional Development (CPD) has been recognized as a key concern that should be addressed here. The moves towards non-traditional forms of course delivery for students required a well prepared CPD programme designed to enable academics to acquire pedagogical skills within the technology. Successful programmes of CPD are those that acknowledge staff interests, hopes and varying amounts of availability. For induction into online teaching, an effective model could be one that adopts accessible and suitably blended approaches which acknowledge different learning styles and sound pedagogical theories and practices. To succeed beyond this stage and taking into account the pace of change, the lack of development time and indeed the lack of staff developers there is a need for an even greater range of on-going scalable, just-in-time and formal or informal CPD. The conclusion drawn is that if the concerns of academic staff are acknowledged and their needs appreciated online learning initiatives most importantly backed up by appropriate range of scalable CPD opportunities and have a far greater chance of successfully gaining widespread support.”[DM-1-1-76-679]

Universities, as engines of knowledge, have an obvious and crucial role to play in relation to staff, students and their wider environment. At the same time as this expansion was taking place, though, the running costs of higher education have grown alongside a relative decline in monies being received from government sources, with increased demands made for greater accountability for the sums already allocated (Dearlove, 2002). In this context, universities are being encouraged to be more entrepreneurial and innovative in their activities, and less reliant on public funding. They are being urged to adopt the very technology that brought about the explosion of the knowledge economy to deliver and support learning flexibly and cost-effectively.

According to the findings, those universities which wished to successfully engage in this process will have to adopt and implement tactics that have the capability to overcome existing social and cultural constraints (Wilson & Stacey, 2004). Significant investment in the delivery and support of courses with new learning technologies was not going to lead to major saving unless strategic transformation occurred within the institutions, at the same time. However, the movement to virtual delivery systems challenge a deeply institutionalised feature of higher education, and the professional skills that have, thus far, been developed and practiced there (Jaffee, Newell, & Stavins, 2005). Pedagogical practices at the traditional intersection of time and space no longer held (Jarvis, 2006). Learning will increasingly be initiated, and be within the hands of the student, rather than the educators who will become more of a facilitator and much less of a “sculptor” (Ljosa, 1998).

A clear vision should be in place at the most senior level(s) so that staff can understand why change is important and necessary (Bates, 2000; Dearlove, 2002; Edmonds, 1999; Fullan & Hargreaves, 2002; Gilbert, Fiske & Lindzey, 2008; McPherson & McCormick, 2006; Oliver & Dempster, 2003; Spencer-Mathews, 2001; Welsh & Metcalf, 2003; Wolcott & Betts, 2007). They all conclude that the successful

implementation of any plans will ultimately rest on the academics' consensus that the proposals are reasonable. The institution has to turn itself, through its underlying philosophy and operational practices, into an e-learning organisation and get commitment at all levels (McPherson & Cormick, 2006). It is unfortunately all too easy, as Duke (2004) suggested, for senior management to become a closed, self-referencing system, trying to impose changes that struggle to establish any long-lasting roots. Carl (1995) believes that an innovation can be much more successfully diffused within an institution using appropriate communication channels (i.e. interpersonal exchanges, and change agents, rather than through distanced, formalised recommendations handed down from on high).

The principal, president, vice chancellor, senior managers and centrally placed educational development staff, therefore, need to be talented change agents at creating credibility, sustaining the movement, and working across traditional boundaries (Bartolic & Bates, 1999). They really do have to understand the situation from an academic's perspective (Surry & Land, 2000). As such, it reinforces Rogers' theory (2002) that change will not be adopted by all at the same time, and that a variety of strategies should be called upon to suit the different levels of predisposition to change (or "innovativeness") amongst the academic staff. Successive studies have clearly shown that academics are inhibited from getting involved with flexible learning initiatives. Clayton (2000), Butler & Sellbom (2002), Cuban, Kirkpatrick & Peck (2001); Berners, Hendler & Lassila (2001); Marcus et al. (2000); Milheim (2001); Lawrence et al. (2003); Spotts (1999); Sorensen & Williams (2002) variously ascribed this reluctance to deficiencies in equipment and facilities to tackle new approaches, poor technical and administrative support, a lack of time together with a general resistance to management-imposed approaches, as well as a scarcity of appropriate continuous professional development.

Bennett and Marsh (2002) also observed that, compared to the long history of didactic approaches, there was presently not the same quantity of research evidence and personal experience to draw on, to substantiate the views of the value of online learning as a mainstream activity. Indeed, academics may, right from the start, be unconvinced about the real motives for institutional involvement in such an initiative, holding a belief that the real drivers are profit rather than intellectual (Lynch, et al., 2005). The wisdom of this route was questioned by Wiles (2002) who pointed out that the available models for costing online learning did not support the view that using technology was affordable and could encourage expansion. Resistance to change is therefore likely to be overcome, if these and the previous issues can be adequately addressed, with academic staff are fully involved and/or having full ownership in the design, development and carrying out of these changes. They need to understand their new roles and the results eventually produced are truly ascertainable (Hagner & Schneebeck, 2001; Lewis, 1998; Reushle, 2006; Rockwell et al., 2000; Rumble & Latchem, 2004; Welsh & Metcalf, 2003).

The drive towards a mass education system has already disturbed some academics in older research bound universities, who now feel that they have far less control over their working lives (Dearlove, 2002). If they are to change their teaching practices, they need to feel that the effort they put into responding in a positive fashion, is appreciated and reassured that their other commitments will not suffer (Adeyinka, 2008). Of particular importance to the success of any initiative will be the backing it receives from what Rogers, (2002) classifies as the mainstream early and late innovator, who normally make up sixty-eight percent of the total staff. Academics just cannot be expected to embrace new learning initiatives merely on verbal encouragement (Dooley & Murphrey, 2000), or through the “build it and they will come” approach (Bower, 2001). McPherson and McCormick, (2006) as well as Plewes and Issroff (2002) also

reveal that the subject influences the adoption of new learning technologies. The attitudes of matching external professional bodies appear to have some additional effect on academics (Traxler, 2005). One acknowledged way of instituting an inclusive, consultative framework could be achieved by establishing a central working group or “Teaching, Learning and Technology Roundtable” (Ehrman, Leaver & Oxford, 2003). Its purpose would be to maintain a dialogue between the main stakeholders, senior and middle management, the academic innovators, and also the often more reserved mainstream of academic support units, and the student.

The roundtable would in turn link up with existing committees and networks across the institution, to ensure that online developments moved forward in close harmony with other academic visions and endeavours (Milheim, 2001). In addition, Jarvis (2006) feels that such bodies should borrow from the practices of corporate universities and usefully seek input from local organisations and businesses, with which the institution has dealings. Indeed, without appropriate CPD, an institution’s schemes for online education are not going to progress beyond the pilot stage (Salmon, 2003). It is, as Copeland and Taylor (2003) describes it, “the catalyst which allows the evolutionary process to move forward less catastrophically...” (p. 75).

The senior lecturer added that:

“Observed that academic staff has been traditionally appointed for their subject expertise rather than any proficiency in the areas of pedagogical design, information and communications technology (ICT). The moves towards non-traditional forms of course delivery for students however put the emphasis on pedagogical techniques within a technology and call for a well prepared workshop that offered (Ellis & Song, 2004). Until recently though, ICT had only a modest impact on teaching and learning within private higher education. Most universities have offered little training regarding this or pedagogical skills for those seeking involvement with open and online learning.” [DM-1-1-868-676]

Research quoted by Lawrence et al., (2003) and the study undertaken by Molly (2005) emphasised the direct relationship between the professional development support

provided to staff, and their motivation and commitment (Jaffee, Newell & Stavin, 2005; Mckenzie & Sallis, 1996; Rockwell et al., 2000). It is therefore very important that staff's interest in professional development is accommodated as a part of their growth. Academic staff development opportunities should be offered at various levels of expertise, most especially for those academics that have not been previously involved with flexible learning initiatives (Shannon & Doube, 2004). Nevertheless, designing and providing effective, high quality professional development is still quite a challenge.

A problem, as Higgins et. al., (1999) discovered was that it was often difficult to get academics to participate in professional development. In light of the circumstances referred to in the previous paragraph, they may often, be unfamiliar with the character of new learning technologies, and are therefore unable to pin point their support needs (Vincent, et al., 2015). Academic staff can also easily be put off by the nature of the experience.

Professional development workshops for online learning in the past. were often delivered in a face-to-face, teacher-directed fashion, (Carr-Chellman & Duchastel, 2000), providing only second hand experience of online technology through a limited learning style (Deepwell, 2007; Kolbo & Turnage, 2002). Buckley (2002) concluded that the drawback of most traditional professional development workshops was that they sought to convert with little affective involvement. His comments are echoed by Battersby (1999) who observes such sessions too often fail to empower or emancipate professionals.

The e-learning coordinator said that:

“Lack of time to attend formalized training has been shown to be seriously inhibiting factor in the training. It is often a problem for academic staff to undertake training when only traditionally delivered courses are available. Indeed, those individuals needing most help may at best only be able to do so on a discontinuous basis because they carry such a heavy teaching load. Then there are the part-time or contract staff, who need to earn a livelihood and who just

cannot necessarily afford to give up working hours or bear the additional costs of participating. Yet the number of people categories has grown significantly in recent years and their needs are still not being adequately addressed. It is vitally important that no one here is just left practice and flexible provision needs to be considered and put in place.”[DC-1-1-88-987]

Findings from the data analysis illuminated that online learning could be incorporated into curricular provision for on and off-campus students through the creation of suitably “blended” professional development courses. These course incorporated both theoretical and practical concepts and were more easily accessed by the intended audience (Bennett & Marsh, 2002; Winograd, 2001). If these characteristics are brought to the fore, then those enrolled will have an even greater appreciation of online learning, and be more actively involved than would have been the case if the course had taken place within just one format (Littlejohn & Pegler, 2014).

In essence, such an approach should ideally incorporate a "scaffolding" process whereby course members begin in a reassuringly familiar face-to-face setting (Siraj et al., 2013). There then follows a period of teaching observation within a professional development online classroom, followed by a lengthier phase of online teaching practice within an actual programme. Such periods of online immersion, where trainee tutors are all working together, or in small groups within socially interactive and reflective learning environments, can provide a ‘real life’ understanding of online learning roles. It also helped to clarify implicit methodologies, with learning preferences or styles further accommodated through the provision of self-paced, print-based and online instruction.

The committee member commented that:

“When private higher education institutions work well it's always due to emotion maturity and integrity, which together enable self-discipline and thinking of actions. Compassion helps the management to sustain people, foster cooperation and mutual support. Compassion is the foundation of tolerance and understanding, which governs the effectiveness of internal and external communications and team-work. Some future prospect on change management is

effective employee training and development on e-learning. This is not to say that results and profit don't matter, of course they do. The point is that when you value integrity, results and profit come quite naturally. Skills and knowledge are the easy things. Most educators will take care of these for themselves. Helping, enabling and encouraging educators to become happier more fulfilled is what employers and organisations should focus on. Achieving this and the skills and knowledge will give people choice in what, how, when to learn and develop. People have different learning styles, rates of learning, and areas of interest. Why restrict people's learning and development to their job skills? Help them to learn and develop in whatever way they want and they will quite naturally become more positive, productive and valuable to your organisation."[PG-1-1-97-798]

The study research exhorted, educators to encourage learning, focusing on the person, while offering relevant learning in as many ways as the management has decided.

The Deputy Vice Chancellor stated that:

"A training policy deals with relatively fixed overriding principles, strategy and systems. Training manuals important to start a change on e-learning that deal with specific training notes and training content such as instructions, procedures, standards, diagrams ,illustrations, technical data and trainer's notes. Before writing a training manual it is useful to decide and describe how the manuals should be structured and organized to address the training policy, typically within the systems.. A training manual can take various forms, and covers a defined training area or subject. Therefore organizations of a very modest scale will t produce and maintain several or many different training manuals. Irrespective of the size of the organization, it is perfectly reasonable to assemble all training manuals within one compendium, which is helpful for all staff and also for the overall management of training manual materials."[PM-1-1-87-324]

Findings showed that training manuals were necessary to start the change due to e-learning. These manuals covered departmental or job specific training, or a particular training course. A training manual could also cover training that was relevant to all jobs and departments. A training policy could then be included in a training manual, or kept separate as a reference document. Either way, it must be made available to people, with visible reference made in all training manuals. Whether t the full training policy is included within training manuals largely depends on the size of the training policy document, and the amount of training manuals updates. A concise inspiring training

policy would fit very well within a training manual, and was probably an ideal approach for initiating a change due to e-learning. Charts and grid layouts containing numbered points, comparisons, and graphs were much more effective than free running text and narratives, to monitor changes that took place due to e-learning. The training policy and training manual methodology must meet the needs of educators for what they are aiming to achieve, in the widest and most adventurous way possible. Training is preferably structured and logical, and equally be appropriate and measurable. If it could also be innovative, enjoyable, ethical, and responsive to the increasing expectations of the educators, it would only boost their interest in e-learning implementation.

The senior lecturer commented that:

“Successful change must involve top administrators and a champion who initially instigates the change by being visionary, convincing, and unswerving. Organization’s top executives have to recognize a change in strategy as both feasible and urgent. At the same time, the Strategic Change Plan for e-learning implementation should not ignore people who have a conscientious objection or differing perspectives of fundamental changes in the role, mission, and methods of new technology-based teaching. These people are referred to as the core group. An organization becomes whatever its people perceive the core group needs and wants it to become.”[DM-1-1-98-908]

Illustrated by the findings, one saw that educational institutions embraced all kinds of faculty and staff; some of whom may be proponents of “conservatism” in education, and simply be opposed to change. This can result from adapted or assumed pedagogical concepts of the past or from a lack of exposure to better ways of doing things, or just from being slow to make decisions. Opposing opinions are unavoidable, so it is worthwhile to attempt to understand the educators’ position. However, this should not preclude an institution from going forward with what it determined to be right. With the convergence of knowledge and method, there is a possibility of convergence of opinions as well. To sustain change, the organisational structures of the university may need to be modified, including strategic plans, policies and procedures.

In addition to e-learning driven advances, and constantly changing educational content further stability of e-learning organisations.

The senior lecturer added that:

“The best approach to address resistance is through increased and sustained communication, particularly to the faculty that feels that their professionalism is being questioned or challenged. When undertaking educational change, a combination of bottom up and top down change should be considered. Although the bottom up approach will slow implementation of changes, it will also result in less resistance than top down approach as faculty can discuss issues and get a sense of ownership of the solutions. In the process of managing change, it is important for educational leaders to reward and celebrate success and milestones. Educational leaders should also ensure that there are no discrepancies between the managerial rhetoric and how the university rewards faculty and staff. Educational leaders need to be prepared and respond quickly to the “games” people play to slow down change, or to portray the appearance of change while maintaining the status quo. Before initiating a major change, university leaders must ensure that other key problem areas are addressed and improved before the change program commences. Examples would be to ensure the efficiency and reliability of the administration and communication systems. This would help to cement the change and prevent other organizational problems from being used to distract faculty from embracing the change.”[DM-1-1-789-280]

Transparency and consistent communications top-down, bottom-up, side-to-side, and peer-to-peer were all, the study results proclaimed, critical to the success of organisations experiencing significant change. With change, there is more “unknown” than “known”, and a cultural tendency to reduce communications until the picture becomes clearer is the worst thing managers could do. Administrators must realise the impact that e-learning will have on the culture of their organisation and provide for their faculty and staff accordingly. (Bower & Hardy, 2004). E-learning is a fast evolving internet-dependent method of learning and education. Tight coupling between changes in information technology and changes in e-learning methodology provide opportunities and challenges. One of the main challenges is a rapid and perpetual change management.

With the rapidly changing world of information technology and e-learning management, success requires a clear vision, purpose, and strategic direction. Change

management methodology must include strategic direction and planning, communication, and curriculum. Change management must also include instructional skills, and a strategy to overcome resistance to change. Full realisation of the strategic aspects of change management, as discussed before, is essential for the successful implementation and growth of e-learning systems in the volatile and heterogeneous world of the Internet.

4.23 Summary

Part 1 of the findings and analysis of Chapter 4 has looked at the educators' perspectives of change management due to e-learning implementation in private higher education. The first section focused on the responses from the results and analysis from an educators' survey, while the second section focused on the responses from the interview participants in this study. Both the sections gave diverging educator perspectives of change management due to e-learning. The sections revealed the important dimensions perceived by the educators from the four universities.

Part 2 of the Chapter examined the more substantial elements on change management due to e-learning implementation. It answered the fourth research questions which described the journey of educators in facing the change due to e-learning implementation. It also highlighted responses by key personnel from institutions and MAPCU on the status, trends, problem, challenges and ways to adapt change management due to e-learning implementation.

CHAPTER 5: FINDINGS AND DISCUSSION

5.1 Overview

As the title indicates, the focus of this study was on change management due to e-learning implementation, in private higher education institutions that had a vision and a mission on e-learning. This study was based on the Systemic Change Model theory. This study also analysed the relationship between key variables from the perspective of educators. This chapter highlights the summary of the main findings, discusses the findings in relation to review of literature, and elaborates on some of the implications of the research in terms of change management due to e-learning implementation, and suggests some recommendations for improvement

5.2 Discussion of Findings

This section presents the discussion of the findings from this study. The main findings of the study were as follows:

Demographic data from the study found that the majority of educators were Chinese female lecturers with 2-5 years of working experience. This finding was consistent with a past study by Priestley (2010) who found that majority of lecturers were more females than males. Majority of the lecturers were females, not married, and were between 25-35 years old. No comparison can be made with previous literature as no study has been conducted from the aspect of how race, position or age group viewed change management. The only research having a little relation to the findings was that of Levy and Yair (2007) when they compared dropouts to persistence in e-learning courses, in term of the students' age group. The lecturers were Master's Degree holders and worked full time in the respective institutions. This revealed that the lecturers were comparatively better in using the different software programs, Internet websites and

multimedia tools for e-learning purposes, than the senior lecturers in the private higher education institutions.

5.2.1 RQ1: Relationship between e-learning implementation and change management

The analysed data revealed that there were significant differences in the mean scores of all measures of e-learning and change management variables. Therefore, that the H₀₁: E-learning implementation had no significant effect on change management in private higher education institutions within Malaysia, from the educators' perspective, is rejected.

Significant differences existed in the mean scores of SI, SV, EM, UT, SD, and SE. These findings are consistent with related studies done by Sims (2008). The study found that change management had significant effect with the e-learning implementation. Some scholars like Jung et al., (2011) and Seale (2014) had highlighted that some facets of change, such as a system view, system design and system evaluation were needed for an e-learning implementation. The post hoc test of LSD indicated that the mean scores of SI, SV, SD for OC and SS were not significantly different from each other. However, those obtained by AT were significantly lower than those of their counterparts at OC and SS.

A related study conducted in Kuwait by Ali (2008) examined the phenomenon of resistance to change, in implementing e-learning, also found that academic transforms had a lower significant difference compared to other study variables. They further argued that change was dependent on its conformance to values, attitudes and patterns of behaviour typical of human attitude. Therefore, the researchers believe that in order to have high relevance in academic transforms, the change management variables that supported the study variables of evolving mindset and understanding

transition will need to play the role. A similar study was done by Littlejohn and Pegler (2014) who discussed that a sense of belonging to group, and participation in academic transforms, was necessary and psychologically satisfying to humans. Adding to that they also mentioned that academic transform need further enhancement to best approach of the attitude as the change agent. The researcher argued that educators may have a particular way to adapt to the academic transforms from the e-learning implementation.

