THE IMPACT OF SELF-REGULATED LEARNING, PERSONAL KNOWLEDGE MANAGEMENT (PKM) SKILLS, AND ENGLISH COMPETENCY ON UNIVERSITY STUDENTS' LIFELONG LEARNING.

DINITHAMBIGAI NADAHRAJAN

MASTER OF SCIENCE (MANAGEMENT)
UNIVERSITI UTARA MALAYSIA
July 2017

THE IMPACT OF SELF-REGULATED LEARNING, PERSONAL KNOWLEDGE MANAGEMENT (PKM) SKILLS, AND ENGLISH COMPETENCY ON UNIVERSITY STUDENTS' LIFELONG LEARNING.

By

DINITHAMBIGAI NADAHRAJAN

Thesis Submitted To

School of Business Management,

Universiti Utara Malaysia,

In Partial Fulfillment of the Requirement for the Master of Science (Management)

Pusat Pengajian Pengurusan Perniagaan
SCHOOL OF BUSINESS MANAGEMENT

Universiti Utara Malaysia

PERAKUAN KERJA KERTAS PENYELIDIKAN
(Certification of Research Paper)

Saya, mengaku bertandatangan, memperakukan bahawa
(I, the undersigned, certified that)
DINITHAMBIGAI A/P NADAHRAJAN (820120)

Calon untuk Ijazah Sarjana
(Candidate for the degree of)
MASTER OF SCIENCE (MANAGEMENT)

telah mengemukakan kertas penyelidikan yang bertajuk
(has presented his/her research paper of the following title)

THE IMPACT OF SELF-REGULATED LEARNING, PERSONAL KNOWLEDGE MANAGEMENT (PKM) SKILLS AND ENGLISH COMPETENCY ON UNIVERSITY STUDENTS' LIFELONG LEARNING

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(as it appears on the title page and front cover of the research paper)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.
(that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the research paper).

Nama Penyelia Pertama : **DR. CHONG YEN WAN**
(Name of 1st Supervisor)

Tandatangan :
(Signature)

CHONG YEN WAN
Lecturer
School of Business Management
UUM College of Business
Universiti Utara Malaysia

Tarikh : **3 JULAI 2017**
(Date)

PERMISSION TO USE

In presenting this project paper in partial fulfillment of the requirements for a postgraduate degree from Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this project paper in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in her absence, by the Dean of School of Business Management. It is understood that any copying or publication or use of this project paper or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation/project paper.

Request for permission to copy or to make other use of materials in this project paper in whole or in part should be addressed to:

Dean of School of Business Management
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ACKNOWLEDGEMENT

My sincere appreciation and acknowledgement to my lecturer Dr. Chong Yen Wan for her time, patience, effort and guidance in helping me to complete this research paper as requirement for completing my master degree in MSc Management (coursework). Thank you also to all my master subject lecturers who have thought me during coursework period.

I would like to thank my family for their love and support. Thank you also to my siblings Dinesh Kumar and Shiva Kanthan always guided me and give moral support to myself accordingly.

Finally, I also would like to thank to all those helped me especially my dearest friend Ali Raza to carry out the research paper in general and supported me in the whole process.

ABSTRACT

Lifelong learning has been one of the most explored agenda in today's education field. Latest technology advancements and modern procedures as well provide new challenges for individual learners in their knowledge learning process. Therefore, people require to involve in the learning process consistently in their lifespan to adapt nature of changing environment of the information age to be ore competence and successful. There have been many empirical studies on lifelong learning in general. Consequently, this study is attempts to examine the abilities and competency of university students and their tendency on involving in lifelong learning. The theoretical framework of this research identifies three abilities of university students which influences the students lifelong learning. Those main three capability that influences the students lifelong learning are self-regulated learning, personal knowledge management skills and English competency accordingly. Overall, 380 students were participated in this correlational study. The analysis of this study considers the empirical literature, and the difference between independent and dependent variables. The findings of the research it has been found that all the predictors of the study have significant relationship with students' lifelong learning. The paper also makes recommendations for future research.

Keywords: Lifelong Learning, Self-Regulated Learning, Personal Knowledge Management Skills,and English Competency.

ABSTRAK

Pembelajaran sepanjang hayat telah menjadi salah satu agenda yang paling diterokai dalam bidang pendidikan hari ini. Kemajuan teknologi terkini serta prosedur moden telah meningkatkan cabaran baru untuk peneroka ilmu dalam proses pembelajaran pengetahuan mereka. Oleh itu, orang memerlukan untuk melibatkan diri dalam proses pembelajaran secara konsisten dalam jangka hayat mereka untuk menyesuaikan diri dengan persekitaran yang kian berubah pada era maklumat ini supaya lebih berkemampuan dan berjaya. Terdapat banyak kajian empirikal mengenai pembelajaran sepanjang hayat secara umum. Pada masa yang sama, kajian ini adalah salah satu percubaan untuk mengkaji kebolehan dan kecekapan pelajar universiti dan kecenderungan mereka pada yang terlibat dalam pembelajaran sepanjang hayat. Rangka kerja teori kajian ini mengenalpasti tiga kebolehan pelajar universiti yang mempengaruhi pembelajaran sepanjang hayat pelajar. Ketiga-tiga kemahiran dan keupayaan yang mempengaruhi pembelajaran sepanjang hayat pelajar pembelajaran adalah pembelajaran kendiri, kemahiran pengurusan pengetahuan peribadi dan kecekapan bahasa Inggeris sewajarnya. Secara keseluruhan, seramai 380 pelajar telah mengambil bahagian dalam kajian korelasi ini. Analisis kajian ini mengambil kira kesusasteraan empirikal, dan perbezaan antara pembolehubah bebas dan bergantung. Hasil kajian yang telah didapati bahawa semua peramal kajian mempunyai hubungan yang signifikan dengan pembelajaran sepanjang hayat pelajar. juga membuat cadangan untuk kajian masa depan.

Kata kunci: Pembelajaran Sepanjang Hayat, Pembelajaran Kendiri, Kemahiran Pengurusan Pengetahuan Peribadi, dan English Kompetensi.

TABLE OF CONTENTS

CHAPTER 2: LITERATURE REVIEW

CHAPTER 3: METHODOLOGY

CHAPTER 5: DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

LIST OF TABLE

LIST OF FIGURE

ABBREVIATION

MOHE	Ministry of Higher Education
LLL	Lifelong learning
SRL	Self-Regulated Learning
PKM	Personal Knowledge Management
EC	English Competency
UUM	Universiti Utara Malaysia
SPSS	Statistical Package for the Social Science
ODL	Open and Distance Learning
MOOCs	Massive Open Online Courses

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In today's knowledge economy, a nation's success relies on the skills, competencies and knowledge of its people to face global challenges. The greatest acquisition of competencies and knowledge are becoming huge elements of competence among nations, corporate entity, and individuals. The latest advancement technologies provide plenty of novel chances for individual to acquire knowledge and skills in throughout their life. Latest technology advancements and modern procedures as well provide new challenges for individual learners in their knowledge learning process. Therefore, people require to involve in the learning process consistently in their lifespan to adapt nature of changing environment of the information age to be more competence and successful.

Lifelong learning has been one of the most explored agenda in today's education field. Lifelong learning is a consistent process of acquiring knowledge and skills to enhance individual competence according to the objective of the learning objectives and subject matter. In Malaysian perspective, lifelong learning is closely linked with the employability and productivity of human resource. The Malaysian government's main objective is to promote lifelong learning at the higher institution. Therefore, the government's fundamental motive is to provide and attain the country's needs with skilled, knowledgeable, experienced and competent human capital. Besides that, lifelong learning also has been mentioned in various government documents as policy statements and several plans were strategized to deliver the access of lifelong learning for every

resident of the country. Since the release of the Eighth Malaysia Plan (2001–05) in year 2001, the concept of lifelong learning, knowledge economy, development of human capital and capacity-building have gained various mentions in several national plan and documents. This movement of government in giving important to field of knowledge management and human resource management indicates a clear vision of Malaysia's targets to grow to be a well developed nation by year 2020.

Moreover, in relation with the Malaysian plan to promote lifelong learning at the higher institution the government comes up with Malaysia's Blueprint on acclimatization of lifelong learning for Malaysia (2011 to 2020). The Blueprint was initiates by the Ministry of Higher Education (MOHE) in November 2011, it represents the nation's conscious attempt on making lifelong learning as new lifestyle of its people as well as to represent the values of nation that can be cultivated and passed on from one generation to another. This can be seen in the document's directing principle where the acknowledgement of lifelong learning as the human capital development's third pillar in cooperation with the school system and higher education system. Consequently, it is considered an important move in relation to make lifelong learning as a part of the mainstream reach in the direction of improved education system in Malaysia in broader sense.

Necessarily, continuous change and learning process occur throughout our lifespan for the purpose of development in various disciplines. In the same notion, learning is also all about the change that revolve around human beings, and the change is the motivating factor which drives a person to involved in learning. In these diverse areas of human life,

changing environment always raises questions about the preparation to take advantage of opportunities to achieve more demanding life goals.

The compulsory skills for a lifelong learner include, the magnitude to set personal goals in a very practical way; effectiveness in applying knowledge; efficiency in assessing one's own learning; understand materials from different topic; and the ability to use and efficacy in using different learning strategies. Collins (2009) has identified those skills which include well-developed communication skills, information-seeking and retrieval skills, high-order thinking skills, self-directed learning skills, and Meta cognitive skills.

The current study focuses on the self-regulated learning, personal knowledge management (PKM) skills and English competency on student's lifelong learning. Therefore, in relation with the creation of lifelong learners, the higher education system playing crucial role where they have the responsibility in producing graduates with the higher tendency of lifelong learning by providing a proper education system which can strengthen the meta cognitive abilities of the student parallel with vision of the Ministry of Higher Education of Malaysian Government. It is because the greater ability of lifelong learning among university students will be a highly competitive in terms of talent market when they keep on learning throughout their life time and they will be able to adapt the society. Therefore, as we discover ourselves getting broad into the age of globalization and information economy, an inclusive curriculum and a world class deliverance system and educational infrastructure is fundamental to develop supple and proficient lifelong learners.

1.2 Problem Statement

Malaysia aspires to become a regional center of educational superiority and entirely industrial nation by the year of 2020. Thus, the Malaysian government collaborates with the Ministry of Higher Education (MOHE) to bring the transformation of success and the quality human capital development of Malaysia. This paradigm step by Malaysian government will enhance the development of knowledgeable and skilled human capital. Thus, MOHE is responsible and responsive of the continuous changes that emerge around the triennial education system of the country and making more attempts to embrace and develop the best practices of world class higher education sources. MOHE also attempts to govern the country and effectively plays its role to change Malaysia into a high-income generating country by developing knowledgeable, skilled and inventive human resource capital. This requirement has transformed by MOHE for a substantial prominence for university students on lifelong learning.

On the other hand, encouraging lifelong learning's culture is among the most important element of the seven strategic areas which is outlined in the National Higher Education Strategic Plan. Regardless of high involvement of individual's in lifelong learning programs, there will be very poor coordination and management of lifelong learning at the national level. Meanwhile, higher education institution is not only a place for the knowledge sharing and skills acquisition instead it has become a platform that cultivates lifelong learning. In a general form, lifelong learning accepted as learning of formal and informal knowledge and workplace intellect range. More importantly, learning

throughout the life span also covers the expertise, education, behaviors and attitudes that people gain through their daily routine experiences (The Scottish Executive, 2000).

The world of knowledge economy, demands for more experienced and knowledgeable workers with more suppleness and persons with lifelong learning skills; and more positive in a more independent and team oriented working circumstances such as self-directed learning and crucial skills (Maier & Warren, 2000). Simultaneously, Sulaiman and Burke (2009) has explored that development of key skills is required to identify the problems which related with the Malaysian graduates' unemployment. Unfortunately, the education system of Malaysia has been bias towards formal educational system with national examinations for many years; it's where the major concern of parents and students more focus on academic achievement with 'A's and scholarships. However, only a little consideration was given to the non-formal and informal learning, although their distinction was matters, especially in terms of consistent development of professional and work-based learning, where the unformed and informal learning is acknowledged in a broader scheme by underpinning the nation's plans of transformation (Ashton and Newman, 2006).

Therefore, acquisition of both formal and lifelong education is required for human capital development to keep the gained skills to be applicable and the workforce more capable. To ease the consistency of knowledge acquisition and evolution of those abilities in the working world, the execution of the lifelong learning concept is important, being

beneficial for the individual's personal development as well as society (Field, 2005). Lifelong learning that sets the basis of this research is an approach that covers all the learning activities of the people that they perform throughout their lives to develop their knowledge, skills, and attitudes with a personal, social and/or from the viewpoint of employment to align their self to switching global conditions (Savuran, 2014). As the essential qualities of the establishment recommend, the awareness related to the lifelong learning can only be increased by providing the people with outstanding education opportunities which is possible in the tertiary education institution.

1.3 Research Objectives

1. To identify the relationship between student's Self-Regulated Learning and student's Lifelong Learning on university students.
2. To identify the relationship between student's Personal Knowledge Management Skills and student's Lifelong Learning on university students.
3. To identify the relationship between English Competency and student's Lifelong Learning on university students.
4. To identify the effects of self-regulated learning, personal knowledge management skills and English competency on Lifelong learning capability.
5. To identify the differences between demographic profile characteristics such as gender, age, nationality, marital status, faculty of study, educational level and CGPA with regards to lifelong learning self-regulated learning, personal knowledge management skills and english competency.