As stated in Chapter 2, educators must be empowered through the advantages offered by technology (Zakaria & Iksan, 2007). Higher education institutions, both real and virtual, must consist of educators who were appointed on their skills with technology resources and assistance. Subject experts need also to include technology concepts and skills in developing their content. Real world links, resources, sophisticated data gathering and analysis tools are a few of the sources that educators can draw on and use to create opportunities for developing their transformation on e-learning (Boon, 2003). Thus, the rate of change depended on the change agent.

5.2.2 RQ2: Change management variables that influence the e-learning implementation

The findings revealed that there were change management variables that influenced the e-learning implementation. Therefore, that the H02: Change management variables did not influence e-learning implementation in private higher education institutions within Malaysia from the educators' perspective, is rejected. It was revealed that in general, it could be concluded that the contribution of independent variables decreased from OC to AT and to SS, from 31.54 percent to 9.23 percent. The findings also revealed the e-learning variables that most influenced stakeholders' involvement and a system view, with all variables entered into the equation, were only OC and AT, that managed to produce an adjusted R^2 to enter into the equation. OC was the primary

predictor for the stakeholders' involvement and the system view. Other independent variables did not achieve any significance. The findings were consistent with related studies done by Ding and Wermers (2012). The study found that system view had a significant effect on the system of governance and ownership control. With regards to the factor of change such as stakeholders involvement reacts as crucial factors for ownership control (Garrison, 2011). They argued that educators may have a particular way to adapt to the system's expectation even with the aid of stakeholders' involvement in the e-learning implementation.

Furthermore, this finding also disclosed that the e-learning variables that most influenced evolving mindset and understanding transition, with all variables entered into the equation, were only AT and SS, that managed to produce an adjusted R^2 to enter the equation. AT was the primary predictors for both evolving mindset, and the system view. Other independent variables did not achieve any significance. A related study conducted by Suktrisul (2004) examined the phenomenon of resistance to change. They argued that changes were dependent on peer groups, their values, and patterns of behavior typical of people's attitude towards academic transforms service and satisfaction. Therefore, the researcher concluded that in order to have high relevance of evolving mindset and understanding transition for e-learning implementation, academic transforms, service and satisfaction were important factors. A similar study done by Sirinaruemitr (2004) who discussed service and satisfaction was needed to understand transition especially in a group of people who work in same working scope. As stated in Chapter 2, it was also necessary to comprehend that progress in change management is measured by the time taken by small teams led by a process facilitator (Caine & Jenlink, 1997). The key efforts of the process teams are to cultivate an in-depth understanding of the change management, develop individual thinking and support the private higher

education community to progress through dialogue, design, and active participation to help implement an ideal educational system.

This study showed that e-learning variables that most influenced system design and system evaluation, with all variables entered into the equation were only SS and AT, that managed to produce an adjusted R^2 to enter the equation. SS was the primary predictor for system design, and system evaluation. Other independent variables did not achieve any significance. These findings were consistent with related studies done by Wang (2011). The study found that system design and system evaluation proposed in developing a Web-Based assessment system, the Peer-Driven Assessment Module as a way to compromise on service and satisfaction to evaluate the system. Some scholars also highlighted the use and usability of educational design patterns for designing and evaluating the system, and enhance service and satisfaction as part of an e-learning framework approach (Derntl & Calvo, 2011). They argued that service and satisfaction which were very subjective, needed to play an intervening role in how the change management proposed to adapt the outcomes of e-learning implementation.

5.2.3 RQ3: Status and trend of e-learning

Referring to research question 1, regarding the status and trend of the e-learning implementation, the study found that the majority of lecturers' had between two and five years of e-learning implementation experience in their institution. No lecturers had more than twenty years in e-learning implementation. This finding was inconsistent with the previous finding by Mantler, et al., (2013), that held the opinion that change management decreased with experience. The finding of that study showed that hospital staff nurses, with long experience in the same position, were not able to adapt to drastic change management effectively.

E-learning implementation was quite new in most of the private higher education institutions that had vision and mission statements on e-learning. The majority of the lecturers also had between two and five years of experience in handling e-learning classes. This said that much of the e-learning implementation in private higher education institution only started including e-learning in their teaching and learning, about two to five years previously. Hence educators usage of e-learning was commensurate with the years of deployment of e-learning implementation in private higher education institution in Malaysia. No comparison can be made with previous studies since no study has been conducted with respect to the years of experience.

Educators who have lesser years of experience need clearer guidance to realise the importance of the e-learning implementation. The relationship between lecturers' acceptance, and their experience of e-learning implementation in their institution, has been confirmed by this analysis. As stated in chapter two, acceptance of change management by Nickols (2008), was the root cause in realising the importance of implementing e-learning. Even though technology is developing at an ever faster rate, causing major changes in handling almost every way of teaching and learning, the total duration of e-learning implementation was still only about two years to five years old, according to the respondents.

Statistically significant association was found that e-learning implementation in teaching and learning in private higher education institutions only started with procedures about two to five years ago with development of e-learning vision or mission. Many studies have been conducted to explore regarding e-learning empowerment in the private higher education institutions. The analyses are also in line with qualitative analysis finding, and the analyses of Aharony (2009); Adesope, Olubunmi & McCracken (2007) that e-learning should become a tool that educators integrate into their daily teaching and learning, since they are the agents of change.

They are not to be evaluated on the length of their experience. Educators have to be encouraged, coached and motivated to be enthusiastic to contribute and work with the system, even over a short period. This finding showed methodological triangulation. On the other hand, as explained in chapter 2, Shahir et al., (2012) viewed, this research finding had also agreed that many leaders at the top, who have succeeded in making changes in the past, may not necessarily have insights on how a department has to change again in the future. Majority of the educator also strongly agreed that stakeholders could assist in monitoring the time frame with clear objectives and also able to communicate in advance for e-learning implementation purposes.

These educators also agreed that stakeholders considered the e-learning implementation to be a dynamic project which changed in timescale and deliverables. Additionally, it focused on the complexity of e-learning implementation issues. The educators also agreed that e-learning implementations were a combination of the two statements, but not necessarily in equal proportion. E-Learning instructional design for teaching and learning, is all about using techniques to help learners understand, and apply what they learnt at the workplace. For educators, skills in e-learning instructional design take time to master.

E-Learning implementation will develop shared ways to manage change on online learning. Faculties or departments need to identify and examine the instructional, assessment and visual elements (Goetsch & Davis, 2014). The analyses of this study revealed an insignificant, positive relationship among the educators that agreed stakeholders manage and monitor within a set time frame with clear objectives in line with qualitative findings. This revealed the methodological triangulation in this study.

Generally, according to Fee and Kenneth (2012), implementing an e-learning strategy required a multidisciplinary team that manages every faculty or department.

The researcher has noted while reviewing literature, that little attention has been paid to educators who are skilled in all aspects of e-learning development and implementation. Therefore, a dynamic project which changes in time scales, is needed for every faculty and department, to monitor the change in the department. The majority of respondents revealed that in creating an e-learning style and function guide, using a quality parameter checklist and a project management methodology would ensure adherence to standards and governance. This finding is in line with the qualitative finding, and strengthens the methodological triangulation in this study. As stated in chapter 2, this research agreed with Ghavifekr et al., (2013) that the guides, checklists and other tools to get the team of educators started, were crucial for e-learning implementation, as was also observed by the respondents.

The majority of the educators took two to five years to adapt to the changes in handling e-learning pedagogy classes, before working in the current institutions. Based on the analyses, private higher education institution should constantly consider their value proposition, create new services, and maybe search for new partnerships to adapt to the changes in handling e-learning pedagogy classes. Within the short duration of two to five a faculty within the institution needs to show results in a constantly changing set of operations, in a rapidly changing and competitive environment.

According to the finding by Altstaedter, (2007) that educators has significant association to adapt changes in instructional design classes. In this study, analyses showed that educators took two to five years to adapt to the changes in handling e-learning pedagogy classes before working in the current institutions. Even if slow in adopting changes, they have become more receptive to change because of external factors like, the expansion of the internet, emergence of a new student body, and continued decline in government subsidies (Gilbert, 2013). According to Adeyinka, (2008) e-learning is defined as the transmission of knowledge whereby the instructor

and the student participate in the learning process from different places and different times. In his study he has also confirmed that many institutions adopted e-learning with a hope of a faster and better delivery of learning processes.

The university faculties attempted to deal with these radical technological and managerial changes, by scaling instructions down to merely a form of automated text lectures with the primary focus on the delivery of classes. For the respondents, limited experience coupled with little known technologies, they felt they needed extra guidance and ongoing support. This finding is in line with the qualitative finding of this study that found that the fundamental challenge was how to employ new technology to provide educators with what they need. This further strengthens the methodological triangulation of this study.

Most of the educators also stated that they had experience in the changes, in handling e-learning pedagogy classes before working in the current institutions. They were required to integrate it with the broader scope change management. The educator's function is to learn new language and new knowledge in systems integration (Richards & Rodgers, 2014). Since the majority of the respondents said they were experienced in handling e-learning pedagogy, the analyses suggested that the educators were able to adapt to the changes in handling e-learning pedagogy classes before working in the current institutions. This conclusion is in keeping with the analyses of Sife, Lwoga and Sanga, (2007) which concluded that separating the experienced educators, who were the majority from those without, in the training functions will be the best way of handling change due to e-learning pedagogy classes, because of the different skill sets.

The management needs to work hard to build relationships with both these groups of educators. It is often helpful to develop a process map illustrating the relationship between educators, and the points between the LMS and change

management to ensure the leading team has a clear view about the implementation , their interaction with the educators, and how traditional learning functions are to be translated. This corresponds with qualitative findings and literature, from Ho and Kuo, (2010) who mentioned that educators need to help and ensure the platform's usability to adapt and manage the change due to e-learning. No comparison can be made with previous studies since no previous study had been conducted using education level and e-learning as a basis. However a research conducted by Gomaa and Hassan (2009) on critical success factors for e-learning acceptance, with confirmatory factor models, revealed e-learning critical success factors involving instructors, students, information technology, and university support, the research concluded that students with postgraduate level of education had significant relationship with e-learning implementation.

A large number of the educators had two to five years to adapt to the changes in handling-learning pedagogy classes before working in the current institutions. Most of the respondents with this experience are at the stage where they are beginning to stimulate new thinking patterns with e-learning. E-learning also to aim in improving and innovating the learning management system. It is also to have a higher impact of teaching and learning become clear, current and required competencies that need to concurrently be analyzed (Jaworski & Coupland, 2014).

Analyses of the study revealed that the majority of the educators had two to five years of time to adapt to the changes in handling e-learning pedagogy classes, before working in the current institutions. This was similar to the study conducted by Chavan and Rathod, (2009) who found that while developing the right competencies the e-learning was parallel implemented by the deans and heads of department. At this point, duration of 2-5 years experienced educators to adapt changes in handling e-learning pedagogy classes will be only an institutionalized approach in a change management

system, so that it will be resulting in a new organizational design with a focus on innovation and learning. Almost ninety-nine percent of the respondents felt that there was no policy on e-learning at their institutions. For those respondents who said there was a policy disseminated, it was observed that the institution had done so through their official website. However, majority of educator that stated policy was disseminated in their institution also stated that it was disseminated by other means.

The educators also stated that only top level management were the stakeholders involved in developing the e-learning policy at their institutions. The vision and mission statements are the voice to the standardised policy on e-learning of a private university that will influence the outcomes of the issues that have an impact on them (Richard, 2014). Equally, the policy looks to support its members in understanding and responding to the developments in an ever increasing complex and competitive global environment in education. Private higher education stakeholders are the key partners for policy makers in the increasingly broad range of public policy domains, in which universities have a role to play.

In line with the qualitative findings, this study confirmed that the most important barrier to e-learning implementation is change management. According to the analyses, ninety-nine percent of the respondents stated that there was no policy on e-learning at the respondents' institutions, which followed the study conducted by Sevgi and Refika, (2009). This study stated that the development and implementation of e-learning policies and strategies were needed in private higher education. According to Kong and Jamil, (2014) private higher education institutions need to critically examine the key influences on strategy and policy at the institutional levels. This finding supported the methodological triangulation in this study. Literature by Muriel, Caroli and Behaghel (2013) also showed that the management and stakeholders of private higher education

needed to explore the institutional implications of developing different approaches to digital education, and to interface it with issues of pedagogy and technology.

Top management level participants in private higher education need to be encouraged to read, and discuss the theoretical background to policy and strategy settings, as these would apply and contribute to the institution. This will offer them opportunities to examine practical instances of e-learning strategies. According to the study conducted by Jaworski and Coupland, (2014) tools and strategy were supported by applying the concepts properly to their institutions. According to Forsyth, (2010) incorporating an e-learning policy in education and corporate learning, as well as in educational management, is challenging. According to the study findings by Meeker, Kleiner and Byers, (2014), being given an opportunity to explore, formulate, develop, and implement e-learning strategies and policy in educational contexts, is vital.

A greater number of the respondents were familiar with change management terminology. In line with this study's qualitative finding, they were of the opinion that in the change management due to e-learning implementation, the educator was accountable for learning the change management process. This provides more proof of the methodological triangulation of the findings. They also agree that self-evaluation in handling the change management process was equally important. Self-evaluation is needed to gauge the quality of the change management (Meeker, Kleiner & Byers, 2014). Educators have bad change management experiences the result of poor communication and consultation. Changes due to e-learning implementation happened too fast, and they underwent increased pressure and workload, compounded by a lack of training to support those changes. Literature from Neirotti and Raguseo (2012) also suggested that without self-evaluation, educators felt alienated, and ultimately, disempowered.

In the literature review, Campbell-Sills, Barlow and Brown (2004) identified a number of factors that hindered the change management due to e-learning and one of it was unfamiliar with change management. Oppositely, these analyses are in line with the study conducted by Chavan and Rathod (2009) who found the majority of respondents were familiar with change management and ways to handle change management. When they agreed that self-evaluation in handling the change management process was important, it was aligned with the study from Curtis, Bonk & Kim, (2006) who showed that change for its own sake lacked strategic vision, and had negative impact on staff morale. Through self-evaluation of the good and bad experiences, one develops a clearer understanding of the reasons of changes. Good communication and self-evaluation can structure change, and improve the process resulting from the timeframe available (Elaine, Tatiana & David, 2014).

Many of the respondents also strongly agreed that the handling of the change management process when implementing e-learning, needed to be more professional. It is also in line with qualitative findings that disclosed that developments in digital realm are reshaping far- reaching changes in the institutions. Another reason for the educator's negative view of change management was due to the lack of professional manpower to handle change management. The analyses of these results revealed that the respondents strongly agreed that more professionalism in handling the change management process. This also represented the methodological triangulation of the findings.

According to the study by Frank (2014) professional coaching is needed through all the steps of rolling out original and effective change management that tackled emerging challenges. Similar, most of the respondents also strongly agreed that gaining concrete experience in handling the change management process was important for effective change management. It revealed that the key to involving the educators in change management paths was to employ quality training and to coach the educators

through their first steps in the e-learning approach. Looking at the issues, the situations and change management handling culture in the respondents' institution, the need is to map out the stakeholders, targets and most appropriate communication angle to motivate educators and, especially, build meaning into the implementation.

The majority of the respondents agree that being more observant while experiencing the change management process, was a good way to handle e-learning implementation. It is revealed that one of the keys to smoothen the change management process was to communicate the initiatives. This finding are in line with the qualitative findings, and with Nickols, (2008) who saw e-learning as a game of chance that needed responding strategically meet the programme's goals. According to this research finding, as one progressed through the change processes, educators will calculate the risks of their choices when creating a change management plan, engaging with stakeholders, countering resistance to change, and measuring the effectiveness of implemented changes to meet the set goals. This has also revealed methodological triangulation in the findings.

More of the educators stated that they were moderately active in experimenting with their capability to adapt to changes in implementing e-learning. It revealed that change management may also require one-to-one support for those who actively tried out the capabilities. The goal was to share methods and tools to optimise e-learning and to deliver the objectives that was set. Majority of the educators stated moderate for the willingness of educator to actively experiment the capabilities to adapt changes in implementing e-learning, are in line with the findings from a research by Goi and Ng, (2009). They remarked on the potential of e-learning in assisting with adaptation to change, and in identifying associated challenges. In order to actively test the capabilities to adapt to changes, e-learning play a role in strengthening the adaptive capability of developing nations at the forefront of change (Webster & Murphy, 2008).

Overall the respondents disagree that the institution were ready to handle change due to e-learning implementation. They were as adamant in disagreeing that the institutions planned to handle this change. According to the analysis, teaching practitioners were often not originally engaged for their technology prowess. They were chosen for their ability to design and facilitate memorable teaching and learning. According to Grossman and Salas (2011), recognising that successful leadership requires a wide range of knowledge and skills, the academic leaders and scholars should have focused on those knowledge and skills as required by leaders' positions. Leaders' efforts depend on the range of resources being provided and programs being offered. These respondents strongly disagreed that the institutions planned to handle change due to e-learning implementation, was an opinion likewise with the study by Gomaa, (2009) who found that skills to design and administrate the system, adapt multimedia e-facilitation and platform usability were not generally planned beforehand.

There is often then, disconnect between the human perspective of learning and the process perspective of technology. This disconnect affects how practitioners transition to teaching and learning with the new technologies, how they perceive teaching and learning design, learning outcomes, relationship with learners, and so on. According to Frank, (2014) it is a best practice that educators work towards striking a balance between systematised learning and the high touch of classroom learning and coaching. It was also found from the analyses that the private higher education institution does not have the planning team to decide on the principles that will guide the decisions on how learning technologies will be used. According to this study, the overall goal of e-learning is to enhance the learner's experience and outcomes, and is not simply a substitute for the classroom experience. This study's analysis also holds that the majority of educators strongly disagree that the institution develops a good change management process before the e-learning implementation.

According to Nanda and Sorensen (2010), institutions are becoming more knowledge intensive to gain the competitive edge. Therefore, they are concentrating more on managing and sharing knowledge, to their advantage. The traditional education style has remained consistent without any changes being made to the system (Carol, 2014). This research revealed that a large number of creative thinkers among the educators, to ponder on possible educational approaches that could have benefited the system, if the e-learning implementation had been planned earlier.

A majority of the educators also strongly disagree that the institution trained educators to handle the change due to e-learning implementation. Providing educators with training in e-learning, helps develop shared values in how change management will be approached. This was line with the qualitative findings of this study. A similar significance was found in a study conducted by Moore, (2013) who said that many educational institutions did not develop a change management process before implementing e-learning. According to Muriel, Caroli and Behaghel (2013) learners' access to information be applied immediately, thus reducing delays and loss of productivity. This illustrates a methodological triangulation in the data.

Deans, heads of department and managers need to engage in order to gain an understanding of what evidence was required to assure competence, and how this evidence gathering can best be systematised for each workplace setting. Conversely, the majority of the respondents agreed that the institution structure many program to exposure educators to handle change due to e-learning implementation. They also strongly agree d that the institution evaluates programmes for exposure and conducts maintenance to handle the change due to e-learning implementation. At the point where traditional project and change management methodologies begin the final goal, a work breakdown structure is formulated. The organisation and the project team have a clear idea of the end result, and the necessary assessment at each step. A significant, positive

association was found among the educators who were involved in programme structures constructed by the institution, and their exposure to handle change due to e-learning implementation. According to the results, the institution with programmes for the use of internet technologies had outstanding opportunities to deliver education in different training techniques through the strategic use of internet technologies. The implementation of e-learning combined with suitable learning strategies assisted in providing an open, flexible and dynamic learning environment.