1.4 Research Questions

1. What is the relationship between student's Self-Regulated Learning and student's Lifelong Learning on University Students?
2. What is the relationship between student's Personal Knowledge Management (PKM) Skills and student's Lifelong Learning on University Students?
3. What is the relationship between English Competency and student's Lifelong Learning on University Students?
4. What are the effects of self-regulated learning, personal Knowledge Management (PKM) skills and English competency on Lifelong learning capability?
5. Are there any differences between demographic profile characteristics such as gender, age, nationality, marital status, faculty of study, educational level and CGPA with regards to lifelong learning self-regulated learning, personal knowledge management skills and english competency.

1.5 Significance of the study

The findings of this study could provide a database that can be used as a tangible reference for more meaningful educational services. Results could be useful in improvising lifelong learning of UUM students especially to those elements related with the predictors of the study which are self-regulated learning, student's personal knowledge management skills and English competency accordingly.

Lifelong learning is not restricted to the broad economic opportunities but also would direct to a possibility for personal growth and enhancement in an intellectual manner. The ability to learn new expertise throughout our lifetime is the best deal to secure the individual with gainful employment (Buntat et al., 2013). The findings of the present study can be both theoretically and practically significant.

In a theoretical manner, the study demonstrates to students the importance of self-regulated learning and creates awareness among the students in terms of mastering their studies and completing their tasks and studies successfully. Furthermore, the current study would also provide insight for the students to understand the impact of personal knowledge management skills on their lifelong learning. An effective manipulation of PKM skills may enhance the ability of UUM students on how to learn and acquiring knowledge to support lifelong learning and the sustainable individual development. Since, English language teaching plays a crucial role in educational system of higher education institution. The findings of the research could find essential feedback and information about their English language competency which could provide a proper guidance and direction on better English language skills development of UUM students and for a more improved language proficiency and aid the students in future for their lifelong learning and knowledge acquirement. All the above factors increase the need for lifelong or continuous learning if the nation wants to progress and become more competitive at the global level.

In addition to theory development, this study is also significant in a practical sense. The administrator or management of UUM could use the results of the study as a reference in formulating new policies and effective programs that can prepare and enhance the students' for lifelong learning.

1.6 Scope of the study

The research intends to study the impact of Self-Regulated Learning, Personal Knowledge Management Skills and English competency on University Students Lifelong Learning. The scope of this study also being specified among higher education students especially, 'UUM' students to examine the readiness of the students to adapt expertise and additional knowledge as a tool for them to acquire lifelong learning. On the other word, it can be claimed that ability of university students to involve in the process of "learning to learn" in this ever-changing environment for self-development and being competence.

1.7 Definition of key terms

1.7.1 Lifelong learning

Lifelong learning is a planned or intended learning with specific objectives in which the learning should be undertaken throughout one's lifetime (Jessup-Anger, 2009).

1.7.2 Self-regulated learning

Self-regulated learning is a lively, productive process where the learners place objectives for their intellect process and strive to observe, manage and administer their learning, determination, and behavior, escorted and obligated by their objectives and contextual hallmark on the surroundings (Pintrich, 1999).

1.7.3 Personal knowledge management skills

Personal knowledge management skills should be considered as a set of skills and methods of resolving issues in sensible and the actual degree (Dorsey, 2000).

1.7.4 English competency

Language competency interpreted as the understanding of language for example English language, cognitive facet in understanding a language. There certain principal in master the language competency which is by excel in spoken and written language, utilizing the language, understanding of the English language and its cultural context, and competency of language learning (Bonnet,2004).

1.8 Organization of the Study

This research is consisting of five chapters which were organized as below:

Chapter one provides introduction to the study, the background of the study, the problem statement, the research questions, the research objectives, and the significance of the study. Generally, this chapter provides the background, and purpose for the study in addition to its importance. **Chapter two** focuses on the review of existing literatures related to the topic of this study. It will highlight previous literatures and underpinning theories on students' lifelong learning, in relation with the self-regulated learning, personal knowledge management skills and English competency of students. Later, the chapter also will discuss about theoretical framework and hypotheses development of the study.

Chapter three discuss about the research methodology. It will explain how the research is approached, what is included in this study, the method that was used to collect the data for the research and how the data for the study was analyzed. The chapter will include the research design, unit of analysis, population frame, sample design, measurement and instrumentation, and data analysis techniques. **Chapter four** covered the results in this study. The analysis on data gathered was reported. The correlation and independent t-test were reported. **Chapter five** emphasize on the discussion and recommendation of the study. Future studies were also proposed.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter will focus on the concepts and related literature on lifelong learning as the dependent variable of the study, followed by the predictor of the study namely, Self-Regulated Learning, Personal Knowledge Management (PKM) Skills and English competency which will impact the lifelong learning of UUM students.

2.2 Lifelong learning

Lifelong learning extended across various sectors, where it cultivates acquisition of knowledge beyond traditional education and in every part of the adult life. This interpretation is associated with the 4 pillars of education for future which has defined as underneath (Jacques et al,1996): -

a) Learning to know – it's a process of conquering knowledge tools like skills and language competency besides of the learning of constructive knowledge. For instance, the additional skills or competence of an individual will ease the process of learning for them.

b) Learning to do – is a learning process preparing individuals for all kind of work in for a current and future situation included with adaption of innovation and understanding working environments in future.

c)Learning to live together, and with others- focuses, future learning's also will create an environment for the learner to solve clashes peacefully, encountering other individual and culture, promote the development capability of community, individual competency and capacity, economic elasticity, and community inclusion.

d) Learning to be – grant an education contribution towards a person in terms of complete individual development from mind to the body, intellectual capacity, responsiveness, aesthetic pleasure and spirituality.

Lifelong learning" is a dynamic procedure that looks for, comprehends and applies information to accomplish individual and expert objectives all through life (Seval, Gulsun, and Atanur, 2012). Lifelong learning can be comprehended as the path in which intentionally and self – roused experts always look for information (Myers and Greenson, 2012). Aynur and Bülent (2009) characterize the lifelong learning as all learning occasions done to build up the information from the individual and social measurement, with a specific end goal to accomplish a quality life and a steady learning in a creating world.

Lifelong learning is a procedure of achieving individual, social and expert improvement for the duration of the life expectancy of people (Dave, 1975). As it were, allude to learning exercises, including all skills and branches of information, utilizing every single conceivable mean, and giving the chance to all individuals for full improvement of their identities (Sell, 1978). On the other hand, adult learning is the consequence of long lasting instruction which is a persistent formal and casual process that happens over a life expectancy delivering a learning society (Wain, 1987). Europa (2003) defined lifelong learning as activities that happen in life and were directed towards enhancing understanding, competence and expertise of people, community and work based attributes. It empowers individuals to learn at various circumstances, in various routes, for various purposes at different phases of their lives and careers (Preece, 2011).Aspin and Chapman (2001) have claimed that that lifelong education constituted of three distinct "plans" and thus can fill three unique capacities or needs, which, in their words, are: (a) long lasting learning for economic advancement and improvement; (b) adult learning for self-improvement and satisfaction; and (c) lifelong education for social comprehensiveness and fair understanding and action.

In the meantime, the European Report on the Quality of School Education (European Commission, 2000), which communicates the last decisions of a workgroup framed by specialists from the Departments of Education of 27 nations developed 16 pointers that constitute the premise of a quality instructive framework. One of them is the capacity to "figure out how to realize" which is viewed as the vital measure of accomplishment in the work environment and in the public generally. It portrays an all-encompassing way to

deal with learning that covers more than what happens in the classroom. This is alluded to as long lasting learning a theory that includes the improvement of information, abilities, states of mind, and values for the duration of one's life from early youth through adulthood.

Furthermore, Lifelong learning is an approach including information, capacities and states of mind, and in addition all the learning's of individual, social or business related. Lifelong learning is carried on through profession based instruction Lifelong learning also incorporates with formal and basic learning courses which empower learning of technical learning and capacities, professional capacities from work environment, and in addition learning to learn different capacities (European Council, 2000).

A lifelong learner is an individual who has the inspiration and state of mind important to persistently seek after learning through all phases of his or her life (Candy, 1991; Cropley and Dave 1978; Knapper and Cropley, 2000; Wain, 1987). A person's potential in learning and the advancement from beginner to master rely on upon the improvement of mastery in figuring out learning how to learn (comprehending what and how to learn), approaching an important information construct to work, and being inspired to learn. At the point when competency in an area expands, the learner starts to build up their own circumstances related to their learning objectives, picks and utilizes more sufficient techniques, and shows expanding capacity to work freely (Bolhuis, 2003).

Proceeding with learning is just a single some portion of the cognitive procedure and exists as one phase inside the long-lasting learning continuum (Madill, 1984). Nevertheless, lifelong learning considers the formal and non-formal learning forms in which youngsters, youngsters, and adults are included throughout their lifetimes. Lifelong learning, as indicated by Royce (1999), "expects to provide students with the abilities to continue learning all through life and furthermore uplifting states of mind towards realizing which acknowledged generally and even welcome the change and new learning". An appropriate learning condition encourages the improvement of aptitudes in the students and their capacity to learn (Ashton and Newman, 2006).

Tight, (1996) has compressed three key components of lifelong learning, which is first of all, a long-lasting learning is viewed as expanding upon and influencing all current educational providers, including both schools and organizations of tertiary education. Second, it stretches out past the formal educational providers to include all peoples, groups and agencies that required in any sort of learning action. Third, it lays on the conviction that people are, or can progress toward becoming, self-coordinating, and that they will see the incentive in participating in long lasting learning." However, the lifelong education is more than grown-up instruction, which frequently underlines giving individuals chances to take part in (school-like) learning experience during their adult life (Fischer,2001).

Lifelong education has been additionally stretched out to long lasting learning (Smith, 1996). One explanation behind the move from "education" to "learning" is that "education" concentrates on arranged and planned activities and "learning" can incorporate both casual occurrence activities and formally educated activities (Merriam and Brockett, 1997). McCombs (1991), recommended that the formal education condition ought to advance the lifelong learning, and the formal education motives. The educational institutions should not just give learning materials/syllabus to the students, additionally concentrates more on improvement of more assorted parts of people, for example, their meta-cognitive and attitudes dimensions.

Since, lifelong education is attitudinal that a person can and ought to be interested in new thoughts, choices, abilities, or practices. Skills for long lasting learning identify with the need to secure, process, and exchange information. On the other word, lifelong learners should have the capacity to figure out what they should realize and how to make and complete a learning arrangement. They must know how to find suitable data, assess its quality, sort out it, and utilize it adequately. Taking the idea of lifelong learning is a process of figuring out how to incorporate all learning activities which incorporate formal, non-formal and casual learning's (Commission of the European Commission, EC, 2000) it is formal learning and to a significantly lesser degree, non-formal learning that can be depicted as the center of lifelong learning programs and activities in the Malaysian perspective.

The Malaysian Higher Education ministry has noticed that lifelong learning enhances through distance learning, e-learning, workplace experience and part-time learning will become an integral entity to support Malaysia's the development of human capital and the nation's innovation and knowledge based economy (MOHE, 2007). MOHE taking initiative by implementing the agenda of lifelong learning of the country and assist the government to transform the nation into a high-income economy by 2020. MOHE has taken the initiative to embark on a Blueprint on Enculturation of LLL for Malaysia: 2011-2020.

In Malaysian context, iCGPA is among one of the venture initiate by the Malaysian government for evaluating and reporting the development and performance of students as well as output of learning on their ethics, knowledge and capabilities. As reported in Malaysian Education Blueprint (Higher Education) 2015-2025 the attainment was outlined in the six attributes of student aspirations and as well as the eight domains of learning outcomes as listed in the Malaysian Qualifications Framework. It is an integrated evaluating component that is meant to help different stakeholders in decision makings or for overall development planning. The reason for this system is to drive advancement and arrangement in educational programs outline, delivery and evaluation at program level and at course level concentrating on university students learning experience towards improvement of a holistic and personal development.

In relation with the iCGPA system, the students' performance will be evaluated in academic and non- academic perspectives. The students' performance at the end of each semester will be presented in two forms. Firstly, the listing of subjects and grades as featured in conventional academic transcripts, and the second one is a "spider web" of points profiling specific skills sets obtained through extra-curricular activities. A total of nine graduate attributes have been identified for assessment:

- Practical skills;
- Knowledge and understanding;
- Professional skills, ethics and values;
- Unity and patriotism.
- Social skills and responsibilities;
- Problem-solving skills and scientific thinking;
- Communication, leadership and teamwork;
- Entrepreneurship and management;
- Information management and life-long learning;

As known earlier, iCGPA is one of the initiatives under the first shift of the Malaysia Education Blueprint 2015-2025 (Higher Education). iCGPA can help overcome the mismatch between the quality of graduates and requirements of employers, as the existing system only measured a student's academic ability. The system of iCGPA had begun to be studied and developed since 2009 through collaboration with UKM and UiTM. Besides that, the Malaysian Qualifications Agency (MQA) also took part in the

integrated venture by proving consultation service. The iCGPA grading will be reported in students' scorecards using the 'Spider Web' method which will list down the students' performance. The assessment is not only done through activities in the classroom, but also other activities on campus. Consequently, by introducing this iCGPA system the Malaysian government has creating some opportunity for the higher education students to gain more additional skills and ability to cope with their lifelong learning.

On the other hand, besides proving extra-curricular activities, it is crucial to preparing conducive environment for the university student for gaining of extra skills and capabilities. Preparing students for long lasting learning setting them up to make complex judgments about their own work and for future conditions. In general, setting up and extending a responsive individual learning environment to successfully use on and after that improve the utilization of existing or rising learning assets and innovations. This condition is frequently called as PLE&N (Personal Learning Environment and Network) (Valtonen et al., 2012). Consequently, a PLE&N comprises of processing/specialized gadgets, systems associating an immense number of individuals and electronic learning devices, programming for different learning activities and substantial scale archives of learning and information. In typical PLE&N which is student centered, a student can develop profound psychological skills for critical thinking and cooperative work with others and additionally gains those qualities or properties (e.g. self-directed learning strategy) required for lifelong learning after graduation. As information and are advancing quickly, new upgraded incarnations of equipment and programming devices

are the market patterns and students need to advance their learning abilities in future (Wing, Tsang & Tsui, 2017).

A fundamental characteristic in general is the idea of lifelong learning is that learning can occur outside the formal setting of classrooms and libraries. The utilization of advancements of technologies is a case of the boundless potential outcomes required in learning; clear in open and distance learning (ODL) approaches that use innovation based developments, for example, e-learning and mobile learning. The same methods can be embraced for long lasting learning, regardless of whether in course or program delivery or for awareness purposes. Development in Internet entrance and general mechanical mindfulness and inclination, advancements in educational technology (particularly web based learning) can likewise turn out to be a helpful variable to support lifelong learning endeavors in Malaysia. Web based learning can energize significantly more prominent quantities of individuals to take up long lasting adapting, either through ODL courses and projects, online stages, or massive open online courses (MOOCs).

Long lasting learning process fuses the capacities of seeing differences, rational reasoning, following advancements, and using from information center and utilizing the innovation. Knowing how to reach and get to information is a capacity that people require in lifelong learning. People must be data proficient to get the intellectual capital required for their works in their leisure time and when they are on their own (Hancock,

2005). In this way, it is crucial to introduce an individual to the knowledge society, who can utilize this procedure effectively (Harste, 2003; Kist, 2004).

2.3 Self-regulated learning

Knowles (1975) portrays self-regulated learning as "a procedure in which people step up with regards to the assistance of others in diagnosing their knowledge acquiring needs, figuring objectives, recognizing human and material assets, and assessing learning results. self-regulated learners comprehend when and how to use systems that expansion diligence and execution (Schunk & Zimmerman, 1994). They deliberately utilize meta-cognitive techniques that consolidate self-checking and evaluative segments that consider self-perception and self-response (Kauffman, 2004).

Self-control of learning includes more than point by point information of an expertise; it includes the mindfulness, self-inspiration, and behavioral ability to actualize that knowledge correctly. Zimmerman (1989) brought up that students can be portrayed as self-controlled in the way that they set up their objectives, create arrangements to accomplish those objectives, focus on and actualize the arrangement, think about their activities and redirect action. He portrays these students as meta-cognitively, motivationally and behaviorally dynamic members in their own learning forms.

Self-regulation is a variable quality of learners. The self-administrative process laid out by Zimmerman (1998) can assist the learners to create self-control and volition to learn in taking part in their protracted research extend. Presentation to these self-direction

strategies is valuable in adapting yet if the learner ends up noticeably capable in their application, these systems can be utilized as a part of long lasting learning in casual settings.

Elias and MacDonald (2007) have mentioned that self-regulation clarifies how an individual control and coordinates their own behavior. Self-direction is firmly identified with the self-evaluation skills which includes higher level awareness that encourages pupils to have the capacity to observe their learning and achievement. The capacity to control or observe one's own achievement related with meta-cognitive elements. Whereas Reid (2001) characterize meta-cognitive as considering, monitoring the learning procedure and using that in new learning. With regards to critical thinking, Meta-cognition will help a person to control the conduct in utilizing facts, procedures and strategies adequately (Schraw, 1998). It is demonstrated that meta-cognitive skills will prompts self- regulation (Zimmerman, 1995). That clarifies why Pintrich (2000) highlighted that self-direction can be measured as an individual's competency in checking and managing one's learning by the utilization of an assortment of cognitive and meta-cognitive techniques.

Mok et al. (2006) contend that students need to end up plainly self-coordinated learners who are equipped for goal setting, self-observing, self-evaluation and self-amendment to increase deep rooted learning ability. Self-Regulated learning procedures are students'

abilities that are not straightforwardly identified with their coursework and regions of study, however rather to assets that students can use to deal with their learning.

There is a lot of past empirical, which is mostly published in US, demonstrating that more self- regulated learners are considered as more powerful learners: they are more creative, persistent and higher achievers (Pintrich, 1995). Pintrich and Scharuben (1991), students with positive mentality and high inspiration will probably exhibit self-regulation and performance- oriented and tend to do well in their academics. That discloses why academician needs to consider students' self-direction and inspiration, because the two-corresponded part will anticipate whether students will perform in their academic and lifelong learning in future (Zimmerman, 2001).

Additionally, the even more learning has turn into self-managed, the more students expect control over their learning and the less reliant they are on outside instructor when they take part in regulatory exercises (Zimmerman & Schunk, 2004). The improvement of self-direction in students can be encouraged by organizing learning situations in ways that make learning forms explicit, through meta-subjective training, self-monitoring and by giving chances to practice self-control (Pintrich, 1995).

2.3.1 Self-regulated learning and students lifelong learning

The Commission of European communities (2000) in the Memorandum of Lifelong Learning expressed that self-directed learning is viewed as an essential for nonstop

lifelong learning. As indicated by Candy (1991) there is a connection between long lasting earning and self-regulated learning, which is a feature of lifelong learning. Self-direction is essential because a noteworthy capacity of training is the improvement of lifelong learning abilities. Self-control methodologies can enhance students' learning can go far to helping them plan for testing learning undertakings and appraisals (Graham and Harris, 2005).

The Commission of the European People group (2006) puts forward that the capacity of figuring out how to learn as one of the key abilities for lifelong education. It likewise claims that self-direction of learning turns into a fundamental ability for college students in European Arrangement of Training (Wirth & Leutner, 2008). Gargallo and Ferras (2000) maintain that a huge measure of data and substance nowadays information age makes the learning of methodologies to deal with that data vital to keep learning for the duration of one's life.

Verhoeven, Heerwegh, and Wit, (2012) contend that this necessity has created generated a new tradition of gaining knowledge of that places excellent emphasis on acquisition of strategies, each in primary trendy education in addition to in university or outside of the university, which focuses on the mechanisms that assist college students to control their very own mastering of knowledge. Self-inspiration is imperative to the procedure of self-direction since it obliges learners to accept control over their learning (Corno, 1993). Besides, self-inspiration happens without outer prizes or impetuses and can accordingly be a solid pointer that a learner is ending up plainly more self-governing (Zimmerman,

2004). By setting up their own taking in objectives and discovering inspiration from inside to gain ground toward those objectives, understudies will probably continue through troublesome learning undertakings and regularly discover the learning procedure even more satisfying (Wolters, 2003).

It has been highlighted by the investigation of Stoeger and Ziegler (2008) showed that once students were given SRL techniques to utilize, they will probably work on perusing autonomously. Lenne, Abel, Trigano and Adeline (2008) insist that numerous advanced education activities that expect to expand the assortment of exercises for students tend to expel innovative assets or to neglect to help students to adjust to mechanical tools that are accessible to them and support self-directed learning.

In Malaysian, educational research, Self-regulated learning is still a new area of study. To date, only very few studies have been conducted on this topic in Malaysia. The results of correlation analyses, obtained from a study by Ng and Abu Bakar (2006), revealed that Malaysian students' self-regulated learning is related to their motivational beliefs. The result of such findings lends further support to social cognitive theory which initiate more approaches in future research, which proposes that motivational beliefs are the underlying premise to self-regulated learning.

2.4 Personal knowledge management (PKM) skills

Knowledge management is a key issue that is widely perceived at any hierarchical level. Nonetheless, the usage of effective knowledge management still represents a challenge

and there has been a move of focus to the individual approach to deal with KM (Barth, 2004). This move has conveyed scientists' regard for PKM to investigate the individual dimension of KM (Apshvalka & Wendorff, 2005).

Regardless of knowledge management has been found to advance organizational learning, it concentrates on organizational level. In any case, this organizational learning can't be gathered or made without people from inside and outside the corporate entity. This reality prompts the significance of people's improvement and figuring out how to make them ready to participate, contribute, and advance the organizational learning.

Personal Knowledge Management can add to the people's learning since it concentrates on individual instead of the organization itself. Over the most recent few years, perceiving that information is close to personal in nature, there has been a growing enthusiasm for Personal Knowledge Management (PKM) as another model to KM. PKM represents a bottom-up approach to traditional KM directed at the needs of individual knowledge workers (Pollard, 2008). It "concentrates on helping people turn out to be more powerful in individual, authoritative and social conditions" (Gorman & Pauleen, 2011)

Myint (2004) mentioned about the value of PKM in the work environment by stressing the significance of KM for people. He contended that KM ought to be an existence cycle that starts with PKM. The value of PKM for people was found to enhance the individual

capabilities, as proposed by Cheetham and Chivers (1996, 1998). Recovering expertise gives a high incentive in learning/self-advancement ability. Evaluating skill provides a very high value in problem solving competence, learning/self-development competence, mental agility competence, analysis competence, and creativity competence and reflecting competence. Organizing skill provides very high values in problem solving competence, mental agility competence, analyzing competence, learning/self-development competence, and reflecting competences. Analyzing skill provides very high values in, mental agility competence, problem solving competence, learning/self-development competence, creativity competence, mental agility competence, reflecting competence and analyzing competence. Collaborating skill provides very high values in communication competence, creativity competence and problem solving competence. Presenting skill provides a very high value in communication competence and creativity competence.

The main purpose of PKM is to give a system to Individual Knowledge Workers to manage new data, coordinate it and advance every individual learning database in a viable way. Doing this effectively will engage everybody to effortlessly apply their very own insight in managing new and old issues, to gain from new involvement and to make new learning.

Higgison (2004), characterized PKM as supporting and dealing with the individual data and information to end up easily, valuable, and significant for people, making life

simpler, and improving individual capital. Volkel and Abecker (2008), has claimed PKM as the procedure that enables people to deal with their insight. As per Efimova (2005), individual's knowledge management is an intelligent procedure between people's thoughts and learning. As indicated by Wright (2005), PKM is the limit and capacity to get to and apply knowledge and data assets and procedures to expand the efficiency, viability, and advancement of people.

PKM is depicted by Frand and Hixon (1999), as a framework that is planned by people for individual usage. Adapting the PKM skills is a complex and a long term procedure that can be encouraged by making conditions that help individuals to learn important and powerful self-administration abilities, practices and values expected to work in the information society (Pettenati, Cigognini, Guerin, & Mangione , 2009).

To competent and successful in today's information age, knowledge workers need to exercise data competent abilities that emphasis on basic considering, critical thinking, decision making, basic leadership and secured information sharing. (Agnihotri & Troutt, 2009)," PKM abilities is a framework that coordinates and composes the critical data and makes it an important element of the individual learning resources, and plans to change irregular data into a precise and appropriate information (Frand & Hixon 1999). After they had laid out five PKM skills as searching, classifying, storing distributing, evaluating and integrating skills, (Avery, Brooks, Brown, Dorsey, & O'Conner, 2001) widened the Frand and Hixon PKM system well beyond its formulation.

Avery et al. (2001) characterized PKM as a general organized process for deliberately overseeing data and transforming it into helpful information. There are 7 skills in their proposed PKM framework which are for (a) Retrieving data; (b) Evaluating data; (c) Organizing data; (d) Collaborating around data; (e) Analyzing data; (f) Presenting data; and (g) Securing data. Understanding the significance of data abilities in overseeing individual learning, Dorsey (2000) characterized seven center judicious data skills essential to PKM application as show in the table below.

Table 2.1

Personal knowledge management skills

PKM skills	**Definition**
Retrieving information	PKM skills require successful and proficient data recovery. Such expertise's incorporate dealing with a person's seeking procedure.
Evaluating information	PKM requires the assessment of the broadly accessible data that is neither separated nor edited with the target of discovering important and applicable data.
Organizing information	The association of data encourages KM by interfacing new and old data.
Collaborating around information	PKM abilities that empower learning of workers to involve in high-esteem activities during the time spent working together around data.
Analyzing information	Expanding on data association abilities, analyzing the data helps users to change the important information into learning.

Presenting information	This PKM ability includes displaying data to others through compelling outline and interaction.
Securing information	With a developing number of dangers and openings related with data sharing, knowledge should be capable for plotting tradeoffs in regards to security.

Creating PKM abilities in learning conditions supported by Web 2.0 devices can help today's higher education learners for a lifelong learning, empowering them to perform better in a globalized, world. Colleges and universities have a responsibility to furnish their graduates with the skills which is fundamental for investment in the new types of lifelong and expansive learning assist by web-based social networking sites (Cigognini, Pettenati, & Edirisingha, 2010).

Even, the Malaysian Government places major important on the Information and Communications Technology (ICT) development and the utilization of E-Learning. The measures put in place include the National IT Agenda's development in 1996, and the establishment of the National Information Technology Council (NITC). This is due to E-Learning has been identified as one of the five Strategic Thrust Areas which concern trade on enhancement of the culture of a lifelong learning. On this regards, the Ministry of Education and the National Information Technology Council (NITC) are developing the MyGfL. Under this initiative, the Malaysian government has created a platform for the Malaysians to access online learning which will lead them to involve in the lifelong learning in future. Consequently, one of the key objectives of this project is to develop

quality educational content/resources for e-learning and lifelong learning to be accessed by schools, colleges, universities, public libraries and community centers.

2.4.1 Personal knowledge management (PKM) skill and Students lifelong learning

Gaining PKM skills is an unpredictable and long haul handle that can be facilitated by creating conditions that help individuals to learn important and viable self-administration skills, practices, and values expected to work in the information society (Cigognini, Pettenati, & Edirisingha , 2010). Swigon (2013) argued that PKM is a multidisciplinary issue and it targets to qualify people with abilities and capacities to get by in changing organizational and social conditions.