According to Webster and Murphy, (2008) technology has not only radically changed the ways and methods of our work, but is now beginning to transform the education system. Maintenance to handle change management is usually in the initial stage of the e-learning implementation. At this stage, deans and head of department from each faculty will start to develop new ideas and gain new insights and knowledge. According to the findings, educators also strongly agreed that the institution evaluated programmes for exposure and conducted maintenance to handle change due to e-learning implementation. In line with analyses by Nielsen and Lassen, (2012), most of the knowledge gained during this effort often dies without an evaluation phase at the end of the project. Lack of evaluation that may create knowledge gap in change management when changes take place rapid and constantly.

As for maintenance to handle change management, according to the finding, the deans and head of department might be able to bridge the gap between the changing environment and the existing method. However, when the project team starts actual implementation of the plans, they will find that it takes a long time, and great effort to involve the rest of the educators, and realise change within the faculty. According to the finding of Nurahimah, (2007) changes in the environment take place ever quicker, but does not maintain well. Thus, a knowledge gap will be created. The majority of the respondents stated that the current structure of governance of e-learning in their current

institutions, were effective. The top management acts as change agents on a steering committee, and best talents on taskforces to execute innovative e-learning projects (Finnegan, 2014). The governors can act as coaches or project leaders to stimulate new patterns of thinking.

A steering committee ensures that e-learning implementation projects are aligned with the desired strategic direction. The sequence of projects gives a rough idea of the change process, but is not necessarily a fixed pattern. In reality, it allows ample room for improvisation. The analyses are unique, according to the study in Noraini and Nor, (2010) in that the challenge to create a change effect starts with a small pilot group of educators who will work parallel on different projects of e-learning implementation in their respective faculties. Over time, this group will evolve naturally in size, scope will involve and motivate the whole organisation. In line with the analyses from Rahimah, (2006) this study also concludes that the new technology will provide opportunities for change. A knowledge and learning infrastructure based on new technology, enables new organisational communication and collaboration, increasing the effectiveness of the management of cultural change. According to Price et al., (2010) e-learning is the driving force behind the change that forces institutions to constantly innovate, but at the same time, these same drivers help us keep up with the continuous change. Therefore, governance will be a key asset in achieving cultural change, and in e-learning, is a first practical step towards a desired cultural change.

The majority of the respondents also stated that the person in charge of monitoring the status and trend of e-learning was the IT director. Immersion in e-learning implementation can take up resources and time, away from the team interacting with deans and heads of department. Relationships and priorities change due to e-learning and the need to be monitored by a person in charge (Micheal, 2014). Educators are required to use a system to self-enroll, to be self-directed and self-governing in

dealing with change due to e-learning. According to the finding of this study, many of the respondents also stated that the person in charge was the IT director. A significant relationship was found from the study conducted by Ravet and Layte, (2008) where the IT director needed to identify staff development as a priority. As the person in charge of monitoring the status and trend of e-learning, IT directors are basically required to understand online functions, and manage staff self-development. They are also expected to help identify new opportunities for interacting with e-learning champions in each faculty.

Besides that, the majority of respondents stated that there were no distribution of frequency scores, for respondents who are on central committees in charge of monitoring the change of status, or trends due to planning and implementation. The e-learning implementation is in a community of educators who practice as designers, developers, and managers of e-learning. The institution needs to ensure that a central committee receives access to the change management due to e-learning, change management research, discussion boards, activities boards and such. This was in line with the qualitative finding that has strengthened the methodological triangulation of this study. In addition, according to the Ridzuan (2010), implementing an e-learning initiative can be very rewarding, and equally difficult if the institution did not set up a central committee to monitor the change. The study conducted by Shahir et al., (2012) is in line with the findings of this research, where it is mentioned that there are decisions and important considerations that have to be made by a central committee, and that includes starting with an action plan first.

The greatest criterion of success in e-learning implementations will be determined by the core committee. The majority of the respondents felt that they were competent in adapting to the changes due to e-learning implementation, and were also technologically competent. Findings also pointed out that e-learning communities need

to conduct multiple change management forums and conferences throughout the year. The conferences and forums focused on the management, design, and development of change management and will improve competency in adapting to change and technological imperatives. According to the research results, educators were competent in strategy implementation and change management. They focused on analysing and planning how they will lead and align, across the institution.

According to the research by Siti, Nabiha and Scapens, (2005) effective leadership at the executive level means getting the strategy implemented by educators, and that implies organisational change management. Not being able to implement strategy often means a failure in change management. They are part of the larger leadership and organisational change management system with interrelated processes managed as a whole. Some twenty one to thirty percent of courses at the respective institutions were offered online. The majority of respondents stated though. That there was no e-learning implementation in line with the institutional vision and mission. It was discovered from the study, that institutions with a vision and a mission that related to e-learning. Lacked learning management systems, instructional design, measuring learning, simulations and so on. This research finding also revealed that implementing e-learning demands an accurate vision and mission that they would like to achieve. A senior lecturer from institution C also commented that the vision and the mission of the education institution is a source of inspiration and motivation. He also added that the vision and the mission were not just describing the future of the institution, but the future of the industry itself. In other words, the vision and the mission reflect an institution's reason for existence, and the values and beliefs it embraces. This was also expressed by the Deputy Vice Chancellor that the vision and the mission is a plan to develop appropriate measures that needed input from the educators.

This was correct from a theoretical point of view, but in reality whether it is achieved, or if the mission and objectives were relevant is a separate issue. It depends on the management. The results revealed that the vision and mission statements did not inspire educators nor did it provide a focus or direction for setting objectives, where it should be guiding them in making decisions and establishing what the institution does for e-learning implementation. Vision and mission statements also helm changes that are considered key success factors for e-learning implementation. According to Alsabawy (2013), planning is the starting point, and the main aspect in the process, of adopting this virtual training tool for the education system. There were also no periodical assessment measures, to rate the impact of change due to implementing e-learning on educators, according to the respondents. It is crucial for educational institutions to grow in terms of its directions, which in turn, is set by its vision and mission.

According to Masrom (2007), through periodical measures, the team of educators and the institution management team can analyse the e-learning strategy within the environment. Periodical measures will also determine if the institution needs to recommend activities before, during, and after the implementation, and outline plans, in case of change resistance resulting from giving up traditional training methods.

5.2.4 RQ4: Changes occurred in private higher education institutions within

Malaysia in e-learning implementation

Successful change must involve top administrators, and nominate a champion who initially sets off the change by being visionary, convincing, and unswerving. Private educational institution's top management has to recognise a change in strategy as both feasible and urgent. At the same time, the plan for strategic change should not ignore people who have conscientious objections, or differing perceptions of

fundamental changes in the role, mission, and methods of higher education that prevents them from playing an active role in a new technology based method of teaching. These group of educators should always referred as core group. According to Zakaria et al., (2010) change management due to e-learning that does not conflict with the core group, will achieve the vision and mission of the institutions.

The change occurring in private higher education institutions following e-learning implementation is not always clearly defined. The majority of respondents stated they strongly agree that implementation leadership is unclear, and the e-learning champions are not utilised effectively (Dewitt & Siraj, 2010). Generally, the scope of change may vary from across the institution, narrowing to departmental or group levels. Wide changes include modification of the institutional mission, restructuring of the operations, and introduction of new technologies.

This study found that majority of the respondents stated they strongly agree that implementation leadership is unclear and e-learning champions are not utilised effectively, as per the study from Alhabshi, Ismail, and Bacha (2005). The literature showed that institution wide changes include modification of the mission, restructuring of the operations, and introduction of new technologies. E-learning should be viewed as an institutional wide transformation. Usually, the most significant changes in the way private higher education institution operates, are motivated by factors such as substantial cuts or infusion of funding, technological innovations, actions by competitors, and the need for dramatic increase in services. According to Tells (2007), a change in curriculum will certainly demand a different style of instruction from the faculty. Faculty training will be needed to overcome the lack of technical skills. Educators' services must be expanded to support e-learning as an experience equivalent to the campus courses.

Due to heavy dependency of e-learning on technology, organising training and support for educators was extremely important (Zamri, Jamalul Lail & Ibrahim, 2011). Securing such support from the university is a major concern for those educators involved in this process of change. Literature by Zakaria, et al., (2010) elaborated that the issues of updating policies and procedures require good handling. Above all, a change due to e-learning implementation in the private higher education institution must needs have consistent and clear goals.

Most of the educators strongly disagree that the e-learning strategy, system design or the processes are determined completely outside faculty control. Respondents commonly agree that contrary to static online courseware, e-learning will emerge with more specific dynamic content, driven by better authoring programs, and supported by tools for measuring the e-learning progress against specific learning objectives. Additionally, the acceptance of the standards for e-learning implementation will be a vital step in encouraging collaboration and cooperation between different faculties, to produce better and more suitable results.

According to the study conducted by Zakaria and Iksan (2007) it was stated in the literature, the characteristics of an e-learning process such as speed, ease, and durability of knowledge acquisition will need to be controlled by the faculty. An interesting aspect of change is the necessity to speed up the knowledge acquisition of e-learning components, which will result in content simplification, effortless presentations, and ease of creativity. Technology is clearly the vehicle for performance acceleration in e-learning knowledge acquisition. According to Alhabshi, Ismail, and Bacha (2005), ultimately the success in developing a highly effective workforce comes from aligning the strategic intent with people, processes, and technology. E-learning components will be useless unless the culture within the faculty, rewards knowledge sharing and personal development.

Alhabshi (2006) agreed that research and development must be accomplished to enhance educators' adaptation to the change. Private higher educational institutions embrace all kinds of faculty and educators. Some of them may be proponents of change in education, while others may simply be opposed to change. This could be from adapted or assumed pedagogical concepts of the past, or from a lack of exposure to better ways of doing things, or from just being slow to decide on change. Opposing opinions are unavoidable, and it is worthwhile to attempt to understand the educators' position. However, this should not preclude an institution from going forward with what it determined in its institutional vision and mission. According to literature by Sevgi and Refika (2009), with the convergence of knowledge and methods, will come convergence of opinions. Research and development is essential in order to sustain change, which may lead to modifications in the university's organisational structures, including strategic plans, policies and procedures. In addition to e-learning driven advances, constantly changing educational content further encourages e-learning implementation.

An almost similar number of the respondents stated that the tools mostly used in e-learning were email and electronic chat. Institutionalisation of knowledge starts with providing proper tools to educators, with which information and knowledge can be gathered stored, analyzed, organized and made accessible. Fortunately, technology is available that can perform these functions within the e-learning implementation. Although e-learning implementations are complex, influenced by human factors, e-learning tools are the main enabler to realise operationalisation of e-learning. In line with current literature, the findings from the study conducted by Shahir et al., (2012) characterises each tool in e-learning implementation as representing technology that supports different aspects of capturing information and placing it in the right context to turn it into knowledge. A practical way to start building an e-learning system is by

creating a knowledge portal, that encourages educators to learn, share knowledge and collaborate. This knowledge portal should include practical tools for helping educators to turn knowledge into action. In the respondent's information portal, educators can share best practices, opinions and ideas for innovation by email and electronic chat. Based on these, educators are challenged to create new concepts for giving feedback on new developments, all on the same platform. According to Ravet and Layte (2008), this is a critical component for ensuring quality in product development and enhanced educator knowledge.

In reply to an open ended question, the majority of the respondents stated that change management techniques used at institutions during the e-learning implementation, influenced the adaptation of the system to create a shared goal. E-learning knowledge gained and shared in the training process, opened up new information sources and knowledge for innovation. E-learning implementation creates a shared goal for educators working in projects and sharing expertise. For example, sharing of documents and files for certain tasks improved communications and increased efficiency of the processes and projects. It also cultivated knowledge sharing and collaboration on specific issues, beyond the confines of a process or job. Information retrieval supports the ad hoc need for additional knowledge that can be linked to learning topics. According to literature by Rahimah (2006), documents, files and intranet or internet information sources are regarded as knowledge to be stored as internal and external information that can help support processes and project execution by educators.

The respondents strongly disagree that managing changes at institution level due to e-learning implementation were need to be rapid and continuous. Educational leaders need to be prepared and respond quickly to the changes due to e-learning implementation. Educators can slow down change, or project a semblance of change

while maintaining the status quo. Before initiating major change, university leaders must ensure that other key problem areas are addressed and improved before the change program commences. Examples would be to ensure the efficiency and reliability of the administration and communication systems. This finding also on the same line as the study conducted by Nobel (2010) in that communication will help cement the change and prevent other organisational problems from being used to distract faculty from embracing the change.

The majority of the respondents strongly disagree that change emerged from long periods of stability followed by short bursts of fundamental changes. It is important to recognise the complexity and diversity of the different universities and colleges, in determining the period of change. Each university and college has a unique business, human resources, and technology environments. An e-learning strategy should assess the appropriateness of the process and the program for the organization. It should define how e-learning could enhance the teaching process before determining the time frame to apply the change.

A large number of the respondents voiced moderate opinions to the question on dealing with change, incrementally and separately. Transparent and consistent communications from top-down, bottom-up, side-to-side, and peer-to-peer are critical to the success of organisations experiencing significant change. With change from e-learning implementation, the tendency to reduce communications until the picture becomes clearer is one of the worst things that managers could do. According to Nanda and Sorensen (2010), organisations must ensure that the consultant is highly experienced in institution-wide changes, get as much feedback as practical from educators, include their thoughts on the problems and their suggestions for solutions while staying focused on meeting the needs of the educators and faculty in dealing with change.

Do not attempt to isolate the faculties from change, but rather expect, understand, and manage it, is an admission in line with the study conducted by Muriel, Caroli and Behaghel (2013). One of the key characteristics of an institutional experiencing significant change, is that if educators are not able to adapt to the change, their productivity and confidence level will go down. Therefore, management needs to understand the areas in their institution that are faced with this significant loss, and commit to minimise the negative result of transitions. According to Moshiri and Simpson (2011), management must realise the impact e-learning will have on the culture of their organisation and provide their faculty and staff with relevant professional development opportunities.

The majority of the respondents again strongly disagree with undergoing constant changes, step by step. As in any human organisation, the best approach to address resistance is through increased and sustained education and communication, focusing on the faculty that feels their professionalism is being questioned or challenged. When undertaking educational change due to e-learning implementation, a combination of bottom-up and top-down change strategy should be followed. The majority of the respondents strongly disagree with continually undergoing changes in a purely bottom-up approach. It slows the process of implementation, result in high resistance towards approaching the faculty members to discuss the issues and get a sense of ownership for the solutions.

In the process of managing change, it is important for educational leaders to reward and celebrate success and milestones. According to Ho and Kuo (2010), educational leaders should also ensure consistency between the managerial portfolio and the reward system for educators. Moderate number of respondents stated that to manage the changes will also need to manage the job scope of educators at the institution. There are logical reasons for change, which are visible and the goals are transparent. The

progress in the perspectives of university administration about how to optimally apply technology to meet strategies and attain targets, is often much slower than the dynamics of technological innovations.

According to the study, a moderate number of respondents thought that management of the change affecting the job role at the institution even with logical reasons, becomes a barrier to technology implementation. Some institutions ensure that they have highly reliable operations, but by their very nature of business in the education industry, they are proponents of innovations including the technological innovations. Consequently, institutions' change management must be as dynamic as the changes in the subject matters and domains of knowledge being taught or researched. According to the literature from Khalid, et. al., (2006) change management is a fundamental factor in shaping the organisation's vision, mission, strategies, policies, and procedures.

Like other major organisations, educational institutions are seeking ways to restructure and increase their flexibility and effectiveness in this climate of change. Majority of the respondents also stated strongly agreed that change projects created resistance which has to be broken. They also strongly agree that there are long periods of planning before the change is delivered. It was divulged that the choice of institutional leaders is to ensure that the right approach is adopted, and the appropriate infrastructure and attitude are inculcated in those whose task it is to implement the e-learning as a long term plan. Leadership and management are seen as key to effective e-learning implementations, and to combat the resistance. According to the study results, most of the respondents also strongly agreed that change projects created resistance which has to be broken a thinking in line with research conducted by Malhotra and Birks (2007) who claimed that no matter how well designed and planned the change due to e-learning is, not every educator will be praising it.

Educators resist change for a wide variety of reasons, ranging from a straightforward intellectual disagreement to the facts of e-learning implementation. Some of these reasons for to be addressed may include change initiatives that portray a temporary belief that the team members are incompetent, a loss of authority or control, lack of faith in their ability to learn new skills and loss of job security and the feeling that the organisation is not entitled to the extra effort. Adding to this complexity is the fact that sometimes the stated reason hides the real, more deeply personal reason. The educators need to recognise hidden reasons in order to break the resistance.

The majority of the respondents strongly agree that change is expected without being linked to incentives. They also strongly agree that there are long periods of planning before the change is delivered. The research findings revealed that change recipients, namely the educators who are against the change due to e-learning, will pose serious challenges. Only the educators' enthusiasm will motivate them to use opportunities to broadcast the change due to e-learning.

However, the majority of the respondents disagreed that the project lead for the change is known, and project champions aid the planning and implementation. E-learning is a fast evolving internet dependent method of learning and education. Tight coupling between changes in information technology and changes in e-learning methodology provide opportunities and challenges. According to the study conducted by Masrom (2007), one of the main challenges is a rapid and continuous change management that needs a project champion to lead. With the rapid changes in e-learning management, success requires a clear vision, purpose, and strategic direction. Malhotra and Birks (2007) are in agreement, and suggest that change management due to e-learning implementation must include strategic direction and planning, communication, and curriculum.

Change management must also include instructional skills. According to Nurahimah (2007), a full realisation of the strategic aspects of change management is essential for the successful implementation and growth of an e-learning system. The majority of respondents only stated that good ideas for change are hidden and used for personal agendas, while the implementation of the change within their role is managed solely by their institution. Poor planning and lack of foresight by institutional leaders may create problems emanating from a lack of understanding what e-learning could do for their particular institution. They may also have an insufficient recognition of the resources required, as well as a poor understanding of what e-learning can offer.

According to the research by Noraini and Nor (2010) management might have a different agenda in adapting to e-learning, but eventually they accept the inevitability of the change. In line with the research finding, the majority of the respondents were strongly disagreeing that the training was adequate to answered questions about change. Majority of the respondents agree that the process of change implementation was flexible and active. The study concluded that the modus operandi of private higher education institutions that entire change management for structures and top management were self-motivated. According to the finding of this research, change management affects not only the education providers, but the recipients as well. Educational excellence has become a moving target, and it is dynamic. While basic skills such as reading, writing, and math will likely remain at the core of the curriculum, the methods and technological tools employed to acquire these skills will inevitably change, and the abilities built on this foundation will continue to grow with it.

In keeping with the analyses of the study conducted by Alhabshi (2006), the main thrust has been on development, which is flexible and is a generic focus goal for educators. The e-learning process must be far more customised to the complex characteristics of the learning subjects, educators' skills and market needs. Majority of

the respondents were in strong disagree that the training was adequate, leaving unanswered questions about change. According to the findings of this research, training on change for e-learning is more productive than simply reinforcing the forces for change. Choosing adequate training may forces the change to driver for the change. Majority of the respondents also strongly disagree that there were delays in the timescale set in the change projects. They indicated moderate, for the statement that, 'project teams sometimes lacked consistency in regard to the change'.