The issues of the advancement and the acquisition of PKM abilities required to enhance the lifelong learners in the Knowledge Society has been dealt with past works (Pettenati, Cigognini & Sorrentino, 2007). By gaining competencies in the acquisition of the individual information administration skills can be a move toward maintaining the change of worldview from an education for future living to a genuine "lifelong learning to learn "view (Pettenati & Cigognini2009).

Past literature of PKM skills required to enhance lifelong learners in the knowledge society on the advancement of a pedagogical model that targeted for recognizing and acknowledging the PKM skills that the learner should to create to reach their life goals by

collaborate effectively more with formal and casual learning forms in an online domain (Cigognini, Pettenati, & Edirisingha ,2010).

The fundamental PKM skills distinguished as a set of subjective abilities that people need to create, and that can't be viewed as whole without representing further dominance of skills, for example, creating and sharing information inside a system and utilizing its assets (Cigognini et al., 2007). This view, supported by few authors' that research and teaching experiences, drove them to enlarge the essential model (Cigognini, Pettenati, Paoletti, & Edirisingha, 2008) to incorporate higher-arrange skills and capacities, inspired through leading meetings with people regarded to be master of Lifelong Learners 2.0 (Pettenati et al., 2009).

An empirical study on PKM Skills in regards with WEB 2.0 which conducted by Pettenati et al. (2007) explored users should acquire some essential PKM skills, which were investigated against the current Web 2.0 technologies. From the study the researcher have concluded that PKM skills are not sufficient to ensure that online learners utilizing social network will have effective experience of online learning unless proper instructions and guidelines are designed (Pettenati et al., 2007).

The correlation study by Cheong and Tsui, (2010) found that the value and roles of individual and organizational competences are highly correlated to each other. On the other word, it can be said that the individual competency will directly influence

organization's competency as an overall. It can be great signal to executives that enhancing the PKM skills for individual knowledge workers will result in developing the organization competences. It is an area that both researchers and executives should focus on and the authors believe that PKM is the foundation on which to build an effective knowledge organization.

Besides that, study conducted by Alamen and Tasir (2015) found the relationship on practice of personal knowledge management for teachers in Malaysian secondary schools medium. It is found that the highest practice was relating to gathering information; however, the practice of presenting information was the lowest. Also, it is indicating that the practice of retrieving, organizing, evaluating, and analysis information that are related to personal information are higher than presenting and collaborating information that are related to sharing personal information and knowledge with others. This finding of the study is more logical it is because usually individuals spend more time in collecting information more than sharing this information. Also, this finding is in line with the studies conducted by Cheng (2011) and Cheong and Tsui (2011) level of individuals' competencies.

2.5 English competency

Bachman (1990) characterized language competency as the language capability or ability in the usage of the language by individuals. Oller (1983) avers that language proficiency is not a single unitary ability, but that it consists of several distinct but related constructs in addition to a general construct of language proficiency. English language proficiency

or linguistic proficiency referred the ability of an individual to speak or perform in an acquired language (Wikipedia, 2012). According to Blagojevich, Ruiz and Dunn (2004), English language proficiency: English language learners' communication information, ideas and concepts necessary for academic success in the content area of social studies.

2.5.1 English competency and students lifelong learning

To be expertise in foreign languages needs understanding of word power and practical grammar and a consciousness of the major kind of verbal communication and range of language. Understanding of societal protocols, and the aesthetic element and fixed pattern of languages is crucial for a person to masters any language (Gacic, 2009). Poor second language proficiency will lead to many problems for instance, issues with personal interaction skills, verbal understanding and expression; skills that impact on the learning of knowledge and the validation of results needed in the social surrounding in which lifelong learning occurs. On the other hand, it is considered nonviable to assume learners to involve in the critical thinking process if it is hard for to construct a well-structured sentence or paragraph for writing, or for analyze writing work and argue a point in a language which is not their native language (van den Berg, 2000). Besides that, the development of language is essential for learning and thinking but it also associates with about social communication and intellectual growth of a community (Chamot, 2002).

English language proficiency and interaction can be interpreted as the essential worth of the language as a tool for resolving problems, decision making and critical creative thinking and evaluative that requires to be enhanced beyond the whole subjects of further

knowledge acquisition (Niemann, Swanepoel & Venter,2000). Language, literacy and communication are intrinsic to human development and central to lifelong learning (Den-Berg, 1998). Competency is acknowledged as a creative venture, through which helps the learner to study and understands their experiences and later will lead them build links between others (Narsee, 2001). According to Freire (1973) literacy of learner which is connected to language, always grounded in background of their lifestyle and the meaning will be centered in the personal and social construction. The competency of an individual is emphasized by the activity of studying, listening and observing. Clayton (2000) specifies that continuous reading will promotes towards the development of essential cognitive skills that one must possess to succeed in adult learning.

In the other word, Pienaar (2000) has identified that cognition is the main point of interest in the reading process as it includes with relating vocabulary experience; acknowledging main ideas, general notions and procedures; identifying relationships; making differentiation; reflecting, explaining and reading between the lines which will lead one to masters a language from the prominent process of reading. The author believes that with the acquisition of these skills, a deep comprehension which happens will leads to one being able to critically assess ideas, which is compulsory in all the fields of lifelong learning (Pienaar, 2000).

2.6 Hypotheses development

H1: There is a significant relationship between student's Self- Regulated Learning and Student's Lifelong Learning.

H2: There is a significant relationship between student's Personal Knowledge Management Skills and Student's Lifelong Learning.

H3: There is a significant relationship between student's English Competency and Student's Lifelong Learning.

H4: There is a significant relationship between self-regulated learning, personal Knowledge Management (PKM) skills and English competency on Lifelong learning capability.

H5: There are differences between demographic profile characteristics such as gender, age, nationality, marital status, faculty of study, educational level and CGPA with regards to lifelong learning self-regulated learning, personal knowledge management skills and english competency.

2.7 Theoretical framework

The theoretical relationship between the impact of self-regulated learning, Personal Knowledge Management (PKM) Skills, and English Competency on Student's lifelong learning can be seen in the figure1 below. This study comprises three independent variables. The first independent variable in this study is self-regulated learning of students. The second independent variable of the study is personal knowledge

management skills and followed by third independent variable which is English competency. These three independent variables have direct impact with the lifelong learning of UUM students where the students lifelong learning playing the role of dependent variable to the predictors of the study.

The framework of the study was developed with association of Constructivist Learning Theory as the underpinning theory of research. Constructivism is fundamentally a theory in view of perception and logical learn about how individuals learn and the theory says that individuals build their own comprehension and information of the world, through encountering things and considering those encounters to build up their self (Hein, G.1991). Human advancement is about having the flexibility to have an impact one's personal life (Sen, 1999). This is identified with the constructivist idea about figuring out how to learn. The non-specific ability of figuring out learning how to learn must be with the help of having this flexibility; to ready to discover data, assess this data and can apply this data to new setting. As per Hein, (1991) the term constructivism can be described to be the possibility that learners build information for themselves separately and socially develops meaning they learns. The author additionally clarified that by tolerating constructivist theory of Dewey, Piaget and Vigotsky, all ensuing sensible perspectives of epistemology should be surrendered and learners needs to trust that information just can be learn as individual build it for their self. Dewey (1916), Piaget (1973), Vygotsky (1978) and Bruner (1996) each recommended that learners could learn effectively and build new information in view of their earlier learning.

Therefore, this current research also intent to study the relationship between prior knowledge and the construction of new knowledge among university students. Whereas, the prior knowledge of the study is self-regulated learning, personal knowledge management skills and English competency followed by the new knowledge construction or acquisition which is lifelong learning. The developed frame work of the study has been illustrated in the figure 2.1 below.

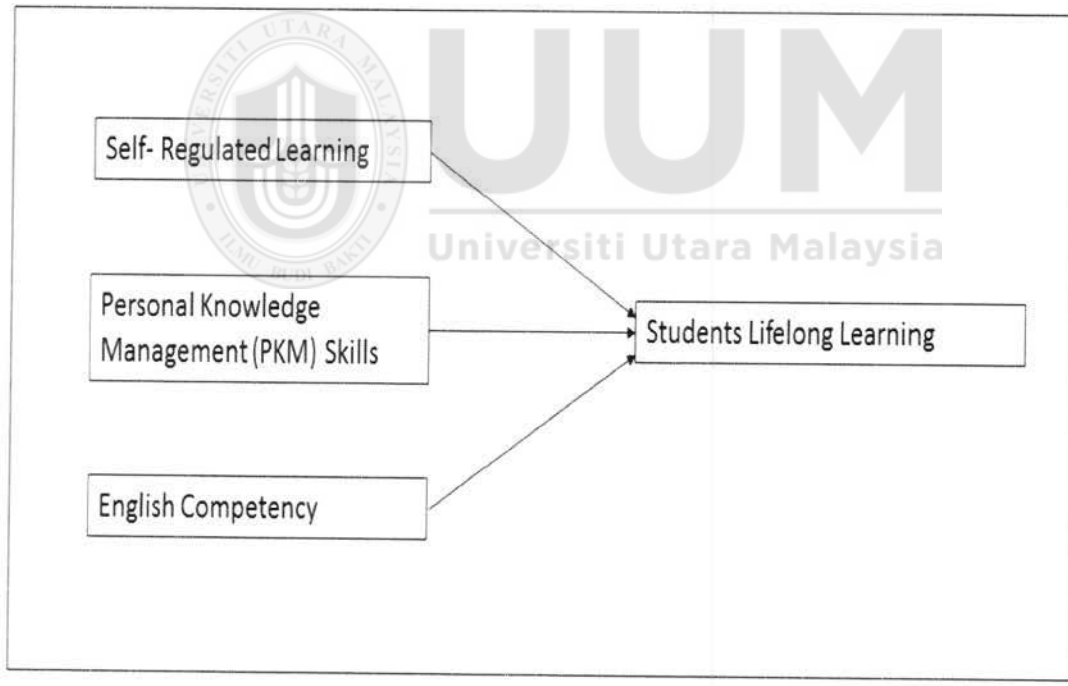

Figure 2.1 Theoretical Framework

2.8 Summary

This chapter reviewed the concepts and theories available in the literature which are related to the lifelong learning/education. During the review process, the researcher investigated previous studies and literature to obtain a selection of viable theories to be used in this study. Further, the researcher identified the predictors of the study which are self- regulated learning, personal knowledge management skills and English competency accordingly. Later, the hypotheses for this study were developed, which lead to the formulation of the theoretical framework of the study which used in this research work.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter will discuss about methodology for obtain the stated intention in chapter one. This include, utter of research design for the study; source of data, data sampling techniques, data collection and the Instruments, method/techniques of analysis of the data are discussed.

3.2 Research design

Research design is a detailed plan to identify the methods and mechanisms for data collection and analyze the gathered data for the study based on the constructed research questions (Sekaran & Bougie, 2013). This research design will assure that the collected data can be utilized to answer the research questions of the study and that the finding of the study will be valid and reliable. Sekaran and Bougie (2013) has stated that research design also refers to resolutions concerning the purpose of the study, place or surroundings of the research, the policies used for the study, the extent studied. Initially, designing a research will assist a researcher to intent and conduct the research in a way that will help acquired the deliberate results, thus raising the chances of gaining information that could be connect with the real condition. This study was embraced by quantitative approach in general which a prototype is generated to analyze the relationship between knowledge management abilities of UUM postgraduates on their academic performance. This quantitative survey method is chosen for this study because

it is the most usual method for gathering primary data. The design of this study is intent at attaining outcome to the research questions.

3.2.1 Type of study

This research using a meta-analysis study which is considered as a way of collaborating information from many different researches. Besides that, this type of study also known as statistical process that merges the findings from other individual research. Research that uses quantitative approach to integrate findings from other individual research works consisting of studies using a quantitative method of combining the results of independent studies and incline to utilize mathematical models as the methodology of data analysis. According to Creswell, (2002) quantitative research also requires data collecting method that is typically numerical. There are three broad grouping of quantitative research which is namely descriptive experimental and causal comparative (Leedy & Ormrod, 2001). Descriptive research approach always examines the circumstances, as it occurs in its real state. Creswell (2002) has defined correlation as a statistical experiment to establish patterns for two variables. Even Bold (2001) has noted that the main aim of a correlation study is to inaugurate whether the independent and dependent variables are related.

3.2.2 Sources of data

The sources of information for this study will be gathered from both primary and secondary data. The primary data will be collected through distribution of which will be directly gathered from the respondent's the UUM students. Data collection of secondary

data being collected and retrieved from interpretation of empirical study, past research, scholarly journal articles and many more.

3.2.3 Unit of analysis

The unit of analysis for the study is the individual level. Since the study is to examine the relationship between self- regulated learning, Personal Knowledge Management (PKM) Skills, and English Competency and UUM Students' Lifelong Learning, it is make crucial the data to be collected separately from every one of the target population individually for the research.

3.2.4 Population frame

Population refers to the entire group of people, events, or things of attention that the researcher wants to investigate for the study. Deciding a proper frame to use for the survey will be the crucial consideration of all. The population frame will reveal relationship between the survey's target population and the unit of analysis (Bennett, 1993). In the matter of this study, the targeted population is all the students of UUM. The population of UUM students are 30279 in total which includes the foundation, bachelor degree, master's degree and Ph.D. students.

3.2.5 Sample and sampling technique

Random sampling technique was utilized and the questionnaires were distributed among the UUM students. The underlying reasons for choosing this technique of sampling is that it provides researchers with a way for collecting data from a moderately sizeable sample rapidly with an inexpensive way. To assess the respondent's viewpoints on the topic being investigated, the respondents were asked to indicate their level of agreement of the different factors that are likely to impact their lifelong learning like self- regulated learning, personal knowledge management (PKM) skills and English competency on Five Likert point scale that included descriptors ranging from strongly disagree, disagree, neither agree or disagree, agree and strongly agree. Based on UUM HEA department (2017), there were 30279 of total number student's enrollments in the university. Hence, as per Kriejcie and Morgan sample determination 379 were selected to serve as the sample. However, to minimize error in sampling and to take care of the none response rate issue, some additional sample was take into the consideration of the survey of the study. Thus, for this study the total number of 400 questionnaires were distributed among the respondents. In the end, only 380 responses were selected to be analyzed in this research. As the determination of sample size was based on the Krejcie and Morgan Table. (Krejcie & Morgan,1970) as shown in the table below.

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is population size; S is sample size

3.3 Measurement of variable

For this research, the questionnaires were distributed to students. This questionnaire contains 46 questions all together. The questionnaires had been divided into five sections. In any quantitative research, it is a must for a researcher to use valid instrument to measure the variables. The instrument for a study can be adapted or adopted from any closely connected literature or valid sources such as academic books or reliable resources which is related to the subject matter (Rattray and Jones, 2005).

The first section of the questionnaire consists of seven questions related to identify the demographic data. This section concerning about the gender, age, nationality, marital status, faculty of study, study level and CGPA of the UUM students. The second section is inclusion of ten questions related to the students' lifelong learning which is dependent variable of the study, followed by the third section contains nine questions related to student's self- regulated leaning. On the other hand, there are fourteen questions in fourth section is regarding Personal Knowledge Management (PKM) skills of the UUM students. Finally, the fifth section of the questionnaire made up of six English competencies related questions. The total of 40 questions are to analyze the relationship between Self-Regulate Learning, Personal Knowledge Management (PKM) Skills, English Competency and Students' Lifelong Learning UUM students.

3.3.1 Dependent variable (lifelong learning) scale

In this study, lifelong learning was measured by adopting 10 items from capacity for lifelong learning scale by Jessup-Anger (2009). This scale was measured by utilizing

five point Likert scale in this current study. Originally the scale was operationalzed using the Capacity for Life-Long Learning index (Hayek & Kuh, 1999), which is a measure created by summing students' responses to 11 items which represent the Estimate of Gains items on the College Student Experiences Questionnaire developed by Kuh, Vesper, Connolly, and Pace (1997). Basically, "Estimate of Gain items represent the ability to "learn to learn" and effective communication with others in complex situation, knowledge-based society, indicating the extent to which students have acquired lifelong learning skills" (Hayek & Kuh, 1999).

Table 3.2

Summary of instruments for student's lifelong learning.

Variables	Operational definition	Total number of item	Sources
Student's lifelong learning	Lifelong learning is a planned or intended learning with specific objectives in which the learning should be undertaken throughout one's lifetime.	I believe on my ability to put ideas together, to see relationships, similarities, and differences between ideas.	Jessup-Anger (2009)
		I believe on my ability to think analytically or logically.	
		I believe on my ability to learn on my own, pursue ideas, and find information I need.	
		I believe on my ability to function as a team member.	
		I can Understand other people and I believe on my ability to get along with different kinds of people.	
		I am able write clearly and effectively.	

My lifelong learning capacity help me in gaining a broad general education about different fields of knowledge.
My lifelong learning capacity help me in acquiring familiarity with the use of computers.
My lifelong learning capacity help me in acquiring background and specialization for further education in some professional, scientific, or scholarly field.
I am able understand quantitative thinking like probabilities, proportions etc.

3.3.2 Self- regulated learning scale

The scale for self- regulated learning was adopted form the Motivated Strategies for Learning Questionnaire (MSLQ) from Pintrich and DeGroot (1990). The MSLQ scales have established levels of validity and reliability (Pintrich, et al., 1993) and have been used in hundreds of research studies and by many instructors all over the world. The MSLQ consists of two sections namely motivational beliefs and self-regulated learning. The motivation section has 31 items about the motivational beliefs and the learning strategies section consists of 31 items about students" use of different cognitive and meta cognitive strategies. In the motivational belief section, there were three subscales measuring the motivational beliefs. Those subscales are self-efficacy, intrinsic value and test anxiety accordingly. The second section of the MSLQ scale consists of two subscales which measure self-regulated learning strategies. The initial subscale is cognitive strategy use and followed by self- regulation. This current study adapted 10 items from self-

regulation with five point Likert scale from self- regulated learning strategies to measure self-regulated learning for this research.

Table 3.3

Summary of instruments for self-regulated learning.

Variables	Operational definition	Total number of item	Sources
Self-regulated learning	Self-regulated learning is a lively, productive process where the learners place objectives for their intellect process and strive to observe, manage and administer their learning, determination, and behavior, escorted and obligated by their objectives and contextual hallmark on the surroundings.	I ask myself questions to make sure I know the material I have been studying.	Pintrich&DeGroot (1990).
		When work is hard I either give up or study only the easy parts. (*R)	
		I work on practice exercises and answer end of chapter questions even when I don't have to.	
		Even when study materials are dull and uninteresting, I keep working until I finish.	
		Before I begin studying I think about the things I will need to do to learn.	
		I often find that I have been reading for class but don't know what it is all about. (*R)	
		I find that when the teacher is talking I think of other things and don't really listen to what is being said. (*R)	
		When I'm reading, I stop once in a while and go over what I have read.	
		I work hard to get a good grade even when I don't like a class.	

3.3.3 Personal knowledge management skills scale

Personal Knowledge Management (PKM) Skills scale for this current study was adapted from self-assessment instrument from work done by Paul Dorsey (2001), Millikin University, Decatur, IL. These items were intended to determine the information and idea management skills of individual. The PKM skills were organized into seven competencies namely accessing information and ideas; evaluating information and ideas; organizing information and ideas; analyzing information and ideas; conveying information and ideas; collaborating around information and ideas; and securing information and ideas. Each competency has 10 sub-competencies. For this current study, two items were adapted from seven competencies accordingly, using five point Likert for measurement.

Table 3.4

Summary of instruments for personal knowledge management skills.

Variables	Operational definition	Total number of item	Sources
Student's personal knowledge management skills	Personal knowledge management skills should be considered as a set of skills and methods of resolving issues in sensible and the actual degree.	I can use an online library catalog to retrieve books, journals and journal articles.	Dorsey (2000)
		I know the difference between an online search engine, a directory of sites, and a meta search engine.	
		I know when it is appropriate to use scholarly books or journal articles for a project and when to use the more popular information from the	

Web.
I know when to use primary sources of information and when to use secondary sources.
I have successfully classified, organized and stored documents into folders for later retrieval.
I can create, edit, and resize images/graphics for use in documents and presentations and organize and store the resulting images for future use.
I can extract and manipulate data and information in a variety of formats.
I know when and where to incorporate data into an assessment document article, or presentation.
I can use a word processing application to create reports and documents.
I can create a PDF document from a word-processed document, presentation, or spreadsheet.
I know when to communicate via telephone, email, chat, or instant messaging.
I can send, delete, reply to and print email messages can attach documents to email messages.
I back up my important documents regularly to another disk or to CD-ROM to protect my work.
I understand the (increased) risks to privacy, loss of data, and to

	intellectual property rights associated with information environments relying on electronic technologies.

3.3.4 English Competency Scale

This study adopted six items for English competency scale from Bonnet (2004). Generally, five point Likert scale was used to measure the language proficiency of students. There are two measurement where used in the original scale to measure the language proficiency. Firstly, a self-evaluation test consisting of a set of so called "Can-do"-statements in which the pupils indicate on a scale to what extent they judged themselves to be able to carry out specific activities in the foreign language and secondly, by global questions on the four skills of reading, writing, speaking and listening to evaluate the student's English language competency

Table 3.5

Summary of instruments for english competency.

Variables	Operational definition	Total number of item	Sources
English competency	Language competency interpreted as the understanding of a language for example English language, cognitive facet in	I can take notes from a text or lecture in English to report about it.	Bonnet (2004)
		I can write English texts that are perfectly understandable, even though they may contain some mistakes.	

understanding a language.	I can read through English texts to find out what they are all about or if they are useful.
	I can understand English literary texts well enough to be able to say something about them.
	I can choose English texts from brochures, magazines, newspapers etc., and get information from them which I need to use for example in a project.
	I can express my own opinion by writing English essays about a drawing, picture or painting.

3.4 Validation of instrument

To valid the instrument of the research a pilot study is a compulsory action. Although the questionnaire was developed using items that were adapted from a well-established study, due to certain factors the result of the current study might be contrast from different group of people where they tend respond differently. Usually the acquired comments and feedbacks from the respondent will be used for the improvement of the questionnaires in further. From the pilot test the validity of instruments can be measured to which extent as it supposed to measure per its specification. In any study, it is closely impossible or unusual for an instrument to be valid 100% to ensure the reliability of each aspect in the questionnaire.

3.5 Data Collection Procedures

Total 420 sets of questionnaires were distributed among UUM students. Respondent was attached with a cover letter regarding the purpose and objective of the current study. In the end of data collection process, only 386 questionnaires were returned. Later the manually collected data and analyzed using Statistical Package for the Social Sciences (SPSS) software version 24.

3.6 Data analysis techniques

Data analysis techniques were used to conclude the findings of the study and to identify the relationship among the dependent and independent variables (Neuman, 2000). Statistical analysis of the data was conducted by using SPSS software. To avoid errors and double entry, all items were coded before entering it in the system. Descriptive statistics method was conducted in study to obtain the answers to compile and interpret the raw data. The data then processed more briefly. In this study, several statistical techniques which have been used for data analysis like frequencies distribution, correlation to test the collected data.

3.7 Summary

This chapter describes how the research is designed and all the techniques used in this research to obtain the objectives of the study. All techniques have been carried out in a quantitative approach, in which a set of questionnaire should be distributed to collect data from respondents.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Introduction

The findings of this chapter will be discussed in this chapter. The discussion starts with the background of the respondents, followed by reliability analysis and descriptive analysis. Next correlation analysis and regression analysis are employed to test the hypotheses of the study.

4.2 Profile of respondents

In this study, a total of 386 sets of questionnaires were returned out of 420 questionnaires distributed. However, 6 of them deleted during the data cleaning process (refer Section 4.3), making the total of 380 usable questionnaires. This section discusses the respondent's general information and provides detailed updates on information about the respondents. Table 4.1 exhibits the demographic background of the respondents.

Table 4.1
Background of the respondents

	Frequency	Percentage
Gender		
Male	143	37.6
Female	237	62.4
Age		
18 - 25 years	281	73.9
26 - 33 years	90	23.7
34 - 41 years	2	0.5
42 - 49 years	6	1.6

50 years and above	1	0.3
Nationality		
Malaysian Student	311	81.8
International Student	69	18.2
Marital status		
Single	352	92.6
Married	28	7.4
Widowed	0	0
Divorced	0	0
Faculty		
College of Business	172	45.3
College of Art and Science	126	33.2
College of Law and Governance	82	21.6
Level of education		
Foundation studies	34	8.9
Bachelor degree	259	68.2
Master's degree	51	13.4
PhD	36	9.5
CGPA		
Below 3.00	30	7.9
3.00-3.50	228	60.0
3.60-4.00	122	32.1

Based on the respondent's background information which was collected in the questionnaire, the total number of seven demographic factors will be illustrated and interpreted in the section below. The seven demographic factors included in this study was gender, age, nationality, marital status, faculty of study, study program and the

CGPA of the UUM students who have participated in the survey. First the gender distribution of the respondents can be seen in the figure 4.1.

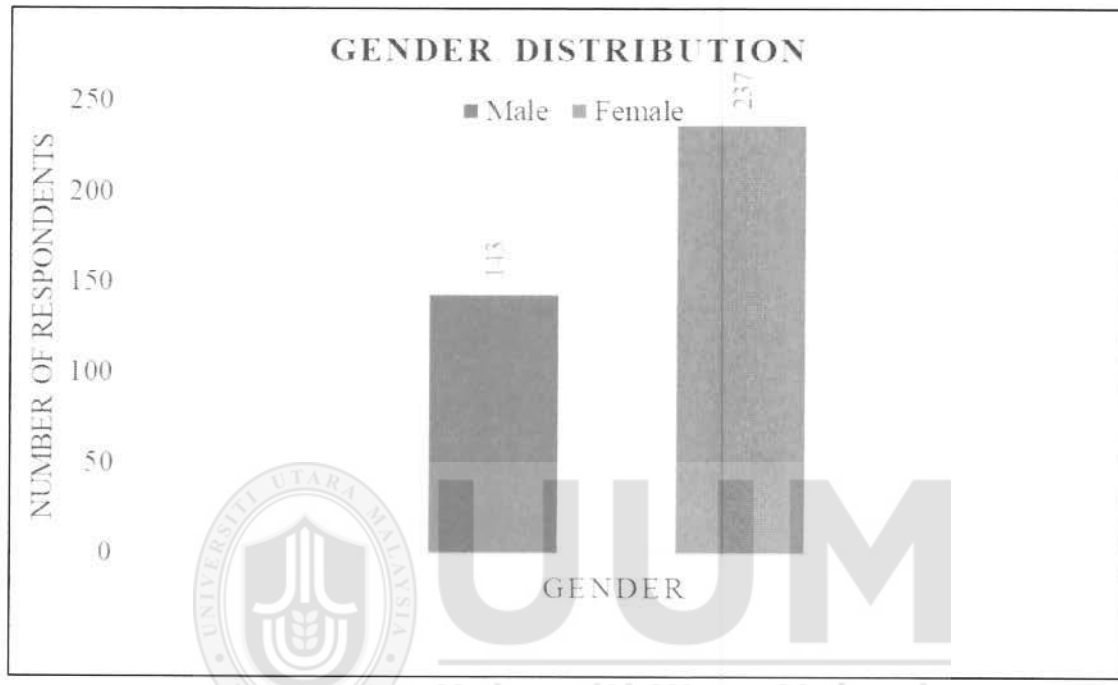

Figure 4.1: Respondents Gender Distribution

The figure describes the distribution of respondent whom are chosen for the study. The graph showed that there were 360 respondents took part in the current survey. Totally 143 respondents were reported male students whom took part in the survey. The balance of 237 students is female student whom help to complete the questionnaire of the research. Proportionally there were 37.6 male and 62.4 female student have taken part in this study.