This expressed the view that if universities are to compete in the higher education market, they must embrace technological advancements, and be consistent in using them to transform educational and business practices. The e-learning project team also should consider that e-learning initiatives will not only give universities a new channel for educational deployment, they will also support strategic objectives by assisting in forming asynchronous discussion consortiums and networked communities. According to the findings, when processes of change due to e-learning are measured, performance indicators and management information is often a valuable input for defining areas of improvement, where consistency is required. The shared goal also supports the execution of a process that is consistent within the institution.

By modeling processes, tacit knowledge, interwoven in daily work and interaction, can be made explicit. According to the literature on the study conducted by Shahir et al., (2012) the process of change due to e-learning implementation encompasses performance measurement, which provides consistent management information. These shared goals can be integrated into a corporate knowledge portal and personalised for educators to increase utilisation. A lot of the respondents also strongly agree that communication about the change was limited to those directly concerned with the project and only those concerned with the outcome of the change project took part in the planning. The study revealed that e-learning implementation

success depended on the institutional structures that leaders create within their institutions in preparation for the incorporation of new technological innovations. It is therefore necessary to explore these structures in the private higher education institutions that enable e-learning adoption.

According to the research findings by Siti, Nabiha and Scapens (2005) institution-wide communication of change are frequently in opposition to the values and practices to which faculty members were accustomed. According to Robbins and Judge (2006), that is the reason why most literature on change due to e-learning, discuss the changes needed in the culture of the institution, including changes to the members' values and beliefs. The attributes of this process include a systematic approach to planning of institutional change, faculty involvement, learning and adaptation to the new technologies, and a shift of resources that should have leadership and champions to utilise that previously only involved the respective educators.

Majority of the respondents' also selected moderate qualification, on the point of involvement in the change project before delivery takes place. According to the research by Suktrisul (2004), the system should be delivered as well as requiring educators to be competitive in a fast changing environment. In executing change, the institution requires a team leader with outstanding managerial skills who can provide strong guidance. Communication, which acts as a mortar for the desired change, will only take place after the system is put in place. Communicate issues such as these need to be addressed by institutions. Educators should be assured of training availability for the new skills, after the system has been implemented.

5.2.5 RQ5: Problem and challenges in adopting the changes due to e-learning implementation

Referring to research question 2, overcoming problems and challenges from e-learning implementation, the majority of respondents stated that the main problem and challenge faced by their respective institutions was a lack of management support. Management full support is much needed to align the university to constantly changing environment through teaching and innovation. In innovative private higher education institutions, the e-learning implementation process is not conducted by a few people working in separate projects, but as a part of the culture of the institutions itself.

A knowledge management system supports value as a foundation for an education institution. It has to be cascade from the top management down. Another pressing problem faced by institutions, the respondents said, was in getting the educators to use the existing e-learning platform as they had grown complacent with existing teaching practices. This has exposed that while institutions with relevant vision and mission are starting to transform the educational delivery, there is a challenge on how educators perceive the retention and access to the knowledge. Certain changes brought by the emergence of e-learning implementation within the institution have demanded adjustments and reorganisations by the institutions.

According to the finding of this research, problems in implementation occur when they are not aligned with the existing teaching practice. Achieving expected results would be impossible if existing e-learning platform was not aligned with existing teaching practices. The institutional culture can be modified according to the result of change, provided by the new methods. According to Ho and Kuo, (2010) it is important to keep educators posted on the new benefits resulting from e-learning, and develop a plan in case of resistance. The majority of the respondents stated that a major problem

faced by the institution in conducting effective training to adapt the changes due to e-learning implementation, was that educators were overloaded with teaching responsibilities

Despite the different problems and challenges in adopting e-learning within private higher education, the end result from this study was clear that e-learning has helped to transform education. It became associated in a variety of contexts such as distance learning, online learning, and networked learning. However, it has overloaded the community of educators with tasks. According to the qualitative findings, an overload workload in teaching responsibilities, management in the institution should consider reducing educators' commitment. Moreover, it is part of overall planning if e-learning maintains good change in line with the institution's vision and mission. Then it educators' competencies are improved, and it helps the user enjoy the use of new methods. According to the majority of the respondents, the challenge with system performance that affects adaptation of e-learning implementation was that the educator did not possess the technical skills to use e-learning tools. This showed that private higher education institutions, as well as the faculties, were needed to solve this problem to enhance the learning and performance of the educators. Other institutions seemed to be just hopping onto the bandwagon because they do not want to be left behind. This finding has further consolidated the methodological triangulation of the data.

Despite the different reasons for adopting e-learning, the undeniable end result has been that e-learning has helped to transform education, and has become associated with a variety of contexts, such as distance learning, online learning, and networked learning. However, educators need to know how to use the tools. Some seventy percent of the respondents stated this as a key issue adapting to e-learning implementation. In accordance with the qualitative finding of this study, and supported with literature by Zakaria and Ikhsan, (2007) the skills to use e-learning tools and acceptance should be

evaluated. This has a good impact on the methodological triangulation of the data. According to Malhotra and Birks, (2007) there should be an assessment to determine whether users are using the knowledge on the usage of e-learning tools, resulting from their jobs. It is important for the educators to feel motivated and be recognised for their efforts on using e-learning tools.

In an open ended question, the majority of respondents recalled that these problems and challenges, concerning educators towards change from e-learning implementation, have been mirrored in previous implementations. Educators were actually interested in improving teaching method to make courses more interesting for students, or to keep updated in their academic field, which are incentives for e-learning adoption. This revealed by qualitative finding that saw the emergence of e-learning within the education sector, changing not only the role of lecturers and their mode of instruction. Instead, it has also been able to expand and enhance what has been done over time. These aspects can vary, be deeply analysed or wiped out, according to the organisations implementing them but they serve as a fundamental guide to successful implementation. This has a high impact on the methodological triangulation of the data. According to the findings of this research, nearly all of the problems associated with implementation are down to people, and not technology. Literature by Nickols, (2008) also stated that acceptance is essential to e-learning. As stated in their literature, Neirotti and Raguseo, (2012) said that educators need to use what they have built, more than use what they have to adopt, as a new way of working that is capable of creating a fundamental shift in learning.

5.2.6 RQ6: Ways to initiate change management for e-learning

implementation

For research question 3, the way to adapt to change management, in order of importance, the most important being recognized by the respondents as being implemented by people with the necessary core skills. A clearly defined and tracked manner of implementation was put forward as the most important requirement about change, and the least requirement being the feeling that everyone is focused on the same goals and objectives. This revealed that in private higher education institutions, educators who continue to adhere to the traditional modes of instruction, soon found themselves overtaken by new technological innovations.

Consequently, institutions need to gear-up for change, a process which is inevitable when there is a clear defined focus on e-learning. Within the private higher education discourse, there will be debates about the importance of changing institutional structures in preparation for the incorporation of technological innovations. The institutions need to have the experience of structural changes in higher educational institutions, in preparation for the introduction of technological initiatives. According to the research findings that matched with literature Nurahimah, (2007) the tracking of the performance of the new changes need to be clearly defined and carried out in the change process. The clear definition and progress monitoring acknowledges the changes accomplished.

According to the research conducted by Laylock, (2010) educators should be continuously updated through internal communication tools regarding meeting targets successfully. Educators can be taught to analyze the information regarding the success of the task, and encouraged to give suggestions for improvement. According to the same research, change managers must ensure that educators introduce the required change

into every aspect of the institution. This can be done by continuously monitoring and motivating managers and educators concerned, until they are accustomed to the new process and make the change, a part of their work culture. The finding matched with literature that stated that, some educators will exhibit resistance, while implementing change, if it is not clearly stated. Subsequently, this may act as an obstruction to the implementation of successful change management.

The study found that the least popular way to facilitate e-learning implementation was to focus on the same goal, because for some educators the target goals will be short-term goals, but long-term for others. Reward and celebration of success depends on successful achievement of the goals. Success and progress in implementing changes will enable the institutions to subdue their critics and negative thinkers. This will also motivate the educators.

Among other findings and qualitative finding, the majority of the respondents disagreed with the statement, 'once the implementation has taken place, user involvement in the project begins'. E-learning implementation in private higher institution needed a good set of e-learning tools to help educators not only learn their role and function as a lecturer, but also to learn the new technology. Changes also in this aspect help to trigger creative implementation pattern. The reason for this result could be that collaboration tools that stimulate educators to share knowledge, and make the project team more effective while capturing change, needs to be managed. If the project team has performance indicators, they can measure their progress and find the right direction for improvement. The findings revealed that an adequate information retrieval and document management system will support educators in finding the right input for further innovations and improvement. Therefore, once implementation begins, user involvement need not take place immediately, was the consensus of the majority of the

respondents. This finding is also supported by qualitative and quantitative data that revealed methodological triangulation.

They were also strongly agreed that communications about the implementation were not given in advance and were not relevant. Majority of the respondents feel and agree that the direction of the implementation was influenced by resistance. They were of the opinion that, private higher education institutions with a vision and mission are often prepared for proactive management, and act defensively towards responses to the e-learning changes. They tend to focus on the situational, procedural objectives rather than on the strategic educational goals. According to this study, they were also strongly agreed that communications about the implementation are not given in advance and not relevant. The study conducted by Rahimah (2006) found a positive relationship in introducing e-learning, involving a shift in culture and requiring change in management. Literature by Zakaria et al., (2010) also suggested, in accordance with the findings of this research, that the majority of the respondents understand that resistance to e-learning technology and methods originate mainly from a fear of risk.

However the respondents disagree that each release begins with no anticipated planning. Regarding incentives linked to the implementation, the respondents were moderate in their response. The analyses of the study conducted by Ridzuan (2010) concluded that the e-learning system should be attractive to educators, in many ways, to use and contribute toward a successful e-learning implementation. These principles vary from institution's leadership, places, roles, profiles, etiquette, events, rituals and others. It is important to address the incentive issue, and build a community of educators naturally within the existing institutional culture. In this way, private higher education that have vision and mission can build an e-learning system, where the management can mix strategic actions with knowledge management, governance and educators.

Where incentives linked with the implementation elicited a moderate response, as also found in qualitative finding of these researches. This has a good impact on the methodological triangulation of the data. Educators should receive incentives for contributing their knowledge to the institution, in terms of money or promotions. One of the main requirements is a sponsor at the top management level, and other dedicated educators who will drive the knowledge community. The majority of respondents also agreed that implementation communications were open and readily available. The leaders will actively participate in the community of educators, to become visible change agents and use the e-learning system to steer educators in the desired strategic direction.

The majority of respondents agree that the timescales for the implementation deliverables and meeting goals, was wide. Strategic implementation starts from the setting of the e-learning vision and mission statements, and is further shaped by the new technologies. Many of the e-learning driven changes have already been affecting day to day operations of private educational institutions, but there is still a widespread lack of realisation, among administrative ranks, of how comprehensive the technological shifts and strategic challenges can be. Studies revealed that the majority of the respondents agreed that the timescales set for the implementation deliverables and meeting goals, was wide and this is in line with the study by Ozkan and Refika (2009). Strategic planning, which shows wide timescales mapping technology trends onto various online educational processes, will help better understanding of this technological transformation in e-learning. The wide timescale was needed for private higher education institutions as e-learning was a fundamental switch towards anywhere, anytime, transparent computing based on global networks, According to literature, Shahir et al., (2012) also suggested that private higher education institutions have created global competition for educators, with their e-learning platform.

The need for lifelong learning and re-education for educators will have create transition in educators role. In line with the analyses, the study by Carol, (2014) indicated that the fastest growing educational demographic group of educators demands wide timescale and location flexibility. Rising need for new knowledge and skills for the 21st century will create the highest yield opportunities for universities in the educational market. Therefore, the impact of e-learning in this area needs to be fully addressed and goals need to be set.

They also strongly agreed that there were predetermined guidelines on how the system implementation was to be managed and followed. Change is the driving force of progress, but educators' reactions to change are often ridiculous. Thus, change management is an essential part of the e-learning evolution and advancement. According to the respondents, change management should focus on the guidelines. The task of managing change is internal, but is usually triggered by external factors. A significant positive relationship was found from the study conducted by Shahir et al., (2012) highlighted in the literature. According to Smith (2001), changes due to e-learning are also prompted by implementation of e-learning practices, and must be anticipated. Hence, private higher education institutions should have proper plans in place, to act as guidelines to support the methodology that will fulfill the process of e-learning implementation. One important aspect of such support is that it has to be managed and followed by the educators.

The majority of the respondents strongly agreed that the ideas were openly communicated and encouraged within the implementation. It revealed that institutional leaders were perceived to be drivers of change and open communication. Institutional leaders should assume the role of being the front runners in transforming their institutions, and as such have been fundamental in instituting change and transformation within the education sector. According to the findings, e-learning tools and methods for

communication are essential, even if used only to support teaching. Every private higher education institution that need to progress into e-learning implementation required to embrace leading-edge technology. How they communicate will determine the efficiency, speed, and cost-effectiveness of its operations. According to the research conducted by Goetsch and Davis, (2014) management of these changes will be critical for the 21st century private education institutions.

Besides that, qualitative and quantitative findings both showed that the majority of respondents also agreed that the training was frequently given with supporting materials, creating confidence with the system and the processes. It revealed that the role of training should therefore be explored, because it is the implementation arm of private higher education institution, has an impact on the adoption, and the attitudes towards the adoption, of e-learning in their institutions. These also confirm the methodological triangulation of the data. One of the most crucial prerequisites for successful implementation of e-learning is the need for careful consideration of the underlying training. Greater part of the respondents disagree that the key implementation personnel were chosen, put in charge and left unchanged. According to the research finding, highly specialised in-house key personnel are probably to be found in small numbers, and added on accordingly. In line with the finding research by Tells, (2007) who stated that personnel in charge, who can understand technology, and are aware on how to create the changes desired by the institution, are highly valuable.

Majority of the respondents also agree that conflicts within the implementation were avoided. However they also agree that the reasons for change were unclear and there are different views of the implementation goals. The strategy of change in e-learning resembles some of the aspects of strategic change, in private education institutions. Learning and adaptation processes leading to strategic change, can be described as a necessity to determine the institution's effectiveness in meeting the

present strategic objectives and fulfilling the mission of the institutions. In relation to the study by Muriel, Caroli and Behaghel (2013) found that learning and adaptation process leading to strategic change can be described as necessary to determine the institution's effectiveness in meeting the present strategic objectives and fulfilling the institutional mission. According to Zakaria (2000), change management direction is based on the mission, goals, objectives, dominant and distinctive strengths and its competencies. The change plan design is a roadmap for moving from the current strategic orientation, to the desired future position, taking into consideration educational alliances, and the readiness to support the transition to the e-learning environment. Literature by Muriel, Caroli and Behaghel, (2013) also suggested, as did this study finding, that strategic change plan implementation assigns responsibilities for change issues such as adaptability, participation, success measurements, and e-learning review activities, based on individual educators' motivation and group dynamics.

Conclusion

Van Vught (2008) views higher education as a good experience and agrees that its value can be determined after going through the process. The cost of a poor choice is therefore high, and effort must be made to prevent educators from being the cause of falling quality and standards. The educationists are concerned about the issue of falling quality and standard of education among educators in private higher education institutions. Something smart has to be done to remedy of this issue. If change management among educators is carried out professionally, it would not only create enthusiasm but will surely provide a powerful motivation for the educators.

Hence, assuring achievement of vision and mission on e-learning is imperative for the institution, as well as the private higher education provider to ensure educator accountability. This study shows that educators' were seriously willing to use e-

learning, but do not, because of a lack of proper training, policies, guidelines, an efficient central committee in charge to monitor the change status and availability of proper tools. The complexities of change management due to e-learning implementation make it very difficult to construct a theory that can adequately explain or predict educators' perception on change management due to e-learning implementation. However the result of the study reported in this research, lends support identifying the relationship for change management due to e-learning implementation. This research has also reported the demographic as moderating effects, in addition in the relationship of the variables mentioned earlier.

Overall, the implications of the findings are that educational institutions embrace all kinds of faculty and staff but some of them may simply be opposed to change. This can result from adapted or assumed pedagogical concepts of the past, or from a lack of exposure to better ways of doing things, or just being slow to decide. With regards to these barriers to change management due to e-learning implementation among the educators, the human factor is of vital importance and success largely depends on positive and constructive management motivation, educators' creativity, adaptability to e-learning implementation in the relevant teaching and learning situations. The change management process has been acknowledged by private higher education institutions in Malaysia, as an engaging approach.

This shows that the private higher education institutions are beginning to see private higher education as a partner in developing the nation's higher education, and making the country an education hub in the Asian region. The change management due to e-learning in private higher education has shown a clear tendency to involve more stakeholders, including the team for governance in the institution and to participate in the e-learning implementation. Theoretical limitation of previous research studies were addressed in this study.

Previous research by Balakrishnan (2011) recommended further study on adapting changes for the professionals, such as lectures and tutorials, that can continue to refine the standards that characterise its work from the end customers' perspective. There was also qualitative research by Ghavifekr (2012) on systemic change management in an e-learning system, at an open university in Malaysia. The research was related to the ability of the management to identify a long-term vision, mission and strategies that can be delivered effectively through best practice techniques that deal with the new changes. Similarly, there was another research by Ahmad (2011) on ICT utilization conducted among lecturers in selected universities in Pakistan. There was also research by Dewitt (2010) on the development of a collaborative mLearning module on nutrition for Form 2 students. This research was on mobile learning module. Several attempts have been taken by past qualitative and quantitative researchers to understand change management. Unlike past studies, the present research has developed change management due to e-learning implementation as one general instrument using quantitative and qualitative measurement.

This study confirmed the number of factors hindering change management due to e-learning implementation among educators in private higher education institutions with vision and mission based on e-learning. Practices on e-learning implementation differ in some ways because of the different visions and missions. Institute A focused on promoting dual mode learning, collaborating with universities, collective expertise, prestige and resources to provide quality education. Institute B focused on technology and innovation to prepare workers and citizens for the world. However Institute C emphasised on becoming a leading provider of flexible learning, and widens access to quality education. Institute C also provides lifelong learning opportunities by leveraging on technology, adopting a flexible mode of learning, and providing a conducive and engaging learning environment. The Institute D's vision and mission emphasised

collaboration with international universities, research institutions and industries in pushing the frontiers of the humanities and embarking on technological innovations.

This has also influenced the educators' attitude towards change management due to e-learning implementation. Some of the most important barriers appear to be the educators' lack of knowledge on change management and e-learning, no proper training, policies or guidelines, and an ineffective governance structure. E-learning policies need to be formulated to respect the needs and interests of higher education whereby a balance of autonomy and skills is achieved.

This study had established variables in change management, due to e-learning implementation by educators with respect to the respondents, such as professional qualification, age, working experience, personal e-learning experience, and awareness about change management. Hence, it was proved that these variables were capable of increasing e-learning usage among educators in private higher education institutions.

The factors stated as obstacles included lack of change management and e-learning knowledge, no proper training, policies or guidelines, an ineffective governance structure for acquisition and utilization of change management. These factors are important source of predictors for the failure or success of change management due to e-learning implementation in private higher education institutions in Malaysia. Further, this study suggested that educators needed revised policies and formal training on how to handle change management due to the e-learning implementation.

5.4 Implication of Findings

The purpose of the research was to investigate the status, trends, challenges and problems, on how to facilitate change management due to e-learning implementation. This study provides real life examples from private higher education institutions, would be useful for the MOE and the private higher education institutions, when considering implementing e-learning. Research involving the private sector is always difficult due to the nature of business. However, the successful involvement of four private higher education institutions, with a vision and a mission on e-learning, had great implications. Firstly, the private higher education institutions are now more willing to share their practices and open up to criticism. This study found that the institutions understood criticism to be a part of learning. Whereby the learning organizations need to make sure that transition towards e-learning is taking place in the educator, team of governance, top management and stakeholders which strive to achieve the vision and mission based on e-learning in the institution achieved.

Secondly, the private higher education institutions are showing interest in supporting research and development of new knowledge. This has allowed the researcher to explore the internal systems of the institutions and report the findings. Each finding could add to a greater reservoir of knowledge on change management due to e-learning implementation. Private higher education institution deputy vice chancellor, deans and the decision makers at the top level, e-learning experts and other relevant parties could definitely benefit from the findings that reflect on experience that improves continuously. This study's findings also allow other higher education institutions to reflect on their other counterpart's experience of change management, due to e-learning implementation, in order they might emulate them or adapt their practices.

By making this practical knowledge explicit, the higher education providers can take control of their own self development on change management due to e-learning implementation. This study's findings would also provide the context of change management due to e-learning implementation, as concrete examples are given for better understanding of the reasons behind the implementation and why it was done in a particular way. The implications of this study are significant from theoretical, methodological and practical perspectives. Each implication is discussed below:

5.4.1 Theoretical implication

Research was conducted with the aim of filling the gap in the research area and contributing new knowledge to the body of literature. This study found that change management has an effect on e-learning implementation, as discussed in the earlier chapters. The important aspect of the theoretical contribution of the present study, relates to the direct effect on stakeholder involvement in change management, system view, evolving mindset, understanding change, system design and evaluation. Lack of empirical research in this subject had led to ongoing debate on change management due to e-learning implementation. Another important theoretical implication of the study is the moderating effect of age, marital status, gender, ethnic, position, job status, experience and level of education on the relationships mentioned earlier.

As discussed in Chapter 1 and Chapter 2, most of the previous studies examined each variable, namely change management and e-learning, separately. As such, the current research expects to make theoretical contributions in several ways. Firstly, the implication of relationship between the conceptual and theoretical framework are discussed. The conceptual framework is a combination of two major elements which are change management and e-learning. The basic idea has been adapted from the Systemic Change Model by Roberto (2010), the E-learning Cycle Instructional Model by Philip

(2004), the conceptual framework of the study along with the main questions of the questionnaire. One of the purposes of this study was to present a model to improve the change management due to e-learning implementation, from the perspective of educators in private higher education institutions that have vision and mission on e-learning implementation.

Based on the findings, the model illustrates two types of variables affecting (positively or negatively) the different dimensions of change management due to e-learning. An inspection of the model indicates that age and experience variables, such as years of working experience as a lecturer, years of working in the institution, negatively influences the lecturers' adaptation to e-learning implementation. Findings indicate that younger lecturers showed more confidence, and were better in using various new software, tools and programmes in change management process, as compared to senior lecturers. These factors along with good communication helps determine the understanding of change management due to e-learning implementation. Secondly, ownership control has significant effect on the system view when e-learning implementation starts in the institution, and experience of educators handling e-learning classes were positively affected which has not been studied before. This was strengthened by the finding that lecturers with a Master's Degree and working full time in the respective institutions, showed greater adaptability to change due to e-learning as compared to the other categories of educators. Thirdly, no research has linked the relationship of service and satisfaction, which was also found to correlate with system design.

Fourthly, there is no empirical research or theoretical model on the policy of e-learning. Findings referring to the majority of the educators agreed that there was no policy on e-learning. The small percentage of educators who agreed that there was policy for e-learning in their institution also stated that the policy was dissemination by

website and guidebook. However, a few studies have been done on e-learning implementation policies, in private higher education institutions. Research by Varvel, Montague and Estabrook (2007) on students' experience on e-learning policy as a foundation for further research and development, and research by Czerniewicz and Brown (2009) studied the relationship between institutional policy, organisational culture and e-learning use in four South African universities.

Findings of the study found that educators' with working experience in e-learning implemented institution, showed significant positive relationship with change management due to e-learning. Findings regarding educators' level of knowledge and experience in handling e-learning courses, also positively influenced the change management dimension towards e-learning implementation. This shows that academic transformation has positive significant relationship with understanding change. These variables play an important role in enhancing change management due to e-learning implementation.

5.4.2 Methodological Implications

The present study provides a few methodological contributions. In terms of adding to the body of literature, the significance of this study involves the newly developed change management due to e-learning implementation. As discussed in previous chapters, to provide a measurement for change management, multi-item scales used in the study were reliable and valid. As such, this is a major contribution especially to educators.

In this study, the researcher decided to take a weighted average for the variables to represent the change management due to e-learning. This is the first implication contributed by this study, as no past studies had conducted such research to develop a measurement of change management. This study departs from most of the previous

studies in that it focused on e-learning implementation and change management separately.

Secondly, this study adds to the existing literature on change management due to e-learning implementation. In chapter 4 the newly developed variables constructed was measured using 18 items. Thus, this also provides a significant methodological contribution in terms of scale development for change management variables, due to e-learning implementation constructs.

Thirdly, all measurement for change management variables due to e-learning implementation, were proven to be valid and found to be highly reliable, when examined by both exploratory factor analysis, and Cronbach's Coefficient Alpha and Confirmatory Factor Analysis using Structural Equation Modeling. All measurements were assessed and modified by the measurement model developed for testing each of the main variables. From the review of the previous literature, none of the previous studies using Confirmatory Factor Analysis and construct validity for each variable.

Lastly to date there is no known study investigating change management due to e-learning implementation in terms of significant relationship between change management variables that contribute to e-learning implementation, status, trend, problem, challenges and ways to adapt from the perspective of educators using qualitative and quantitative methods. Therefore, it is a significant methodological contribution to the body of knowledge in terms of new findings pertaining to change management due to e-learning implementation in private higher education institutions.

5.4.3 Practical Contributions

The present study provides a number of contributions to practice. This section describes the contributions derived from the findings of the study. The primary focus of this study is to examine the status, trend, problems, challenges and ways to adapt to

change management due to e-learning. The first implication of this study is the six variables of change management namely stakeholders involvement, system view, evolving mindset, understanding transition, system design and system evaluation. These influence three aspects of e-learning implementation, namely ownership and control, academic transformation, and service and satisfaction. This finding will enable educators and e-learning management teams in private higher education institutions, to create a more refined strategy to carry out successful change management. In addition, this contribution can be discussed further in terms of status, trend, problem, challenges, ways to adapt to changes and the journey of e-learning implementation. The findings of the study suggested that in the vision and mission of private higher education institutions, it is normally the leaders who integrate teaching and learning, advancement of knowledge base through e-learning scholarship and leadership. Top management of private higher education should concentrate in constructing a vision and a mission that related to educators, teaching and learning.

The second implication of this study is related to the top management that handles change management due to e-learning implementation for the educators. The variables focus on factors such as age, gender, ethnicity, job status, experience, position, level of education and so forth. For instance, the gender aspect can be the most prominent factor to be considered by the educators. Based on the findings of the current study, females are more influenced by change management due to e-learning implementation. Therefore, the top management in private higher education institution can focus more on females compared to males. The possible reasons of lesser influence by change management due to e-learning implementation may lie on the educators' level of education, and also the family background of the educators.

The third implication is related to the effects of change management on six aspects of change management towards e-learning implementation. For instance, the

study found that there is a need to ensure changes due to e-learning efforts are successful. Institutions will consider expansion, drive out cost, recognize, relocate, realign, improve processes, change leadership, implement new and more complex technology. As such e-learning programme managers should ensure that their products and services carry the the full complement to increase the value of the product. As found in the study, educators who were highly influenced by change management due to e-learning implementation are prone to academic transform. Thus top management that are in charge of e-learning in private higher education institution should highlight the evolving mindset and also understanding change to attract the target group of educators.

This study also found that the majority of educators were Chinese female lecturers with two to five years of working experience, unmarried, between twenty five and thirty five years of age, holding master's degree and worked full time in the respective institutions. They had the most effect on change management due to e-learning implementation. Thus the last implication of the study is related to the moderating effects of age, gender, marital status, job status, position, ethnicity and experience towards the direct relationship discussed earlier. These findings will be most useful for e-learning programme developers, to tailor their merchandise for specific age, gender, marital status, job status, position, ethnic and experience. In addition, e-learning programme developers might also be interested in focusing and manipulating the variables that moderate the relationships.

As a concluding remark, the researcher would like to state that change management due to e-learning from the perspective of educators needed concerted efforts and support from stakeholders, educators and the management team of the institution itself. The fullest cooperation and support from the university administration, all concerned departments, and continuous training to update lecturers on e-learning skills can help in improving the change management adaptation and assist in enhancing

the e-learning utilisation among educators in private higher education institutions that have vision and mission on e-learning implementation.

5.5 Recommendations

Since the establishment of e-learning in Malaysia there has been no published study on change management together with e-learning implementation in both public and private higher education institutions. This research has made a beginning by inquiring into the evolving mindset of educators, understanding change which elaborates the academic transformation, system design, reviewing to improve which elaborates service and satisfaction, system view and stakeholder involvement such as MAPCU, institutions' top management, senior educator, educator and IT experts which elaborates the ownership and control. Each unique finding shows the worth of change management for e-learning implementation. The researcher would like to suggest that further studies include studies from public and private universities which differ in their vision, mission, and pedagogical mode. Based on the findings, the study offers recommendation to improve e-learning implementation through change management educators, perspective, in private higher education institutions in Malaysia with a vision and a mission of e-learning implementation.

1- A significant effort is needed to enhance the awareness of e-learning among the educators in private higher education institutions in Malaysia. Educators' should be more dedicated in discussing, reading using information and communication technology related material.

2- Develop an instrument to assure change management due to e-learning implementation. Using the instrument of this study is an added advantage due to its validity.

3- Proper, regular and formal training programmes should be organised for junior educators. Training centres need to be equipped properly with suitable hardware, software and qualified staff that can incorporate change management and e-learning implementation.

4- Budget should be taken as a serious concern in relation with fostering change management due to e-learning implementation, as the budget need to consider training for the educators.

5-Policy should be taken as a serious concern also because many institutions do not have a proper policy on e-learning implementation.

6- It is earnestly hoped that the educators be motivated highly as they change to use e-learning in their instruction. Educators also showed that they agreed and welcomed change in the form of e-learning as compared to the traditional system. If the management of the change was done properly in the private higher education institution.

7- Quality of training given to educators, for using ICT in infrastructure for the change management due to e-learning implementation, needs to be improved as lecturers were not happy with the level of training.

8- It should be emphasised that educators need to plan properly in order to use e-learning as stated in the vision and mission of the university.

5.6 Future Research

Due to the theoretical limitations, the study focused only on relationship of change management variables which influence e-learning implementation, such as status, trend, problem, challenges, ways to adapt and the changes that occurred due to e-learning implementation. New studies need to look at other perspectives. It will be academically interesting to extend the research framework developed in this study, by

incorporating other variables. Further research on change management on e-learning implementation among educators should consider the following:

- 1- Provision of a discussion board on change management methods for e-learning implementation in terms of ICT utilisation.
- 2- Enhancement of the software system to track the progress of instruction among educators with respect to e-learning implementation and change management.
- 3- Development of e-learning standards in private higher education institutions in Malaysia.
- 4- Cross cultural studies to compare and contrast the level of change management focusing on the level of e-learning implementation in the education industry.

In addition, the lack of change management from the perspective of educators emphasizing on e-learning implementation integrating and analyzing the views of experts and the educator became main reason for not having more conducive environment on technological incorporate learning and teaching as stated in the vision and mission statements. Future research should take on the challenge to find other mediating effects between change management variables and e-learning implementation variables.

Due to methodological limitations, future research in Malaysia should include educators from all of Malaysia rather than only Kuala Lumpur, as a sample. In addition, the generalisation of the research findings to the whole educators population of Malaysia is strongly suggested. Better generalisation from the study may yield the opportunity to offer better recommendations to the top management of private higher education, and the e-learning programme developer to formulate more appropriate strategies. The measurement of future studies should also expand the focus beyond

educators' perspectives. Therefore, there is an opportunity for future researchers to embark on these opportunities in expanding the research findings. This will contribute to the body of knowledge in the context of change management due to e-learning implementation relationship context.

Future research should continue to embark on cross-cultural research. Comparison between change management due to e-learning implementation with other ASEAN countries such as Singapore, Brunei, Thailand and Indonesia, which also have diverse demographic background of educators, will definitely enrich the knowledge on change management due to e-learning implementation. The present study could act as a spin-off for other change management related study areas to enhance the educators and to improve the quality of education.

5.7 Concluding Remarks

This study revealed that the availability of skilled trained staff and educators' working relationship with e-learning centers in each institution was vital for the overall success of change management in e-learning implementation among educators in private higher education institutions. The study found that educators' lack of innovation, and ineffective roles in decision making for e-learning acquisition were the reasons for their resistance to change, and feelings of insecurity. The study found that quality and standards in handling change management due to e-learning would enhance e-learning utilisation among educators' in private higher education institutions in Malaysia. As a concluding remark, the successful change management among educators needs the concerted efforts of all stakeholders. Continuous effort must be made to conduct further research related to the change management due to e-learning implementation throughout the world. Private higher education institutions from various countries will continue to contribute to the growth of the education industry. As e-learning implementation

increases globally, understanding change management becomes increasingly important. Bennett and Marsh (2002) argued for greater understanding of the way online learning can be incorporated, through the creation of professional development courses incorporating both theoretical and practical concepts and which can be more easily accessed by the intended audience. Given the rapid growth and market opportunities, the need for professional development also found in developing countries, it is important that this information is obtained by the e-learning developers. They need to take into account the changing needs of the educators.

List of publications

No.	Title	Year	Type of publication	Publisher
1.	'Go green while you can,' CERVIE newsletter 2 nd issue 2010.	2010	Article	CERVIE, newsletter
2.	The role of HE in National Development: How e-learning can facilitate for private HE in Malaysia.	2011	Journal	International Journal for the Advancement of Science and Arts vol .2 No 1 2011 issue
3.	E-learning in selected Science and Technology, LAP Lambert Academic Publication	2011	Book	LAP Lambert Academic Publication, ISBN 9783847323808
4.	The influence of emotional intelligence and creativity on work performance and commitment	2013	Journal	International Journal for the Advancement of Science and Arts vol.4 No 2 2012 issue
5.	E-learning and integration of professional development	2014	Conference Proceeding	International Conference on Sports Science & Teachers Education (IConSTE 2014) ISBN 978-969-9948- 01-5
6.	Narrowing the interpersonal gap created by E-learning among higher education institutions	2014	Conference proceeding	International Conference on Sports Science & Teachers Education (IConSTE 2014) ISBN 978-969-9948- 01-5
7	Implementing e-learning in private higher education institutions: A change management perspective	2014	Conference Proceeding	2 nd International Seminar of Teaching Excellence and Innovation ISBN (1365658691)
8	Morphological awareness among secondary school students	2014	Conference Proceeding	2 nd International Seminar of Teaching Excellence and Innovation ISBN (1365658691)
9	Motivasi intrinsic murid terhadap aktiviti dalam pendidikan jasmani	2014	Conference Proceeding	2 nd International Seminar of Teaching Excellence and Innovation ISBN (1365658691)
10	Integration of emotional intelligence and creativity in e-learning environment	2014	Conference Proceeding	National Conference of Curriculum and Technology in Teaching, ISBN(5252352)

No.	Title	Year	Type of publication	Publisher
11	The effect of an after school intervention program on selected health related physical fitness components among students	2014	Conference proceeding	National Conference of Curriculum and Technology in Teaching, ISBN (5252352)
12	The professional development programs and integration of learning management system,	2015	Social Sciences Journal.Scopus Indexed Journal Impact Factor : 0.483 , 5 years Impact Factor:0.527 Conference proceeding	ISSN 1818-5800, Issue 2, Volume 11, 2015 ISBN(978-969-9948-01-5)
13	An investigation on influential of change management variables on e-learning implementation in Malaysian private higher education institutions.	2015	Conference Proceeding and book chapter, International Conference on Teaching and Learning (ICTL 2015)	International Conference on Teaching and Learning (ICTL)
14.	An investigation on the impact of e-learning implementation on change management in Malaysian private higher education institutions	2016	International Conference on Innovation, Shift & Challenges in Learning & Teaching (ICISC 2015).	Journal of Science and Technology, 2 (24), 2016, ISSN 2231-8526 (Scopus indexed Journal Impact Factor: 0.513)

List of paper presentation:

No.	Title	Year	Conference/Time/Date
1.	E-learning and integration of professional development	2014	International Conference on Sports Science & Teacher Education , 4-6 November, 2014
2.	Narrowing the interpersonal gap created by E-learning among higher education institutions	2014	International Conference on Sports Science & Teacher Education , 4-6 November, 2014
3.	The Professional Development Programs And Integration of LMS	2014	International Conference on Global Trends in Academic Research, Bali, Indonesia 2-3 June, 2014
4.	Implementing e-learning in private higher education institutions: A change management perspective	2014	2 nd International Seminar of Teaching Excellence and Innovation, 25 th February, 2014
5.	Morphological awareness among secondary school students	2014	2nd International Seminar of Teaching Excellence and Innovation, 25 th February, 2014
6.	Motivasi intrinsic murid terhadap aktiviti jasmani	2014	2nd International Seminar of Teaching Excellence and Innovation, 25 th February 2014
7	Integration of emotional intelligence and creativity in e-learning environment	2014	National Conference of Curriculum and Technology in Teaching, 21 March, 2014
8	The effect of an after school intervention program on selected health related physical fitness components among students	2014	National Conference of Curriculum and Technology in Teaching, 21 March, 2014
9	An investigation on influential of change management variables on e-learning implementation in Malaysian private higher education institutions.	2015	International Conference on Teaching and Learning (ICTL 2015) Chulalongkorn University,Bangkok, Thailand, 27 th - 28 th Oct 2015
10.	An investigation on the impact of e-learning implementation on change management in Malaysian private higher education institutions	2015	International Conference on Innovation, Shift & Challenges in Learning & Teaching (ICISC 2015), 19-21 November, 2015.

APPENDIX A



Questionnaire

Survey of change management in e-learning implementation in Malaysian private higher education institutions.

This questionnaire is designed to provide a measure of your opinion regarding the title. Please read each item carefully and mark the number that indicates your views. Your co-operation is very important towards the success of this survey. All information given and opinions expressed in this questionnaire will be treated as strictly confidential.

Thank you very much for your cooperation.

Section A: Respondent's profile and professional background

Personal data is needed to enable meaningful interpretations and comparisons of the results. Please remember that this information will be treated with strict confidence and your responses will be aggregated to preserve your anonymity. Please tick (/) the answer of each following questions.

1-Level of education:

Diploma	
Bachelor Degree	
Masters Degree	
Doctoral Degree	
Others (specify)	

2-Current position:

Teacher	
Instructor	

Tutor	
Lecturer	
Senior Lecturer	

3-Gender:

Male	
Female	

4-Race:

Malay	
Chinese	
Indian	
Others	

5-Age category:

Less than 25	
25-35	
36-45	
46-55	
More than 56	

6-Marital status:

Single	
Married with children	
Married without children	
Others (Specify)	

7-Job status:

Full time	
Part time	
Contract	
Others (Specify)	

8-Years of experience in teaching profession:

Less than 1 year	
2-5 years	
6-10 years	
11-15 years	
16-20 years	
More than 20 years	

9-When e-learning implementation start in your institution

Less than 1 year	
2-5 years	
6-10 years	
11-15 years	
16-20 years	
More than 20 years	

10-Years of experience in handling e-learning classes

Less than 1 year	
2-5 years	
6-10 years	
11-15 years	
16-20 years	
More than 20 years	

12- Please indicate the tools that you use in e-learning. You may select more than one answer.