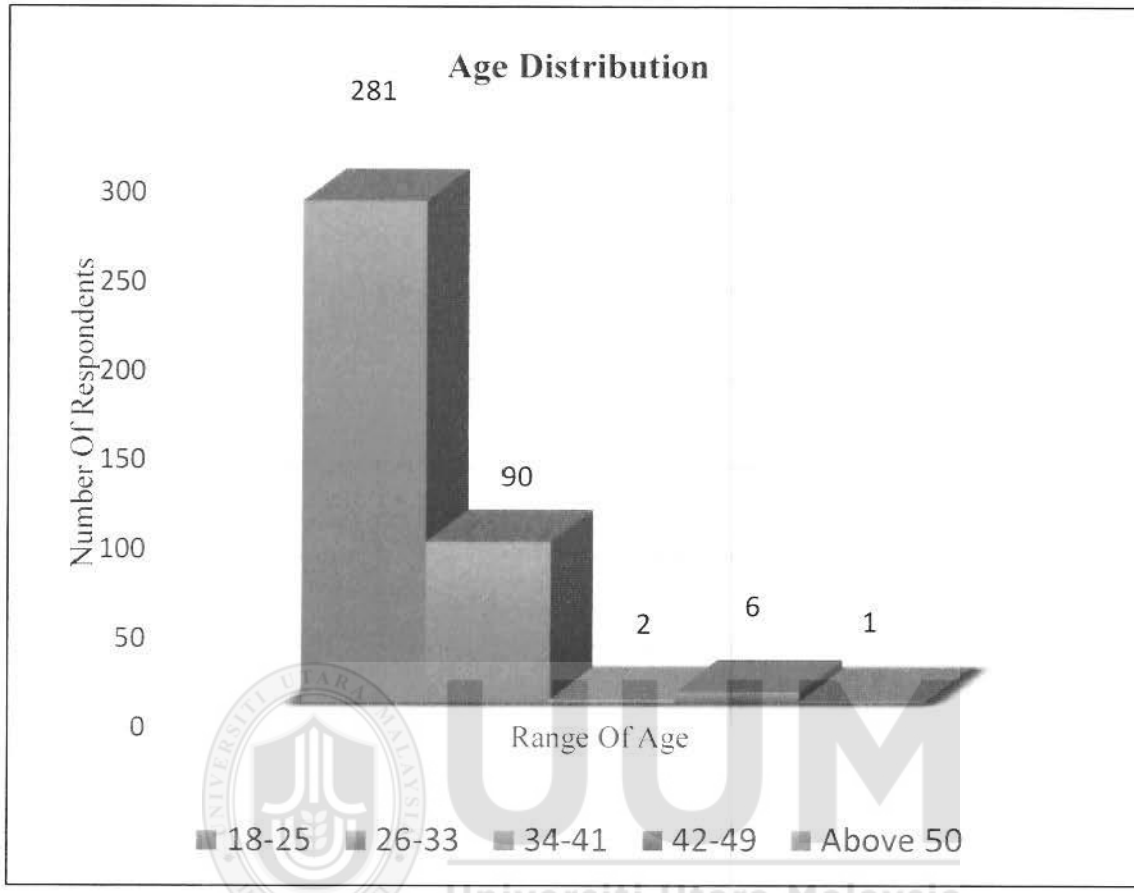

Figure 4.2: Respondents Age Distribution

The figure above demonstrates the age distribution of the respondents of the study. According to the graph age of respondents were divided into ranges which is 18-25, 26-33, 34-41, and 42-49 and above 50. Most of university students whom took part in the study were in the age range of 18-25 which indicates 281 respondents. Total number of 90 respondents was from the age range of 26-33 and six respondents were in the age range of 42-49. Finally, those whom are 34-41 aged and above years old was recorded two and one response accordingly.

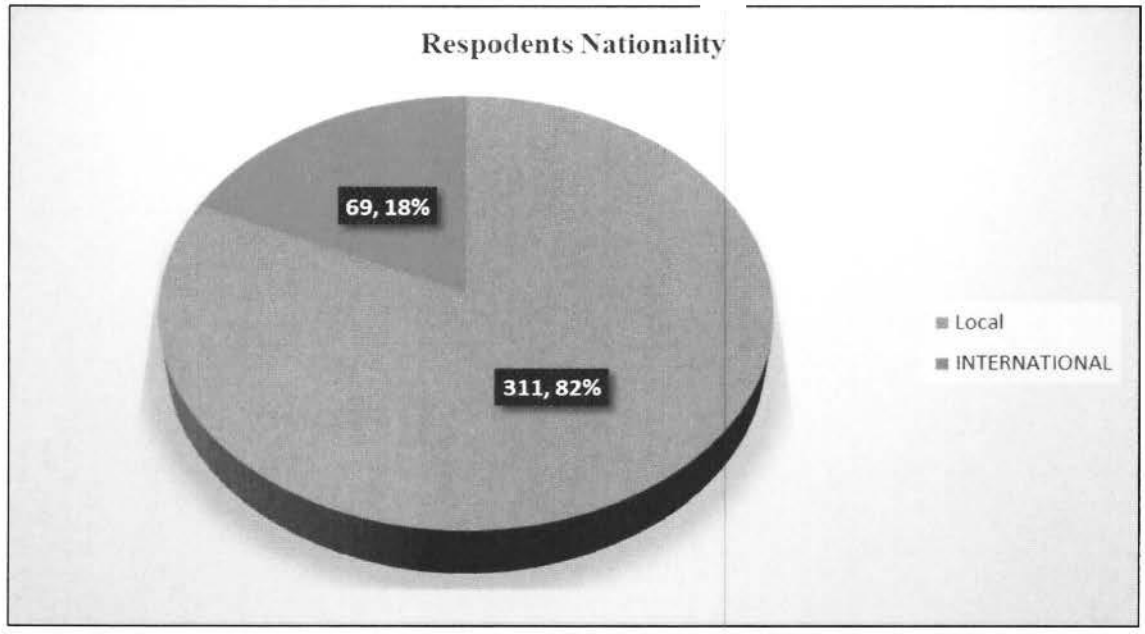

Figure 4.3: Nationality of respondents

Figure 4.3 shows a pie chart which demonstrates the nationality of the students whom took part in the survey. The student's distribution was categorized into two groups namely local/ Malaysian and international students. Based on the pie chart, local students have responded almost 82% of the survey, which is 311 of respondents and the remaining 69% of response, was collected from 9 international students.

On the other hand, figure 4.4 represents bar graph which illustrates marital status of respondents of the study. According to the bar graph we can conclude that the questionnaire mostly answered by single student that have a record of 352 students. On the other hand the balance was answered by 28 students with the status of married

respondents. Proportionally the questionnaire was answered by 92.6 % of single students and the remaining 7.4% was answered by married students.

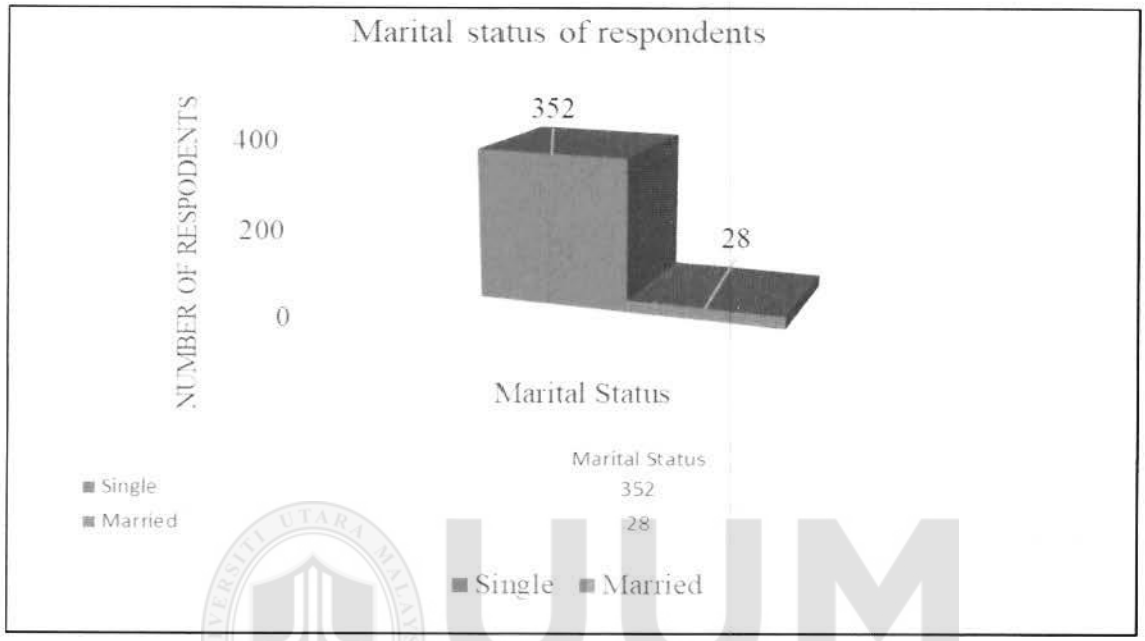

Figure 4.4: Respondents Marital Status

Figure 4.5 illustrated the participant for this study was random selected from the three main faculty of the management university. The distribution of students who answered the questions can be ranked from highest to lowest. Response from COB students was the highest which recorded 172 respondents, followed by CAS and COLGIS with the number of 126 and 82 respondents accordingly.

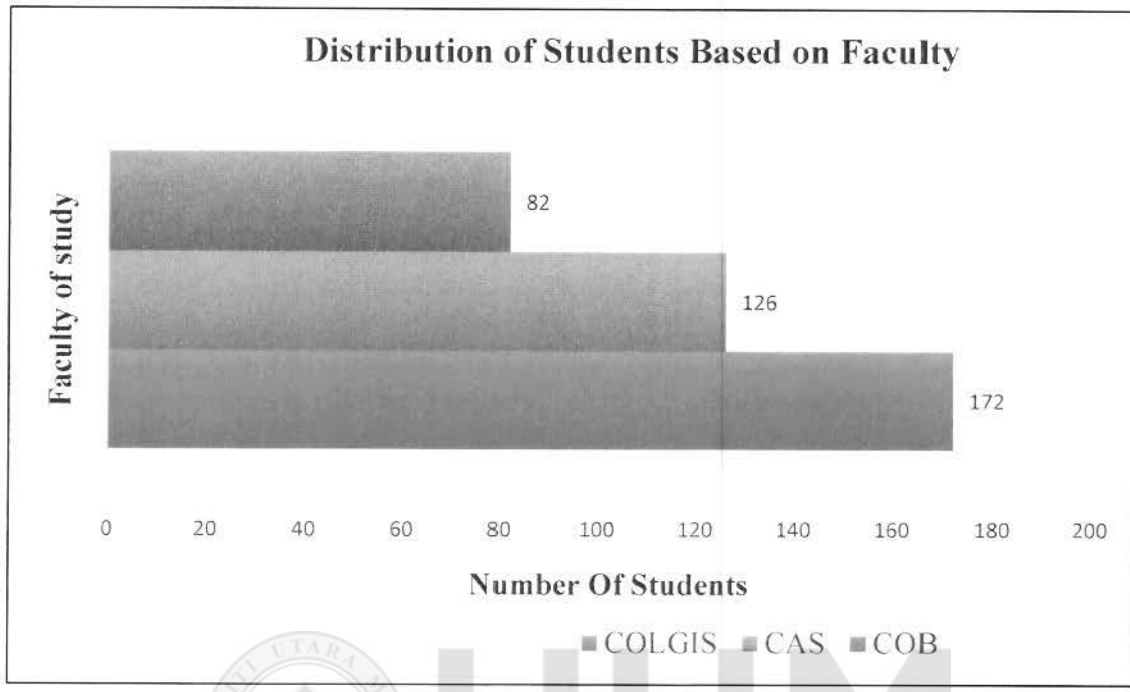

Figure 4.5: Distributions of Students Based on Faculty (school)

Figure 4.6 shows a pie chart which highlighted respondent's distribution based on their program of study. The chart displays that students from four types of programs namely foundation, bachelor degree, master degree and PhD were involved in the study.

The survey was answered mostly by the degree student which record total number of 259 students with the percentage of 68.2%, followed by the 51 of master's degree students, 36 PhD students with 13.4% and 9.5% of the total of 380 respondents accordingly. Finally, the remaining 8.9% was completed by 34 foundation students.