Online tutorials	
Video conferencing	
E-mail	
Voice mail	
Discussion forum	
Electronic chat	

Other please specify	
----------------------	--

13- Is there a policy on e-learning at your institution?

Yes
No

14- If yes to question 13, how is the e-learning policy disseminated to the academic staff at your institution?

Institution's website	
Written circular/memo	
Guidebook	
Induction programmes	
Formal development training programmes	
Others (please specify)	

15- Who are the stakeholders involved in developing e-learning policy?

Top management	
Faculty/Department representative	
External stakeholders (Alumni)	
Students	

16- Are you familiar with the term of change management and how it relates change affecting educators'?

Yes
No

17- Does your institution have a central committee in charge of monitoring the change of status, trend due to planning and implementation of e-learning?

Yes
No

18- If yes, who is the person in charge to monitor the status and trend of e-learning at your institutions?

Coordinator of e-learning	
Director of e-learning	
Chair of e-learning committee	
IT director	
Quality Assurance Director	
Other (please specify)	

19- In your opinion is your intuition in line with the institutional vision and mission that include e-learning implementation

Yes
No

If no please specify the reasons

20-Please TICK in the scale that best describe the competency level due to e-learning implementation

	Not competent	Little competent	Average competent	Competent	Highly Competent
How competent are you in adapting changes due to e-learning implementation?					
How technological competent do you consider yourself in e-learning pedagogy?					

21-Do you experience to adapt the changes in handling e-learning pedagogy classes before working in this institution?

Yes
No

If no skip the question (17)

22-If yes, for how long

Less than 1 year	
2-5 years	
6-10 years	
11-15 years	
More than 15 years	

23-How long you took to adapt the changes in handling e-learning pedagogy classes in this institution?

Less than 1 year	
2-5 years	
6-10 years	
11-15 years	
More than 15 years	

24-What is the current percentage of courses at your institution offered online

0-10%	
11-20%	
21-30%	
31-40%	
41-50%	
More than 50%	

25-Do you think that the current governance structure of e-learning at your institution is effective?

Yes
No

26-Does your institution periodically measure the change impact of e-learning implementation on educators'?

Yes
No

27-Please CIRCLE in the scale that best describe change management due to e-learning implementation

	Strongly Strongly Disagree	Moderate			Agree
	↑	↑	↑	↑	↑
Accountable to learn the change management process	1	2	3	4	5
Self-evaluate in handling change management process	1	2	3	4	5
More professional in handling change management process	1	2	3	4	5
Gain concrete experience in handling change management process	1	2	3	4	5
More observant while experiencing change management process	1	2	3	4	5
Actively experiment the capabilities to adapt changes in implementing e-learning	1	2	3	4	5

28-Please CIRCLE in the scale that best describe the institution to adapt the change due to e-learning implementation

	Strongly Disagree		Moderate		Strongly Agree
	↑	↑	↑	↑	↑
The institution ready to handle change due to e-learning implementation.	1	2	3	4	5
The institution plan to handle change due to e-learning implementation.	1	2	3	4	5
The institution develops good change management process before e-learning implementation.	1	2	3	4	5
The institution train educators' to handle change due to e-learning implementation.	1	2	3	4	5

The institution structure program for exposure to handle change due to e-learning implementation.	1	2	3	4	5
The institution evaluates the programs exposure program to handle change due to e-learning implementation.	1	2	3	4	5
The institution does maintenance to handle change due to e-learning implementation.	1	2	3	4	5

29-Which of these statements best applies to how change is managed at your institution?

	Strongly Disagree Moderate Strongly Agree ↑ ↑ ↑ ↑ ↑				
Exists in a state of rapid and continues change	1	2	3	4	5
Evolves through long periods of stability with short bursts of fundamental changes	1	2	3	4	5
Deals with change incrementally and separately	1	2	3	4	5
Constantly undergoing changes step by step	1	2	3	4	5

30-Please select how applicable each of these statements are in describing the management of change affecting your job role?

	Strongly Disagree Moderate Strongly Agree ↑ ↑ ↑ ↑ ↑				
There are logical reasons for change which are visible and the goals are transparent	1	2	3	4	5
Change projects create resistance which has to be broken	1	2	3	4	5
There are long periods of planning before the change is delivered	1	2	3	4	5
Change is expected without being linked to incentives	1	2	3	4	5

The project lead for the change is known and project champions aid the planning and implementation	1	2	3	4	5
Good ideas for change are hidden and used for personal agendas	1	2	3	4	5
The implementation of the change within your role is managed solely by your institution	1	2	3	4	5
Training is adequate to answered questions about change	1	2	3	4	5
The process of implementation for the change is flexible and reactive	1	2	3	4	5
There are delays in the timescales that are set in the change project	1	2	3	4	5
Project teams have sometimes a lack of consequence and consistency in regards to the change	1	2	3	4	5
Communication about the change is limited to only those directly concerned with the project	1	2	3	4	5
Those concerned with the outcome of the change project take part in planning	1	2	3	4	5
Communications about the change are timely and relevant	1	2	3	4	5
Conflicts within the change are looked for and try to be solved	1	2	3	4	5
Involvement in the change project before delivery takes place	1	2	3	4	5

31-Which of these statements best describes e-learning implementation?

	<div>Strongly Disagree</div> <div>Strongly Agree</div> <div>Moderate</div> <div>↑ ↑ ↑ ↑ ↑</div>
Managed within a set time frame with clear objectives and methods that were communicated in advance and managed in a controlled way	1 2 3 4 5

A dynamic project which changes in timescales and deliverables. It has focus on contingency which appreciates the complexity of issues	1	2	3	4	5
Is a combination of the above two statements but not necessarily in equal proportion	1	2	3	4	5

32-Which of the below statements best applies to how you feel the e-learning implementation is managed?

	<div> <div>Strongly Disagree</div> <div>Moderate</div> <div>Strongly Agree</div> </div>				
	1	2	3	4	5
Once the implementation has taken place, user involvement in the project begins					
Communications about the implementation are not given in advance and not relevant					
The direction of the implementation is influenced by resistance					
Each release begins with no anticipated planning					
Incentives are linked with the implementation to aid the process of change					
Implementation communications are open and readily available					
Wide timescales for the implementation deliverables are set and goals are met					
There are predetermined guidelines for how the system implementation is to be managed and these are followed					
Ideas are openly communicated and encouraged within the implementation					
Training is frequently given with supporting materials creating confidence with the system and					

the processes					
Key implementation personnel are chosen, put in charge and left unchanged	1	2	3	4	5
Conflicts within the implementation are avoided	1	2	3	4	5
The reasons for change are unclear and there are different views of the goals of the implementation	1	2	3	4	5
Implementation leadership is unclear and e-learning champions are not utilized effectively	1	2	3	4	5
The e-learning strategy, system design and processes are determined completely outside of faculty control	1	2	3	4	5
Research & development done to enhance educators' adaptation towards the change	1	2	3	4	5

33-What are the main problems and challenges related to the change management of e-learning implementation at your institutions?

No clear policy on e-learning	
Lack of trained manpower	
No clear line of responsibility on the planning/implementation of e-learning	
Lack of incentive for those involved in the implementation of e-learning	
Lack of support from top management	
No dedicated division/department/unit on e-learning	
No clear governance structure	
Other (please specify)	

34-What are the main problems and challenges faced by your institution in getting the educators' to use the existing e-learning platform?

Preference over open source platforms	
Busy with research/publication	

Skeptical about e-learning	
Not IT savvy/ technophobia	
Complacent with existing teaching practices	
E-learning not user friendly	
Overload with teaching responsibilities	
No training on the use of e-learning	
Other (please specify)	

35-What are the main problems and challenges faced by your institution in conducting effective training to adapt the changes due to e-learning implementation?

Poor attendance	
Unsuitable training schedule	
Insufficient facilities	
Lack of competent trainers	
Insufficient training budget	
Lack of training modules	
Lack of the motivation among the educators'	
Other (please specify)	

36-Please rank these requirements about change in order of importance to you, from 1 to 9.

(1 = most important; 9 = least important) Rank value must be between 1 and 9.

Being able to take ownership and influence details of the change	
Recognize the e-learning is being implemented by people with the necessary core skills in a clearly defined and tracked manner	
Awareness of who is ultimately responsible for the project	
Appreciation of how the change will take place and be effectively communicated	
Having assistance from the project owners, project infrastructure, training specialist to create a supportive environment	

Understanding why change is happening and why it is necessary	
Conscious that key individuals are involved in the project	
Feeling that everyone is focused on the same goals and objectives	
Knowing the project recognizes organization wide dependencies and gives caution to people, process and infrastructure	

37-Please describe if the change management techniques used at your institutions during the e-learning implementation influenced your adaptation of the system

--

38-Please describe any difficulties excluding system performance or operation that affect your adaptation of e-learning implementation

--

39-Please describe if any challenges concerning educators' towards change due to e-learning implementation have been mirrored with previous implementations

--

40-If you have any further comments please feel free to add them here

--

Thank you for your cooperation.

APPENDIX B

List of private universities

(Source: MOHE, Malaysia,

http://www.portal.mohe.gov.my/portal/ExtPortal/Agencies/Apply_Study/PHEI, retrieved on 2 March 2013

No.	Private higher education institutions	Year of establishment
1.	Asia e University	2007
2.	Asia Pacific University at Technology and Innovation	1993
3.	Asean Metropolitan University College	1997
4.	BERJAYA University College of Hospitality	2008
5.	HELP University	1986
6.	International Medical University	1992
7.	International University College of Technology Twintech	1994
8.	Kuala Lumpur Metropolitan University Colloge	1991
9.	MAHSA University	2005
10.	Open University Malaysia	2000
11.	Tunku Abdul Rahman University	2002
12.	UCSI University	1986
13.	University of Kuala Lumpur	2002
14.	TMC College	1997

APPENDIX C

Permission corresponding email

Institute A

Compose Mail - Yahoo Mail x <https://sg-mg61.mail.yahoo.com/neo/b/compose?b.rand=2022070505>

Compose Send Save as a Draft Cancel

Inbox (1499) Drafts (56) Sent Spam (29) [Empty] Trash (41) [Empty] My Folders [Edit]

To: sheila devi <clashella@yahoo.com.sg> Cc: <andris48@yahoo.co.uk> Bcc: Subject: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN UNIVERS [Attach Files](#)

Dear Ms. Sheila,

We are happy, please proceed with your survey. Please fill up research request form when you are here for your survey.

Thank you.

On Wed, 5/2/14, REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN UNIVERSITY <clashella@yahoo.com.sg> wrote:

Subject: REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN UNIVERSITY
To: [REDACTED]@edu.my [REDACTED]@edu.my
Date: Wednesday, 5 February 2014

Dear [REDACTED],

Manager Talent management and development

For attention: [REDACTED]

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN UNIVERSITY

Dear Madam,

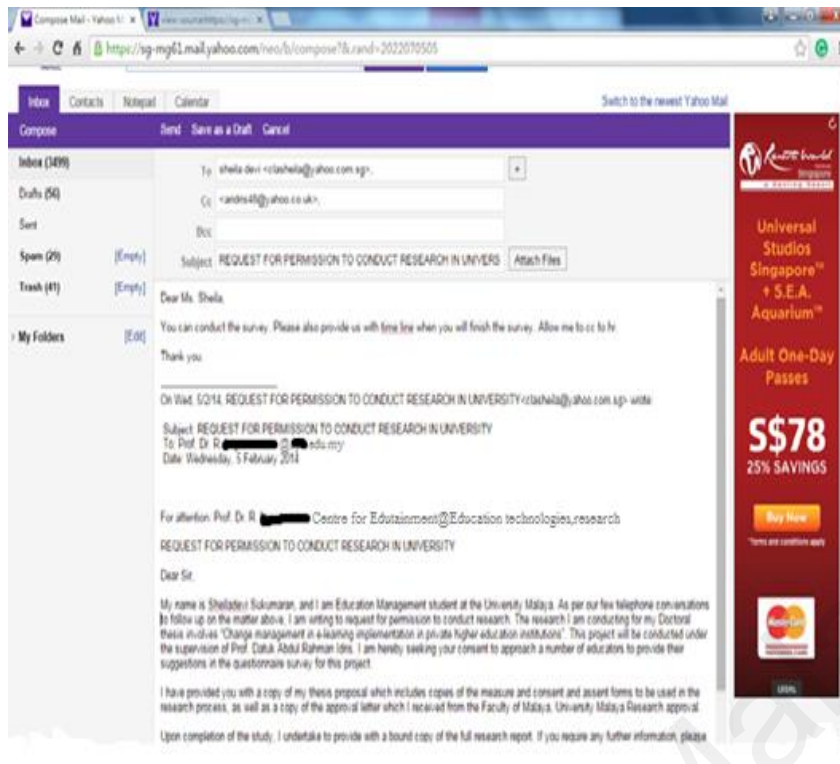
My name is Sheila Devi Sukumaran, and I am Education Management student at the University Malaysia. As per our few telephone conversations for the past one month to follow up on the matter above, I am writing to request for permission to conduct research. The research I am conducting for my Doctoral thesis involves "Change management in e-learning implementation in private higher education institutions". This project will be conducted under the supervision of Prof. Datuk Abdul Rahman Idris. I am hereby seeking your consent to approach a number of educators to provide their suggestions in the questionnaire survey for this project.

I have provided you with a copy of my thesis proposal which includes copies of the measure and consent and assent forms to be used in the research process, as well as a copy of the approval letter which I received from the Faculty of Malaysia, University Malaysia Research approval.

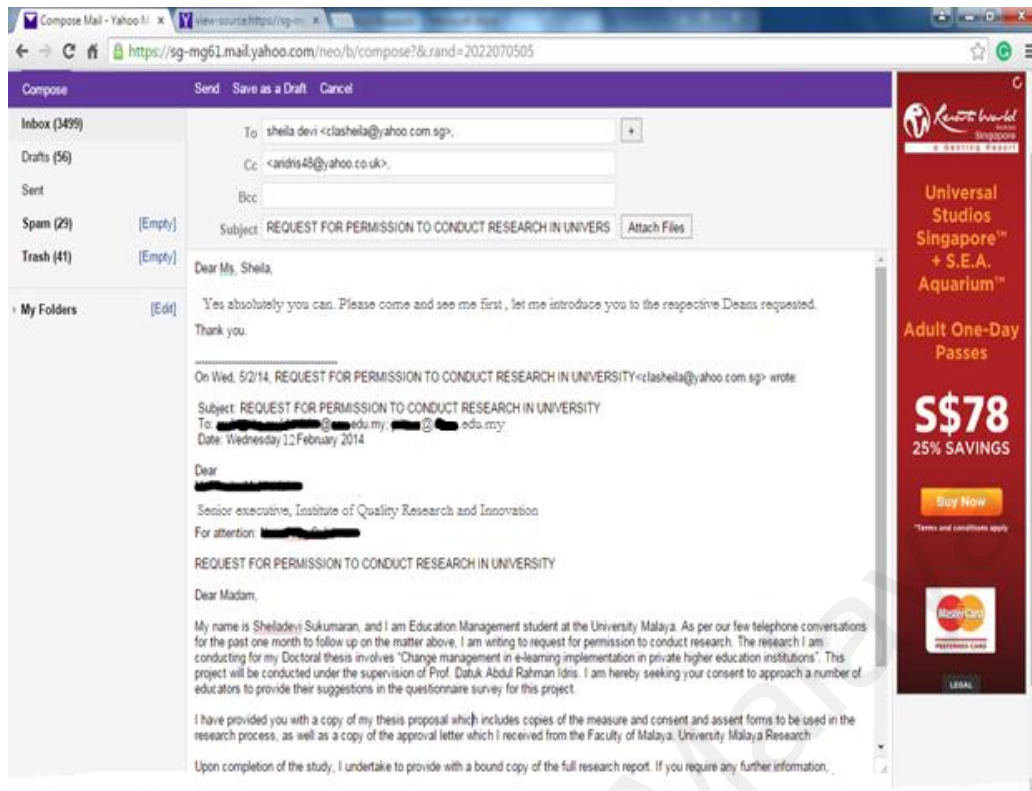
Upon completion of the study, I undertake to provide with a bound copy of the full research report. If you require any further information, please

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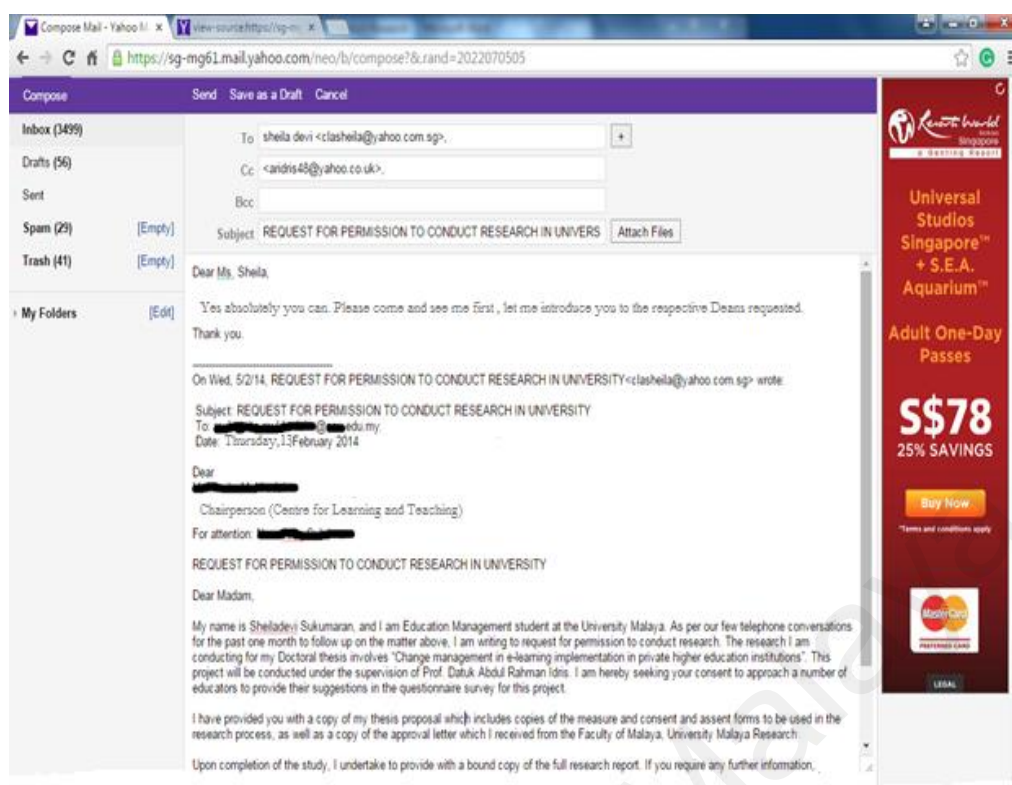
Institute B



Institute C



Institute D



APPENDIX D

Schedule of Interviews

Code	Participant	Institution	Type of meeting	Transcription	Date
------	-------------	-------------	-----------------	---------------	------

					File	/Time
P11	Deputy Vice Chancellor	A	face-to-face interview	PM-1-1-32/808	4 th July 14	9.30am- 11am
P12	Senior lecturer	C	face-to-face interview	DM-1-1-06/685	18 th July 14	12.30pm- 1.30pm
					23 rd July	
				DM-1-1-689/991		9.00am- 9.25am
P13	E-learning coordinator	E	face-to-face interview	DC-1-1-34/275	7th August	11am-12pm
14				DC-1-1-586/778	14th	4.30pm- 5.30pm
P14	Committee Member	MAPCU	face-to-face interview	PG-1-1-14/798	21 st August	3.00pm- 4.30pm
P15/P16	Lecturer	B / E	face-to-face interview	DW-1-1-268/898	28 th August	12.00pm- 1.00pm
14				DE-1-1-522-826	2 nd	
						4.30pm- 5.30pm

APPENDIX E

INTERVIEW PROTOCOL (INTI-1)

Topic of discussion:

1. What are the status and trend of e-learning implementation in private higher education institutions within Malaysia in the perspectives of educators?
2. What are the changes occurred in private higher education institutions within Malaysia on the adaptation of e-learning implementation focusing on educators' perspectives?
3. What are the problems and challenges faced by educators in overcoming the changes due to e-learning implementation in private higher education institutions within Malaysia?
4. What are the ways to adapt change management due e-learning implementation by educators in private higher education institutions within Malaysia?

Time of Interview:

Date:

Place:

Interviewer: Sheila (Researcher)

Interviewee: **Deputy Vice Chancellor**

Position of interviewee:

[Describe here the discussion topic, telling the interviewee about the purpose of the study b) individuals and sources of data being collected, c) confidentiality protection of the interviewee and the data, and d) how long the interview will take.]

[Have the interview read and sign the consent form]

[Turn on the MP3 recorder and test it]

Questions:

- 1- What propounded a clear and specific vision to guide the progress of the institution and also to enable the top management steer the university towards future growth and development?
- 2-How does educators reacted when discovered they are not who they thought they were due to the changes by e-learning implementation?
- 3-Please describe how change management developed towards e-learning implementation?
- 4-In your opinion, what is the meaning and process of change management due to e-learning implementation?
- 5-What are the main issues of change management due to e-learning implementation?
- 6-Could you share on how does e-learning developer preoccupied themselves to train the educators with e-learning implementation?
- 7-In your understanding, what are educator's priorities and motivations depend on?
- 8-Explain how was the journey of e-learning implementation in your institution?
- 9-Please describe the leaders' role in change management due to e-learning implementation?
- 10-Kindly explain how does the institution managed on structural details of reporting lines, decision rights, and formal processes that enacting these changes?
- 11-Describe how do the management encourage leading team?
- 12-How institutions get involved if the transformation efforts fail to measure their success?
- 13-Kindly explain parts of ongoing, continuous improvement of change management for the educational institution that ultimately leads to change competency?
- 14-In your opinion, how change initiate the determination of motivation to change, opportunity to change and capability to change?
- 15-What is the limitation in change management due to e-learning implementation?
- 16-In your opinion, training should focus on?

[Thank the participant for his/ her cooperation and participant in this interview. Assure them of the confidentiality of the responses and the potential for future interviews]

APPENDIX F**INTERVIEW PROTOCOL (INTI 2-1)**

Topic of discussion:

1. What are the status and trend of e-learning implementation in private higher education institutions within Malaysia in the perspectives of educators?
2. What are the changes occurred in private higher education institutions within Malaysia on the adaptation of e-learning implementation focusing on educators' perspectives?
3. What are the problems and challenges faced by educators in overcoming the changes due to e-learning implementation in private higher education institutions within Malaysia?
4. What are the ways to adapt change management due e-learning implementation by educators in private higher education institutions within Malaysia?

Time of Interview:

Date:

Place:

Interviewer: Sheila (Researcher)

Interviewee: Senior lecturer

Position of interviewee:

[Describe here the discussion topic, telling the interviewee about the a) purpose of the study b) individuals and sources of data being collected, c) confidentiality protection of the interviewee and the data, and d) how long the interview will take.]

[Have the interview read and sign the consent form]

[Turn on the MP3 recorder and test it]

Questions:

1. In your opinion what vision and mission of an institution defined and how it help the institutions?
2. Describe how the person in charge consults with educators to understand change management due to e-learning?
3. Please describe responsibilities of senior lecturer to manage change?
4. How does management and leadership style and behavior are important in e-learning implementation?
5. How does the journey to adapt change due to e-learning implementation?
6. What are the impactsof change management to educators?
7. Describe how do you deal with educators that lack of acceptance in changes due to e-learning implementation?
8. How the management initiate e-learning implementation?

9. How do educators manage change due to e-learning implementation?
10. Explain how do you facilitate educators in overcoming change due to e-learning implementation?
11. In your opinion how do educators approach change?
12. In your opinion describe change management due to e-learning implementation?
13. Describe how management signals the need for change?
14. What are the problems from employee perceptions about how they are matched between individual and institutional needs to change due to e-learning implementation?
15. What is the future prospect on change management due to e-learning implementation?
16. How do you describe successful change management due to e-learning implementation?
17. What is the best approach to address resistance in change management due to e-learning implementation?
18. In your opinion how to find ways to involve educators as participants and guides in e-learning implementation?

[Thank the participant for his/ her cooperation and participant in this interview. Assure them of the confidentiality of the responses and the potential for future interviews]

APPENDIX G

INTERVIEW PROTOCOL (INTI 3-1)

Topic of discussion:

1. What are the status and trend of e-learning implementation in private higher education institutions within Malaysia in the perspectives of educators?
2. What are the changes occurred in private higher education institutions within Malaysia on the adaptation of e-learning implementation focusing on educators' perspectives?

3. What are the problems and challenges faced by educators in overcoming the changes due to e-learning implementation in private higher education institutions within Malaysia?
4. What are the ways to adapt change management due e-learning implementation by educators in private higher education institutions within Malaysia?

Time of Interview:

Date:

Place:

Interviewer: Sheila (Researcher)

Interviewee: E-learning coordinator

Position of interviewee:

[Describe here the discussion topic, telling the interviewee about the a) purpose of the study b) individuals and sources of data being collected, c) confidentiality protection of the interviewee and the data, and d) how long the interview will take.]

[Have the interview read and sign the consent form]

[Turn on the MP3 recorder and test it]

Questions:

1. In your opinion how involving and informing educators can also create opportunities for others to participate in planning and implementing of changes?
2. How to help educators to adapt to the transition from face to face teaching to e-learning pedagogy?
3. What is the institution role in change management due to e-learning implementation?
4. What is the problem and challenges of educators to adapt change management due to e-learning implementation?
5. How does educators approach change due to e-learning implementation?
6. How do you describe educators that need lifelong learning?
7. How to facilitate educators on change management due to e-learning implementation
8. In your opinion do educators share best practices?
9. How does competition produced competent educators on handling change due to e-learning implementation?
10. Describe constrains in facilitating educator in e-learning implementation?

APPENDIX H

INTERVIEW PROTOCOL (INTI 1-2)

Topic of discussion:

1. What are the status and trend of e-learning implementation in private higher education institutions within Malaysia in the perspectives of educators?
2. What are the changes occurred in private higher education institutions within Malaysia on the adaptation of e-learning implementation focusing on educators' perspectives?
3. What are the problems and challenges faced by educators in overcoming the changes due to e-learning implementation in private higher education institutions within Malaysia?
4. What are the ways to adapt change management due e-learning implementation by educators in private higher education institutions within Malaysia?

Time of Interview:

Date:

Place:

Interviewer: Sheila (Researcher)

Interviewee: MAPCU Committee member

Position of interviewee:

[Describe here the discussion topic, telling the interviewee about the a) purpose of the study b) individuals and sources of data being collected, c) confidentiality protection of the interviewee and the data, and d) how long the interview will take.]

[Have the interview read and sign the consent form]

[Turn on the MP3 recorder and test it]

Questions:

1. How educational institutions determine that educators agree to the change due to e-learning implementation?
2. How changes due to e-learning implementation will be managed, and how educators involve in planning and implementation of the change?
3. What is the problem and challenges of educators adapting change management due to e-learning implementation?
4. Describe the journey of change management due to e-learning implementation in your institution as an educator?
5. In your opinion how to facilitate educators on the change management due to e-learning implementation?
6. What is the limitation in change management due to e-learning implementation?
7. How to motivate educator in change management due to e-learning implementation?
8. What is the requirement to ensure change management due to e-learning implementation is successful?

APPENDIX I

AUDIT TRAIL

Data Sources & ID	Data Type	
	Interview Transcription File	Document Analysis
DM-1-1-991	DM-1-1-991	Vision and mission statement
PM-1-1-990	PM-1-1-990	Vision and mission statement
DW-1-1-268	DW-1-1-268	
PG-1-1-798	PG-1-1-798	
DC- 1-1-633	DC- 1-1-633	
DM-1-1-522	DM-1-1-522	
DM-1-1-523	DM-1-1-523	
DE-1-1-522	DE-1-1-522	
PM-1-1-236	PM-1-1-236	
DM-1-1-685	DM-1-1-685	

DM-1-1-57	DM-1-1-57
DW-1-1-898	DW-1-1-898
PM-1-1-808	PM-1-1-808
PM-1-1-566	PM-1-1-566
DM-1-1-46	DM-1-1-46
DC-1-1-34	DC-1-1-34
DM-1-1-06	DM-1-1-06
PG-1-1-43	PG-1-1-43
PM-1-1-534	PM-1-1-534
DC-1-1-586	DC-1-1-586
DM-1-1-87	DM-1-1-87
PM-1-1-86	PM-1-1-86
PM-1-1-36	PM-1-1-36
DC-1-1-676	DC-1-1-676
DC-1-1-89	DC-1-1-89
DM-1-1-332	DM-1-1-332
PM-1-1-32	PM-1-1-32
PG-1-1-14	PG-1-1-14
DM-1-1-14	DM-1-1-14
DM-1-1-793	DM-1-1-793
DM-1-1-689	DM-1-1-689
DC-1-1-778	DC-1-1-778
PM -1-1-73	PM -1-1-73
DM-1-1-68	DM-1-1-68
PG-1-1-24	PG-1-1-24
DC-1-1-687	DC-1-1-687
DC-1-1-765	DC-1-1-765
DM-1-1-788	DM-1-1-788

PM-1-1-424	PM-1-1-424
DC-1-1-275	DC-1-1-275
PM-1-1-124	PM-1-1-124
PM-1-1-246	PM-1-1-246
PM-1-1-546	PM-1-1-546
DM-1-1-665	DM-1-1-665
DM-1-1-798	DM-1-1-798
PM-1-1-65	PM-1-1-65
DC-1-1-678	DC-1-1-678
PM-1-1-68	PM-1-1-68
PG-1-1-767	PG-1-1-767
DM-1-1-76	DM-1-1-76
DC-1-1-88	DC-1-1-88
PG-1-1-97	PG-1-1-97
PM-1-1-87	PM-1-1-87
DM-1-1-98	DM-1-1-98

APPENDIX J

POSSIBLE THEMES AND CONCEPTS FOR DATA CODING ANALYSIS

Topic	Possible themes	Sub-themes	Concepts	Sources of data
Status and trend	e-learning implementation	-Recognition -Observance -Appropriateness -Liability -Enhancement -Quality Control -Sustainability -Professional development	Liability, Social accountability, acknowledgement, Top-down approach	INTI 1-1, INTI 2-1, INTI 3-1, INTI 1-2, Questionnaire,
	Vision/Mission	-Obligation -Sustenance and recognition -National and international development	Transformational educators, Strategic leadership, Institutional vision analysis	INTI 1-1, INTI 2-1, INTI 3-1, INTI 1-2, Questionnaire, Document

				analysis
	Change management	<ul style="list-style-type: none"> -Configuration -Common vision -Approach -Knowledge -Knowledge Management -Strategy 	Learning organization, open systems, change resistance, managing change, systemic change, organizational change	INTI 1-1, INTI 2-1, INTI 3-1, INTI 1-2, Questionnaire,
Ways to adapt changes	Varying ways to facilitate methods	<ul style="list-style-type: none"> -Cooperation -Management -Advisory -Review 	Top management Governance Training Policy	INTI 1-1, INTI 2-1, INTI 3-1, INTI 1-2, Questionnaire
	Effectiveness	<ul style="list-style-type: none"> -Assessment -Leadership, governance, communication -Enforcement activities, continues improvement, monitoring 	Preparationassessment Management evaluation	INTI 1-1, INTI 2-1, INTI 3-1, INTI 1-2, Questionnaire
Problem and challenges	Unification (resistance, turnover)	<ul style="list-style-type: none"> -Resistance -Turnover 	Learning organization Open systems, Change resistance, Managing Change, Professional development	INTI 1-1, INTI 2-1, INTI 3-1, INTI 1-2, Questionnaire,
	Challenges/limitation	<ul style="list-style-type: none"> -Limited training -Limited resources -Obstruct 	-Change management theories -Instructional	INTI 1-1, INTI 2-1, INTI 3-1,

improvement/creativity	theories	INTI 1-2,
-Change acceptance	-Academic excellence	Questionnaire,
-Adaptation		

APPENDIX K

EXAMPLE OF INTERVIEW TRANSCRIPTION

35 PG 1: The deans must use face-to-face communications to handle sensitive aspects of educators change management. Educators who lead e-learning implementation should encourage other educators to communicate face-to-face. Email and written notices are extremely weak at conveying and developing understanding. If the educational institution management needs to make a change quickly, probe the reasons. A more sensible time-frame really is more disastrous than presiding over a disastrous change. Quick change prevents proper consultation and involvement, which leads to difficulties that take time to resolve.

36. R : Okay

37. PG1: It is a radical alteration to the lecturers' future choices and other educator's perception of them as individuals. The old way of teaching are no longer that will work. In many ways this is life-changing experience to the educators. In this phase, educators are unsure as to how they will be able to act and react towards potentially, a totally new and alien environment. This, generally, involves identifying what are their core beliefs and how closely they have been to meeting them. Recognition of the inappropriateness of their previous actions and the implications for them as people can cause guilt as they realise the impact of their behaviour. Another of the emotions that may have an impact due to e-learning implementation is the awareness of a negative change in the team of educator's opinion due to e-learning implementation that they think it should be. The recognition of this shift in educators own and other educator's opinion then leads into the next stage of depression. The awareness that our past towards change management due to e-learning implementation are incompatible with our core construct of our old way of teaching and learning. This phase is characterised by a general lack of motivation and confusion from the educator due to sudden introduction of change. This takes up almost half of the year in this university. Then the educators begin to make sense of the environment of the educational institution that they are in and of the place within the change. Then in effect the educators are beginning to get some validation of their thoughts, actions and the direction they are going. The educators then were at the start of managing the control over the change; make sense and seeing some successes in how to interact. Now the educators are moving forward that starting to exert more control, make more e-learning project happen in a positive sense and are getting our sense of self back. The educators now starting to feel comfortable that are acting in line with our convictions, beliefs, etc. and making the right choices

38. R: That's good

39: PG1: The educators do not have enough information to allow them to anticipate behaving in a different way within the new organization. They are unsure how to adequately construe acting in the

new work and social situations. The more positive educators see the outcome, the more control they have over both the process and the final result the less difficult and negative a journey they have.

Transcription Files : PG-1-1

APPENDIX L

CONSENT LETTER FOR PERMISSION TO STUDY FROM PARTICIPANTS

CONSENT FORM

The purpose of the study being conducted is to learn about change management due to e-learning implementation in private higher education that have vision and mission on e-learning implementation on educators perspectives in Malaysia. This study aims to analyse deeply on significant relationship of change management and e-learning implementation, change management variables that influence e-learning implementation, status and trends, problem and challenges and ways to adapt changes for educators on adaptation of change management towards e-learning implementation in the perspective of educators' in Malaysia private higher education institutions

While there are no direct benefits to the participants, it is intended to provide educators better understanding concerning of change management and e-learning implementation of their private higher education and their stakeholders in e-learning implementation which hopefully contribute further to the nation's development of higher education.

Participants that will answer the survey questionnaire will take about half an hour to answer question. Participants that will response in an interview will take approximately one hour each. These interviews will be audio taped to facilitate data transcription, unless otherwise requested by the participant. There may be additional follow up or clarification through email, unless otherwise requested by participants. Privacy will be ensured through confidentiality. The researcher will not share your individual responses with anyone other than the research supervisor. If participant wishes for the use of his/her full name in the study, this request will be adhered to as well. Participants are voluntary and the interviewee has the right to terminate the interview at any time.

If you have any questions or concern, please contact the interviewer

Signature of interviewee

Name:

Date

I wish/not wish to use my name in the study

APPENDIX M

EXAMPLE OF THEMATIC CODES

Status and trend

- Systemic change management
- Continues improvement
- Educators perspective
- Instructional technological perspective
- Vision and mission

Ways to adapt changes

- Governance involvement
- Compliance
- Top down approach
- Best practice
- Professional development

Problem and challenges

- Adaptation
- Learning organization
- Engaging educators
- Resistance to change
- Time management
- Training

APPENDIX N

EXAMPLE OF AXIAL CODING

Educators Commitment and Involvement

<Internals\A P13 1>- 5 references coded (1.03% Coverage)

Reference 1-0.65% Coverage

143 P: "It is a source of inspiration and motivation. Often it describes not just the future of the education institutions but the future of the education industry or society in which the organization hopes to effect change. Mission statement guides the short term operations and decision making of the educational institutions.

Reference 2-0.47% Coverage

156 P: Let say this is the main pros when e-learning implementation was initiated in the institution and more forceful educators embark on a more serious transition.

Reference 3- 0.68% Coverage

164 P: Hai..... for educational institutions, change that entails new actions, objectives and processes for a group or team of people, use workshops to achieve understanding, involvement, plans, measurable aims, actions and commitment. Encourage management team that coordinates e-learning use workshops with the educator.

< Internal\A P13 2>- 2 references coded [0.24% Coverage]

Reference 1-0.37% Coverage

216 P: If educators are not approaching their tasks or the institutions effectively, then the institutions have the wrong mindset, not the educators...you know?

Appendix 12- Page 1/2

Reference 2-0.31% Coverage

225 P: Because I feel that at the basic level, there is a feeling of relief that teaching and learning style is going to change and not continue as before. Whether the past is perceived positively or negatively, there is still a feeling of anticipation and possibly excitement at the possibility of improvement. I think on another level, many lecturers at that time have a view that there is the satisfaction of knowing that some of the thoughts about the old system were correct. I think also generally, there was no matter how well we like the status quo of the change due to e-learning there is something that is unsatisfactory about it and that something is going to be done about.

< Internals\A P14 1>-> references coded [1.35% Coverage]

Reference 1 – 0.81% Coverage

268 P: This, generally, involves identifying what are their core beliefs and how closely they have been to meeting them. Recognition of the inappropriateness of their previous actions and the implications for them as people can cause guilt as they realise the impact of their behaviour. ...so....so...another of the

emotions that may have an impact due to e-learning implementation is the awareness of a negative change in the team of educator's opinion due to e-learning implementation that they think it should be.

Reference 3-0.61% Coverage

274 P: To help educators move through the transition effectively they need to understand their perception of the past before e-learning was introduced, present after e-learning was introduced and the future. Okay

<Internals\B P2 3> 1 reference coded [0.51% Coverage]

Reference 1-0.53% Coverage

112 P: Even in change management means to make the changes to happen and to flexibly adapt the organization to ongoing external changes. The process of change has impact on the whole organization and on all individuals working there. Human resource management has an important role in any change process. That the best result that it may see...