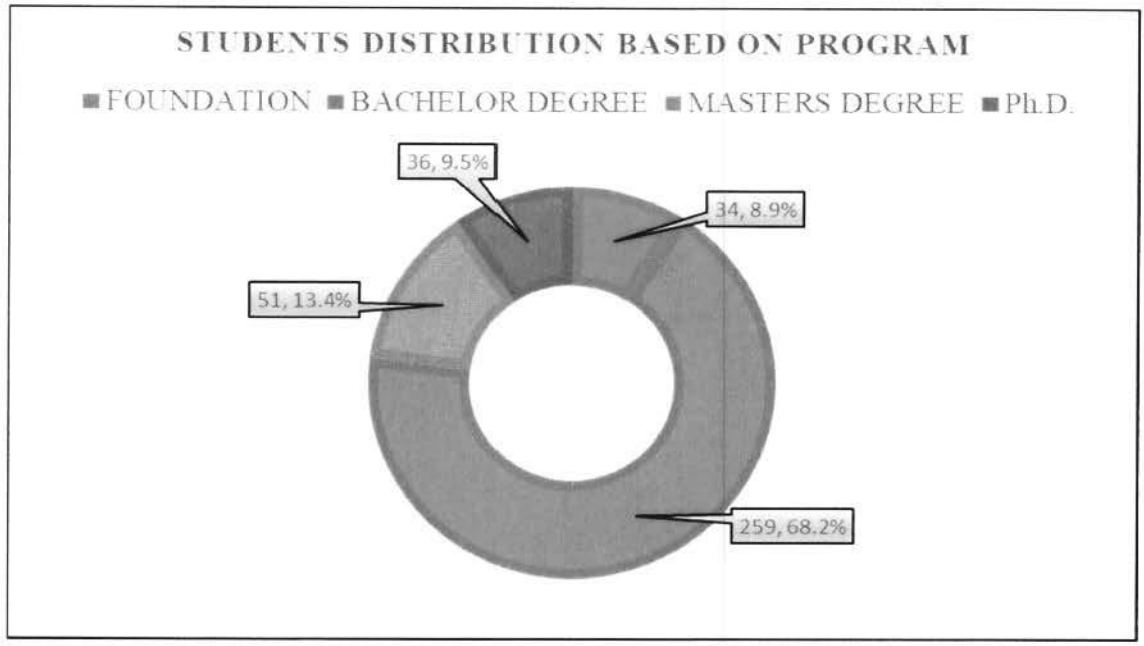

Figure 4.6: Students Distribution Based on Program

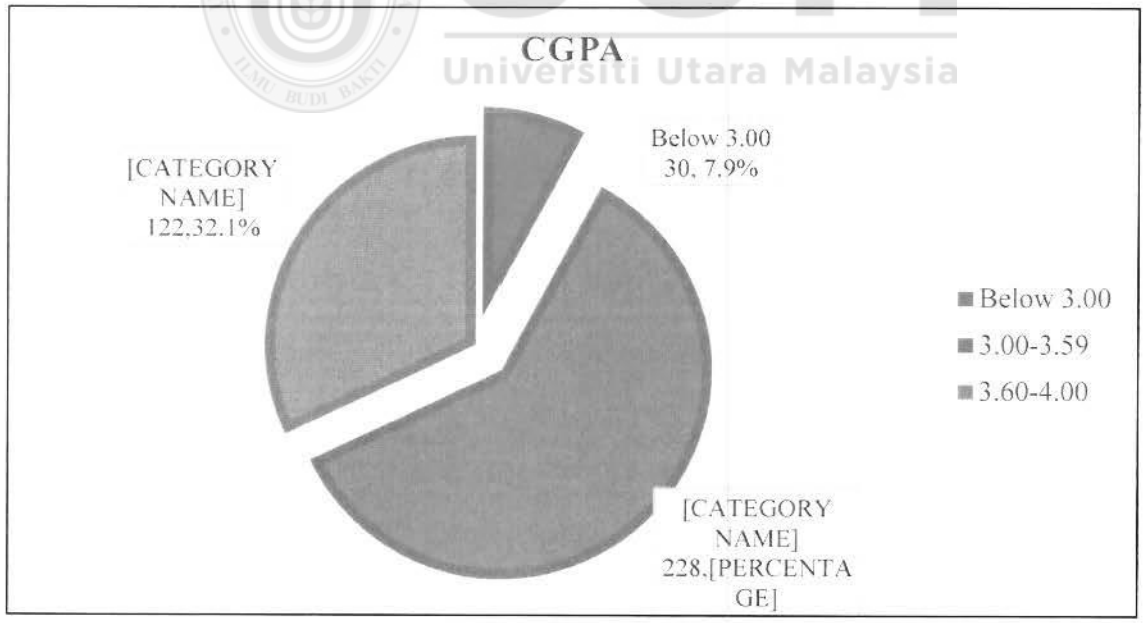

Figure 4.7: CGPA of students

The table above shows a pie chart regarding the CGPA of students whom took part in the survey. The CGPA was categorized into three levels which are below 3.00, 3.00-3.59 and 3.60-4.00.Student whom get average level of CGPA from 3.00-3.59 were the one mostly completed the survey with the counting of 228 students and 60%.Secondly, those students who scored 3.60-4.00 were 122 (32.1%) were the second highest participants of the study. The remaining 30 (7.9 %) students were those who score below 3.00.

4.3 Reliability analysis

To ensure the scales reliability, the confirmation on internal consistency has been conducted. By checking the value of cron bach alpha coefficient, this analysis can be done. The coefficient of alpha that is higher than 0.65 would considered as cut-off point to the study (Nunnally & Berntein, 1994; Nunnally, 1978). The cronbach coefficients alpha for the variables illustrated in Table 4.2. To sum up the value of cronbach alpha for all the variables is higher than 0.65.

Table 4.2

Reliability coefficients for variables

Variable	N of Item	Cronbach Alpha
Self-regulated learning	9	0.759
PKM skills	14	0.888
English competency	6	0.902
Students lifelong learning	10	0.882

*PKM (Personal knowledge management)

4.4 Descriptive Analysis

A total of 380 questionnaires were usable from the survey. All the variables were measured based on a seven-point scale. As reflected in Table 4.10, all the means are higher than five (5), ranging from 5.52 to 6.16. According to Hair et al. (2006), mean values can be categorized into three levels: low, moderate and high. For this study, the categories are divided as follows:

Low:	1.00 to 3.00
Moderate:	3.01 to 5.00
High:	5.01 to 7.00

This suggests respondents highly agreed to all variables and dimensions examined in this study. Table 4.3 shows that all the variables rated as moderate. As for self-regulated learning, PKM skills, English competency and lifelong learning. All the standard deviations are low, suggesting the variability on the data (Sekaran, 2005). This is clearly specified in Table 4.10, where standard deviations for all variables are low.

Table 4.3
Descriptive analysis of the variables

	Mean	**Standard deviation**	**Level**
Self-regulated learning	3.69	0.55	*Moderate*
PKM skills	4.00	0.52	*Moderate*
English competency	4.08	0.65	*Moderate*
Students lifelong learning	4.07	0.51	*Moderate*

4.5 Correlation analysis

To identify the factors that have an association among variables, correlation analysis was conducted where the correlation coefficient illustrates the relationship between the independent and dependent variables. According Hair et al. (2006), the number representing the Pearson correlation is referred to as a correlation coefficient. It ranges from – 1.00 to + 1.00, with zero representing absolutely no association between the two metric variables. The larger the correlation co-efficient the stronger the linkage or level of relationship. A strong correlation is represented by a coefficient exceeding the value of 0.5 whereas a medium or modest correlation is when the coefficient has a value of between 0.5 and 0.2. Any coefficient possessing a value less than 0.2 will be deemed as showing a weak correlation. Benny and Feldman (1985) suggested a rule of thumb, that the correlation coefficients that exceed 0.8 (very strong correlation) will likely to result in multicollinearity. Cohen (1988) has put forward a guideline on the effect sizes of the correlation coefficients in social science studies as: small effect size, r = 0.1 – 0.29, medium: r = 0.30 – 0.49, and large: r = 0.50.

Table 4.4

Correlation of the variables

Correlations					
		Lifelong learning	Self-regulated learning	PKM	English competency
Lifelong learning	Pearson Correlation	1	.540**	.636**	.571**
	Sig. (2-tailed)		.000	.000	.000
	N	380	380	380	380
Self-regulated learning	Pearson Correlation	.540**	1	.488**	.355**

	Sig. (2-tailed)	.000		.000	.000
	N	380	380	380	380
PKM	Pearson Correlation	.636**	.488**	1	.655**
	Sig. (2-tailed)	.000	.000		.000
	N	380	380	380	380
English competency	Pearson Correlation	.571**	.355**	.655**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	380	380	380	380

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

Based on the Pearson correlation test on lifelong learning of the students strongly correlated with the self - regulated learning, personal knowledge management skills and English competency at 0.01 significant level. Consequently, the change in SRL due to LLL is 54% which shows that students who are self-regulated learners are more likely to continue their passion in learning which leads towards the lifelong learning. On the other hand, LLL affect 63.6% of PKM Skills and 57.1% accordingly.

4.5.1 Self-regulated leaning and students' lifelong learning

Result of correlation analysis to examine the relationship between self-regulated learning and students' lifelong learning is exhibits in Table 4.4.1 It is revealed in Table 4.4.1 that self-regulated learning showed the strong significant relationship with students' lifelong learning ($r=0.540$, $p<0.01$). Positive correlation coefficient indicated the direct relationship occurred between the variables.

Table 4.5

Relationship between Self-Regulated Learning and Students' Lifelong Learning

	Lifelong learning	**Self-regulated learning**
Lifelong learning	1	
Self-regulated learning	.540**	1

*Note: **p<0.01*

4.5.2 Personal knowledge management skills and students' lifelong learning

Result of correlation analysis to examine the relationship between personal knowledge management skills and students' lifelong learning is exhibits in Table 4.5. It is revealed in Table 4.5 that personal knowledge management skills showed the strong significant relationship with students' lifelong learning (r=0.636,p<0.01). Positive correlation coefficient indicated the direct relationship occurred between the variables.

Table 4.6

Relationship between personal knowledge management skills and students' lifelong learning

	Lifelong learning	**PKM skills**
Lifelong Learning	1	
PKM Skills	.636**	1

*Note: **p<0.01*

4.5.3 English competency and students' lifelong learning

Result of correlation analysis to examine the relationship between English competency and students' lifelong learning is exhibits in Table 4.6. It is revealed in Table 4.6 that english competency showed the strong significant relationship with students' lifelong learning ($r=0.571$, $p<0.01$). Positive correlation coefficient indicated the direct relationship occurred between the variables.

Table 4.7

Relationship between English Competency and Students' Lifelong Learning

	Lifelong Learning	**English Competency**
Lifelong Learning	1	
English Competency	.571**	1

*Note: **p<0.01*

4.6 Regression analysis

Multiple regressions were utilized to examine the relationship between self-regulated learning, personal knowledge management skills, English competency and students' lifelong learning. Multiple regression analysis using Enter Methods were applied with the confidence level of 90 percent ($p<0.10$) were adapted.

Table 4.8

Multiple regression analysis of independent variables on lifelong learning

Model	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.996	.157		6.337	.000
SRL	.265	.038	.289	6.984	.000
PKMS	.321	.050	.329	6.410	.000
EC	.198	.038	.252	5.271	.000
R^2 = .505	R= .714		F= 130.113	p< 0.01	

Based on the regression table, the $r^2$is recorded as .505 where it shows that the independent variables of the study (self-regulated learning, personal knowledge management skills and English competency) have 50.5% of variability on the dependent variable (lifelong learning), having F (3,376) =130.113, p<.05, with r^2 of .505. Also from the regression analysis above it has been found that all the independent variable of the study (self-regulated learning, personal knowledge management (PKM) skills, and English competency) have significant impact on lifelong learning. This means that an increase in self-regulated learning, personal knowledge management (PKM) skills, and English competency on university students will increase the lifelong learning capability of the students accordingly.

4.6.1 Effect of Self-Regulated Learning on Students' Lifelong Learning

Results of multiple regressions to examine the effect of self-regulated learning on students' lifelong learning are as Table 4.7. It was found that self-regulated learning explained 29.1 percent of students' lifelong learning (R^2=0.291, F=155.499, p<0.01). Self-regulated learning also successfully predicted students' lifelong learning (B=0.540, t=12.471, p<0.01).

Table 4.9

Effect of Self-Regulated Learning on Students' Lifelong Learning

	B	T	Sig.
Self-Regulated Learning	0.540	12.470	.000
R^2	0.291		
F	155.499		
Sig.	0.000		

4.6.2 Effect of Personal Knowledge Management Skills on Students' Lifelong Learning.

Results of multiple regressions to examine the effect of personal knowledge management skills on students' lifelong learning are as Table 4.8. It was found that personal knowledge management skills explained 40.4 percent of students' lifelong learning (R^2=0.404, F=256.403, p<0.01). Personal knowledge management skills also successfully predicted students' lifelong learning (B=0.636, t=16.013, p<0.01).

Table 4.10

Effect of Personal Knowledge Management Skills on Students' Lifelong Learning

	B	T	Sig.
Personal Knowledge Management Skill	0.636	16.013	.000
R^2	0.404		
F	256.403		
Sig.	0.000		

4.6.3 Effect of English Competency on Students' Lifelong Learning.

Results of multiple regressions to examine the effect of English competency on students' lifelong learning are as Table 4.9. It was found that English competency explained 32.6 percent of students' lifelong learning (R^2=0.326, F=182.507, p<0.01). English competency also successfully predicted students' lifelong learning (B=0.571, t=13.510, p<0.01).

Table 4.11

Effect of English Competency on Students' Lifelong Learning

	B	T	Sig.
English Competency	0.571	13.510	.000
R^2	0.326		
F	182.507		
Sig.	0.000		

4.7 Differences among groups

There are several independent t-tests and ANOVA test was conducted to compare the differences between groups in terms of lifelong learning, self-regulated learning, personal knowledge management skills and English competency. There are overall seven groups was tested to identify the difference namely gender, age, nationality, marital status, faculty, study level and CGPA in regards with all the three independent variables and dependent variable of this study.