APPENDIX O

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy

.896		
Bartlett's test of Sphericity	Approx. Chi-Square	
21265.198		
	<i>df</i>	
2145		
	Sig	
	.000	

Communalities		
	Initial	Extraction
EM_26_1	1.000	.564
EM_26_2	1.000	.624
EM_26_3	1.000	.667
EM_26_4	1.000	.554
AT_26_5	1.000	.667
AT_26_6	1.000	.634
AT_27_4	1.000	.589
AT_27_5	1.000	.632
AT_27_6	1.000	.609
AT_27_7	1.000	.634
UT_27_1	1.000	.620
UT_27_2	1.000	.632
UT_27_3	1.000	.509
SE_28_1	1.000	.591
SE_28_3	1.000	.639
SS_28_2	1.000	.690
SS_28_4	1.000	.476
SS_31_2	1.000	.576
SS_31_5	1.000	.632

SS_31_6	1.000	.699
SS_31_7	1.000	.580
SS_31_10	1.000	.533
SS_31_12	1.000	.631
SS_31_13	1.000	.649
SS_31_14	1.000	.625
SV_29_1	1.000	.598
SV_29_2	1.000	.514
SV_29_3	1.000	.641
SV_29_8	1.000	.582
SV_29_9	1.000	.531
SV_29_12	1.000	.642
SV_29_14	1.000	.577
SV_29_15	1.000	.583
OC_29_4	1.000	.629
OC_29_5	1.000	.588
OC_29_6	1.000	.544
OC_29_7	1.000	.597
OC_29_10	1.000	.571
OC_29_11	1.000	.586
OC_29_13	1.000	.648
OC_29_16	1.000	.577
OC_30_2	1.000	.611
OC_30_4	1.000	.600
SI_30_1	1.000	.518
RECODE_SI_30_3	1.000	.488
SD_31_1	1.000	.517
SD_31_3	1.000	.503

SD_31_4	1.000	.622
SD_31_8	1.000	.503
SD_31_9	1.000	.672
SD_31_11	1.000	.539
SD_31_14	1.000	.610
SD_31_15	1.000	.638

Extraction Method: Principal Component Analysis

University of Malaya

APPENDIX P

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.111	26.718	26.718	10.111	26.718	26.718
2	6.686	15.134	41.852	6.686	15.134	41.852
3	3.711	10.657	52.509	3.711	10.657	52.509
4	2.679	5.821	58.330	2.679	5.821	58.330
5	2.159	3.669	61.999	2.159	3.669	61.999
6	1.944	2.667	64.666	1.944	2.667	64.666
7	1.654	2.566	67.232	1.654	2.566	67.232
8	1.567	2.377	69.609	1.567	2.377	69.609
9	1.413	2.119	71.728	1.413	2.119	71.728
10	1.333	1.709	73.437			
11	1.202	1.602	75.039			
12	1.200	1.465	76.504			
13	1.159	1.277	77.781			
14	1.098	1.122	78.903			
15	.976	1.017	79.920			
16	.899	1.007	80.927			
17	.879	.984	81.911			
18	.863	.967	82.878			
19	.795	.933	83.811			
20	.787	.853	84.664			
21	.722	.834	85.498			
22	.677	.828	86.326			
23	.664	.712	87.038			
24	.649	.705	87.743			
25	.635	.701	88.444			
26	.596	.623	89.067			
27	.584	.622	89.689			
28	.577	.613	90.302			
29	.543	.602	90.904			
30	.511	.600	91.204			
31	.473	.571	92.075			
32	.462	.570	92.645			
33	.428	.562	93.207			
34	.381	.555	93.762			
35	.371	.534	94.296			
36	.365	.498	94.794			
37	.347	.452	95.246			
38	.317	.433	95.679			
39	.302	.431	96.110			
40	.300	.425	96.535			
41	.299	.419	96.654			
42	.284	.397	97.051			
43	.265	.326	97.377			
44	.253	.319	97.696			
45	.251	.304	98.000			
46	.243	.301	98.301			
47	.233	.295	98.596			
48	.226	.271	98.867			
49	.213	.246	99.113			
50	.211	.238	99.351			
51	.207	.225	99.576			
52	.204	.215	99.791			
53	.200	.209	100.000			

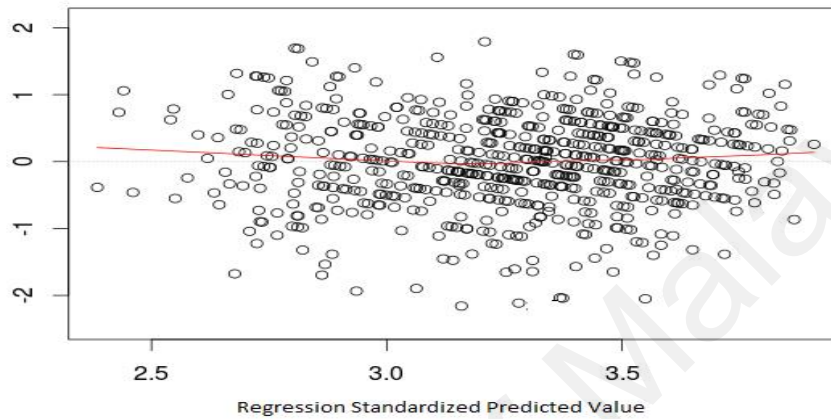
APPENDIX Q

Scatter plots for testing homoscedasticity

Scatterplot

Dependent Variable: EM

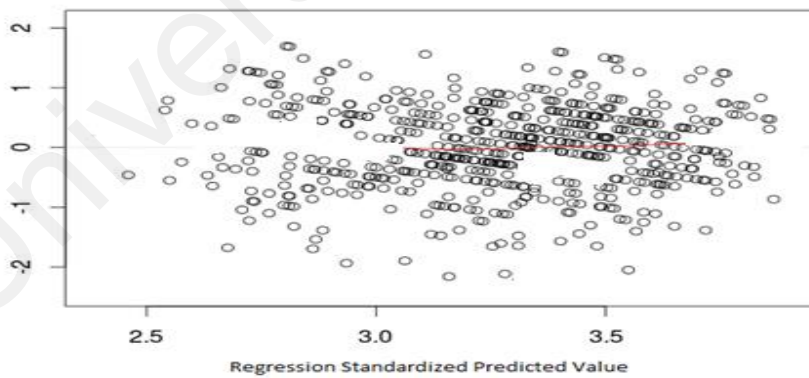
Regression
Standard Residual



Scatterplot

Dependent Variable: UT

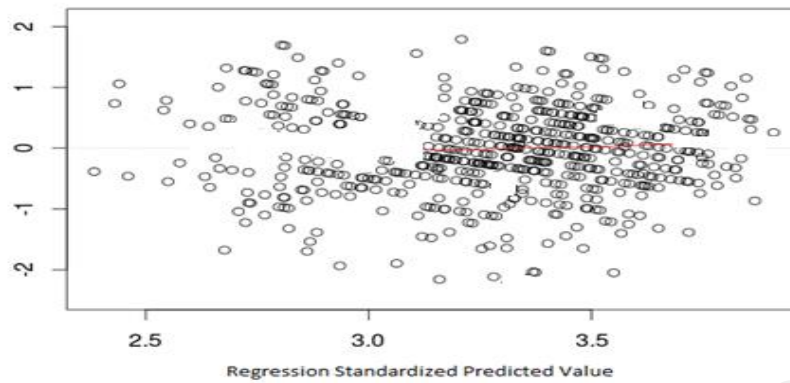
Regression
Standard Residual



Scatterplot

Dependent Variable: SI

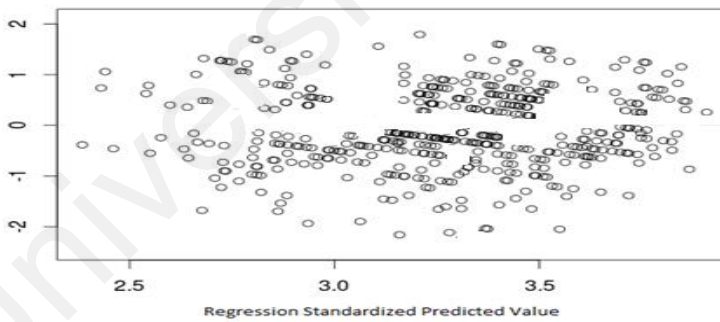
Regression
Standard Residual



Scatterplot

Dependent Variable: SD

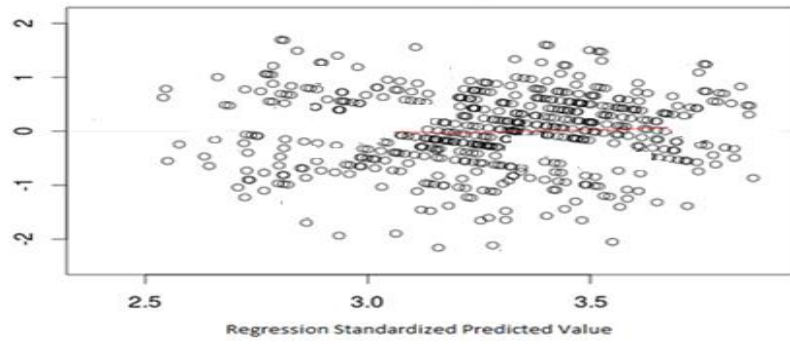
Regression
Standard Residual



Scatterplot

Dependent Variable:
SV

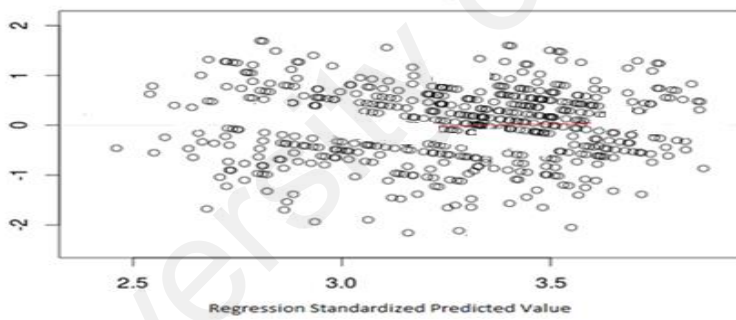
Regression
Standard Residual



Scatterplot

Dependent Variable: SE

Regression
Standard Residual

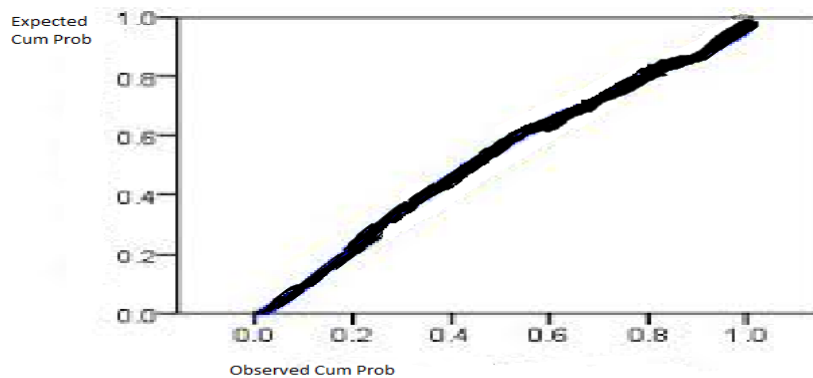


APPENDIX R

Normal Probability for testing Normality and Linearity

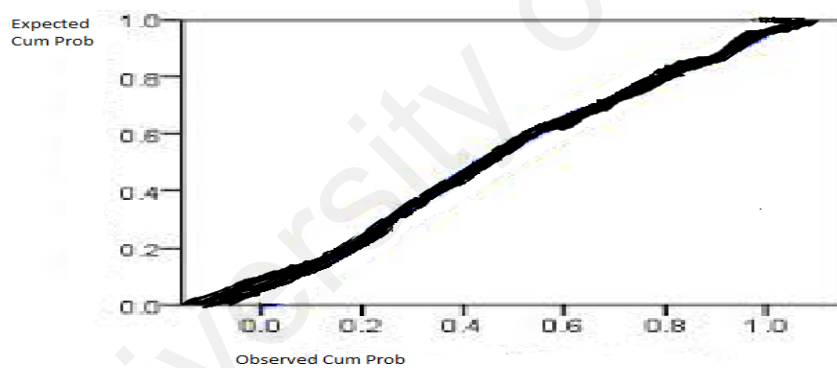
Normal P-P Plot of Regression Standardized Residual

Dependent variables: EM



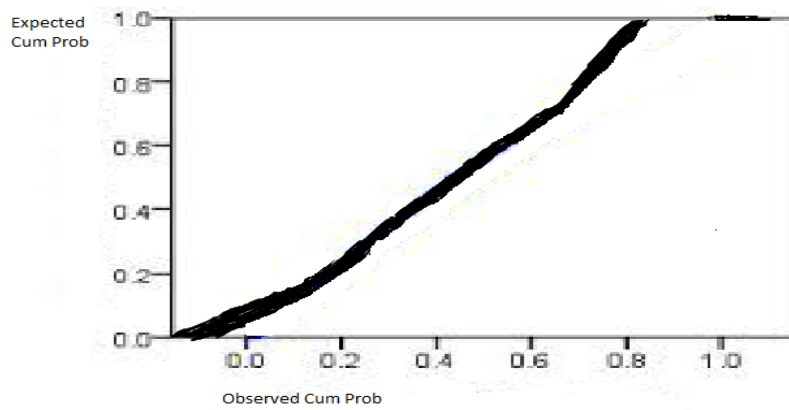
Normal P-P Plot of Regression Standardized Residual

Dependent variables: UT



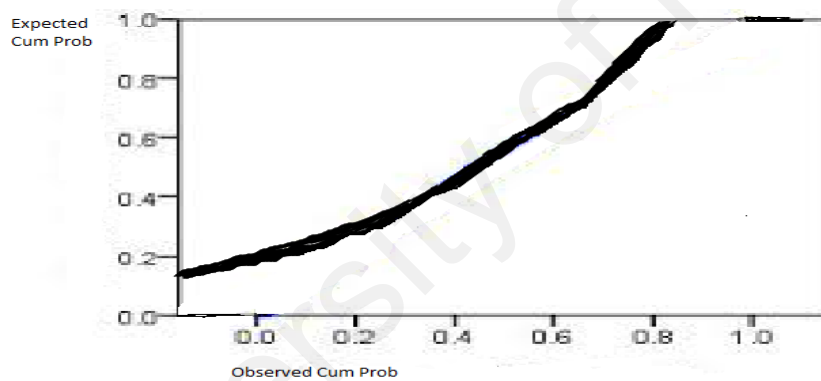
Normal P-P Plot of Regression Standardized Residual

Dependent variables: SI



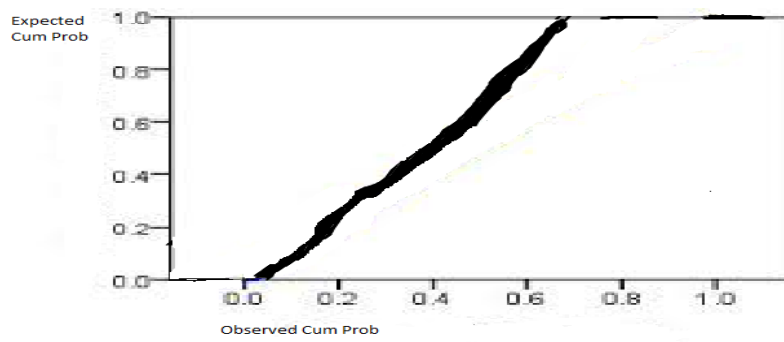
Normal P-P Plot of Regression Standardized Residual

Dependent variables: SD



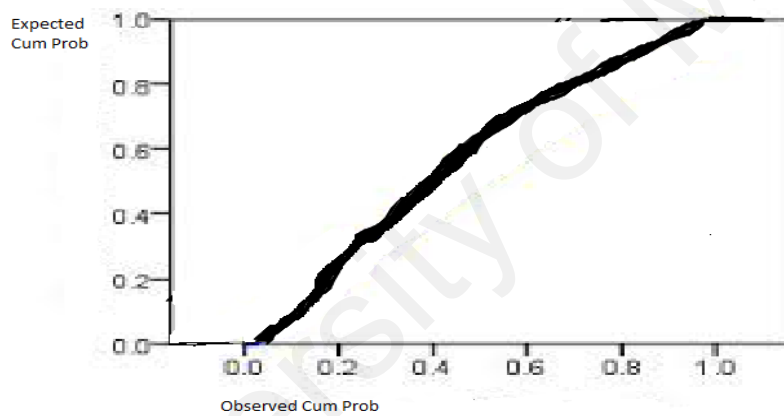
Normal P-P Plot of Regression Standardized Residual

Dependent variables: SV



Normal P-P Plot of Regression Standardized Residual

Dependent variables: SE



APPENDIX S

Post Hoc LSD test for e-learning variables and change management variables

Dependent	IV	IV	Mean	Std.	p-value	95%	Confidence Interval
Variables	(I)	(J)	Difference	Error		Lower	Upper
			(I-J)			Bound	Bound
SI	OC	AT	5.4868(*)	1.06	0.00	-1.65	2.78
		SS	0.3799	1.45	0.65	3.76	7.65
	AT	OC	-5.4868(*)	1.06	0.00	-2.78	1.65
		SS	4.7168(*)	1.75	0.00	-2.43	1.62
	SS	AT	-4.7168(*)	1.75	0.00	-1.62	2.43
		OC	-0.3799	1.45	0.65	-7.65	-3.76
SV	OC	AT	2.2352(*)	1.44	0.00	3.24	9.13
		SS	0.5243	1.48	0.67	-1.42	4.42
	AT	OC	-2.2352(*)	1.44	0.00	-9.13	-3.24
		SS	3.5643(*)	1.47	0.00	3.25	3.32
	SS	AT	-3.5643(*)	1.47	0.00	-3.32	-3.25
		OC	-0.5243	1.48	0.67	-4.42	1.42
EM	OC	AT	2.2875(*)	0.83	0.04	-2.42	3.65
		SS	1.5322(*)	0.84	0.00	3.35	8.52
	AT	OC	-2.2875(*)	0.83	0.04	-3.65	2.42
		SS	0.3452	0.87	0.77	-3.52	5.64
	SS	AT	-0.3452	0.87	0.77	-5.64	3.52
		OC	-1.5322(*)	0.84	0.00	-8.52	-3.35
UT	OC	AT	3.4563(*)	1.24	0.00	-1.32	3.78
		SS	5.5333(*)	1.35	0.00	-4.17	5.36
	AT	OC	-3.4563(*)	1.24	0.00	-3.78	1.32

		SS	0.4556	1.04	0.61	2.43	5.34
	SS	AT	-0.4556	1.04	0.61	-5.34	2.43
		OC	-5.5333(*)	1.35	0.00	-5.36	4.17
SD	OC	AT	3.3784(*)	1.65	0.00	-1.52	3.63
		SS	-0.3526	1.78	0.78	-3.33	6.75
	AT	OC	-3.3784(*)	1.65	0.00	-3.63	1.52
		SS	-5.5764(*)	1.28	0.00	-1.34	2.54
	SS	AT	5.5764(*)	1.28	0.00	-2.54	1.34
		OC	0.3526	1.78	0.78	-6.75	3.33
SE	OC	AT	0.4368	1.53	0.64	-2.23	4.26
		SS	3.3459(*)	1.56	0.00	-2.35	5.46
	AT	OC	-0.4368	1.53	0.64	-4.26	2.23
		SS	-6.3241(*)	1.75	0.00	2.43	3.75
	SS	AT	6.3241(*)	1.75	0.00	-3.75	-2.43
		OC	3.3459(*)	1.56	0.00	-5.46	2.35

Based on observed means

*The mean difference at the .05 level.

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