An independent sample t-test was then conducted for all the dependent, independent, variables to find out if there are any differences between the groups of gender. Levene's test for equality of variance was used to know whether the variances between the male and female differ. Additionally, based on Levine's test, the two-tailed equality of means t-test was used to identify the exact p-value associated with the hypotheses, which allow making decision based on the significant difference between the two groups by accepting or rejecting hypothesis.

4.7.1 Differences between Genders

Table 4.12

Group Descriptive Statistics for the Male and Female Students.

Group Statistics

	Gender.	N	Mean	Std. Deviation	Std. Error Mean
LLL	MALE	143	4.0902	.55580	.04648
	FEMALE	237	4.0506	.47529	.03087
SRL	MALE	143	3.6936	.61626	.05153
	FEMALE	237	3.6833	.51496	.03345
PKMS	MALE	143	4.0917	.54004	.04516

	FEMALE	237	3.9585	.50110	.03255
EC	MALE	143	4.1830	.65292	.05460
	FEMALE	237	4.0105	.63275	.04110

Table 4.13

Independent samples t-test for the male and female students.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LLL	Equal variances assumed	6.997	.009	.737	378	.461	.03958	.05369	-.06599	.14514
	Equal variances not assumed			.709	264.025	.479	.03958	.05580	-.07029	.14944
SRL	Equal variances assumed	8.089	.005	.175	378	.861	.01028	.05879	-.10532	.12587
	Equal variances not assumed			.167	259.177	.867	.01028	.06144	-.11071	.13126
PKMS	Equal variances assumed	5.120	.024	2.438	378	.015	.13323	.05465	.02578	.24067
	Equal variances not assumed			2.393	282.061	.017	.13323	.05567	.02365	.24280

	Equal variances assumed	2.065	.152	2.544	378	.011	.17254	.06781	.03921	.30588
EC	Equal variances not assumed			2.525	292.094	.012	.17254	.06834	.03804	.30705

Table 4.12 above reveals that the groups' sample size, mean, standard deviation and standard error for male and female are not very different. In Table 4.13, the result of Levene's test based on lifelong learning, self-regulated learning, personal knowledge management (PKM) skills and English competency shows that the variance between the male and female is the same. In general, the two-tailed t-test indicates that there is no significant difference between male and female students based on the study variables.

With respect to lifelong learning, the mean and standard deviation of male reported no significant difference male (M=4.09, SD=0.55) and the female (M=4.05, SD=0.47). In addition, the result indicates that there is no significant difference between male and female students (t (378) =0.74, p=0.46) and the p-value is more than 0.05. Therefore, the null hypothesis is accepted.

Similarly, the result indicates that the male students based on self –regulated learning (M=3.69, SD=0.62) and female students (M=3.68, SD=0.51) are nearly the same. The two-tailed t-test (t (378) =0.18, p=0.86) and the p-value is more than 0.05 which shows no significant difference between male and female students. Thus, null hypothesis is accepted.

The result with respect to PKM skills indicates that male students (M=4.09, SD=0.54) and female (M=3.96, SD=0.50) are not similar. The result further shows that there a significant difference in the male and female students' variances assumed (t(378)=2.44, p=0.015) and the p-value is less than 0.05. Hence, the null hypothesis is rejected.

In the same way, based on English competency, the independent samples t-test indicate that male students (M=4.18, SD=0.65) is not the same as the female students (M=4.01, SD=0.63). This result successfully revealed there is a significant difference between the male and female students with regards to English competency (t(378)=2.54, p=0.011) and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

4.7.2 Differences between Nationalities

Table 4.14

Group Descriptive Statistics for Malaysian and international Students.

Group Statistics					
	Nationality	N	Mean	Std. Deviation	Std. Error Mean
LLL	Malaysian student	311	4.0576	.50698	.02875
	International student	69	4.1014	.50773	.06112
SRL	Malaysian student	311	3.6962	.54638	.03098
	International student	69	3.6464	.59205	.07127
PKMS	Malaysian student	311	3.9881	.53702	.03045

	International student	69	4.1014	.42233	.05084
EC	Malaysian student	311	4.0402	.66153	.03751
	International student	69	4.2342	.54080	.06511

Table 4.15

Independent samples t-test for Malaysian and international students.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LLL	Equal variances assumed	.000	.995	-.650	378	.516	-.04389	.06748	-.17658	.08880
	Equal variances not assumed			-.650	100.335	.517	-.04389	.06755	-.17790	.09011
SRL	Equal variances assumed	.093	.760	.675	378	.500	.04983	.07384	-.09536	.19501
	Equal variances not assumed			.641	95.379	.523	.04983	.07772	-.10445	.20411
PKMS	Equal variances assumed	2.687	.102	-1.644	378	.101	-.11338	.06897	-.24898	.02223

	Equal variances not assumed			-1.913	122.090	.058	-.11338	.05926	-.23070	.00394
	Equal variances assumed	2.311	.129	-2.273	378	.024	-.19404	.08536	-.36189	-.02619
EC	Equal variances not assumed			-2.582	117.796	.011	-.19404	.07514	-.34284	-.04524

Table 4.14 above reveals that the groups' sample size, mean, standard deviation and standard error for Malaysian and international students are not very different. In Table 4.15, the result of Levene's test based on lifelong learning, self-regulated learning, personal knowledge management (PKM) skills and English competency shows that the variance between Malaysian students and international students are the same. In general, the two-tailed t-test indicates that there is no significant difference between Malaysian and international students based on the study variables.

In regards with lifelong learning, the mean and standard deviation of Malaysian students reported no significant difference Malaysian (M=4.06, SD=0.51) and the international students (M=4.10, SD=0.51). In addition, the result indicates that there is no significant difference between Malaysian and international students (t (378) = (-0.65), p=0.52) and the p-value is more than 0.05. Therefore, the null hypothesis is accepted.

Similarly, the result indicates that the Malaysian students based on self -regulated learning (M=3.67, SD=0.55) and international students (M=3.64, SD=0.59) are nearly the

same. The two-tailed t-test (t (378) =0.68, p=0.50) and the p-value is more than 0.05 which shows no significant difference between Malaysian and international students. Thus, null hypothesis is accepted.

The result with respect to PKM skills indicates that Malaysian students (M=3.99, SD=0.54) and international (M=4.10, SD=0.42) are not similar. The result further shows that there is no significant difference in the Malaysian and international students' variances assumed (t (378) = (-1.64), p= 0.10) and the p-value is more than 0.05. Hence, the null hypothesis is accepted.

In the same way, based on English competency, the independent samples t-test indicate that Malaysian students (M=4.04, SD=0.66) is not the same as the international students (M=4.23, SD=0.54). This result successfully revealed there is a significant difference between the Malaysian and internationals students with regards to English competency (t (378) = (-2.27), p= 0.02) and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

4.7.3 Differences between marital status

Table 4.16

Group Descriptive Statistics for single and married Students.

Group Statistics

	Marital status.	N	Mean	Std. Deviation	Std. Error Mean
LLL	Single	352	4.0616	.51311	.02735
	Married	28	4.1143	.42314	.07997

SRL	Single	352	3.6866	.55953	.02982
	Married	28	3.6946	.49550	.09364
PKMS	Single	352	4.0014	.53086	.02829
	Married	28	4.0996	.33836	.06394
EC	Single	352	4.0715	.66099	.03523
	Married	28	4.1243	.39674	.07498

Table 4.17

Independent samples t-test for single and married students.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LLL	Equal variances assumed	.606	.437	-.529	378	.597	-.05264	.09959	-.24847	.14319
	Equal variances not assumed			-.623	33.650	.538	-.05264	.08451	-.22446	.11918
SRL	Equal variances assumed	1.395	.238	-.074	378	.941	-.00808	.10902	-.22244	.20628
	Equal variances not assumed			-.082	32.729	.935	-.00808	.09828	-.20809	.19193

	Equal variances assumed	5.180	.023	-.963	378	.336	-.09822	.10200	-.29878	.10234
PKMS	Equal variances not assumed			-1.405	38.495	.168	-.09822	.06992	-.23972	.04327
	Equal variances assumed	8.980	.003	-.416	378	.677	-.05278	.12679	-.30208	.19652
EC	Equal variances not assumed			-.637	40.089	.528	-.05278	.08284	-.22020	.11464

Table 4.16 above reveals that the group's sample size, mean, standard deviation and standard error for single and married students are not very different. In Table 4.17, the result of Levene's test based on lifelong learning self-regulated learning, personal knowledge management (PKM) skills and English competency shows that the variance between the single and married students were the same. In general, the two-tailed t-test indicates that there is no significant difference between single and married students based on the study variables.

In regards to the lifelong learning, the mean and standard deviation of single students reported no significant difference single (M=4.06, SD=0.51) and the married (M=4.11, SD=0.42). In addition, the result indicates that there is no significant difference between single and married students (t (378) = (-0.53), p=0.60) and the p-value is more than 0.05. Therefore, the null hypothesis is accepted.

Similarly, the result indicates that the single students based on self -regulated learning (M=3.69, SD=0.56) and married students (M=3.69, SD=0.50) are nearly the same. The two-tailed t-test (t (378) = (-0.07), p=0.94) and the p-value is more than 0.05 which shows no significant difference between single and married students. Thus, null hypothesis is accepted.

On the other hand, result with respect to PKM skills indicates that single students (M=4.00, SD=0.53) and married students (M=4.01, SD=0.34) are not similar. The result further shows that there is no significant difference in the single and married students' variances assumed (t (378) = (-0.96), p=0.34) and the p-value is more than 0.05. Hence, the null hypothesis is accepted.

Consequently, based on English competency, the independent samples t-test indicate that single students (M=4.07, SD=0.66) is slightly different from the married students (M=4.12, SD=0.40). This result successfully revealed there is no significant difference between the single and married students with regards to English competency (t (378) = (-0.42), p=0.68) and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

4.7.4 Differences between age groups

Table 4.18

One- way ANOVA test for differences between age groups.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	.768	4	.192	.746	.561

	Within Groups	96.550	375	.257		
	Total	97.318	379			
SRL	Between Groups	3.229	4	.807	2.672	.032
	Within Groups	113.293	375	.302		
	Total	116.522	379			
PKMS	Between Groups	.762	4	.191	.704	.590
	Within Groups	101.494	375	.271		
	Total	102.256	379			
EC	Between Groups	1.859	4	.465	1.118	.347
	Within Groups	155.820	375	.416		
	Total	157.679	379			

Table 4.18 shows analysis of variance (ANOVA) test the difference of age range on lifelong learning, self-regulated learning, personal knowledge management (PKM) skills and English competency. In general, the one-way ANOVA indicates that there is no significant difference between age ranges based on the study variables.

In regards to the lifelong learning, the analysis of variance showed that the difference of age range on the students lifelong learning was not significant (4,375) = 0.75, P = 0.56and the p-value is more than 0.05. Thus, the null hypothesis is accepted

On the other hand, result with respect to self-regulated learning indicates that the result of ANOVA test showed that the difference of age range on self-regulated learning was significant (4,375) = 2.67, P =0.03and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

Consequently, based on personal knowledge management skills, the one-way ANOVA indicates that the age range have no significant difference on the personal knowledge management (PKM) skills of students. As the result shows F (4,375) = 0.70, P = 0.59and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

With respect to English competency, the analysis of variance showed that the difference of age range on the student's English competency was not significant (4,375) = 1.12, P = 0.35 and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

4.7.5 Differences between faculties

Table 4.19

One- way ANOVA test for differences between faculties.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	2.892	2	1.446	5.772	.003
	Within Groups	94.427	377	.250		
	Total	97.318	379			
SRL	Between Groups	1.836	2	.918	3.017	.050
	Within Groups	114.686	377	.304		
	Total	116.522	379			
PKMS	Between Groups	1.487	2	.744	2.782	.063
	Within Groups	100.768	377	.267		
	Total	102.256	379			
EC	Between Groups	2.067	2	1.033	2.504	.083
	Within Groups	155.612	377	.413		
	Total	157.679	379			

Table 4.19shows analysis of variance (ANOVA) tests the difference between faculty on lifelong learning, self-regulated learning, personal knowledge management (PKM) skills and English competency. In general, the one-way ANOVA indicates that there is no significant difference between faculties of study based on the research variables. Based on the lifelong learning, the analysis of variance showed that the difference of faculty on the students lifelong learning was significant, F (2,377) = 5.77, P = 0.003 and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

Therefore, result with respect to self-regulated learning indicates that the result of ANOVA test showed that the difference of faculty on self-regulated learning was significant, F (2,377) =3.01, P =0.05and the p-value is equal to 0.05. Thus, the null hypothesis is rejected.

In relation with personal knowledge management (PKM) skills, the one-way ANOVA indicates that the faculties of study have no significant difference on the personal knowledge management (PKM) skills of students. As the result shows F (2,377) = 2.78, P =0.06 and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

Consequently, based on English competency, the analysis of variance showed that the different faculty have no differences on the students English competency and it was not significant, F(2,377) =2.50, P =0.08 and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

4.7.6 Differences between Study Levels

Table 4.20

One- way ANOVA test for differences between study level.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	.242	3	.081	.312	.816
	Within Groups	97.076	376	.258		
	Total	97.318	379			
SRL	Between Groups	.374	3	.125	.404	.750
	Within Groups	116.147	376	.309		
	Total	116.522	379			
PKMS	Between Groups	3.501	3	1.167	4.443	.004
	Within Groups	98.755	376	.263		
	Total	102.256	379			
EC	Between Groups	3.053	3	1.018	2.475	.061
	Within Groups	154.626	376	.411		
	Total	157.679	379			

Table 4.20 shows analysis of variance (ANOVA) test the difference of age range on lifelong learning, self-regulated learning, personal knowledge management (PKM) skills and English competency. In general, the one-way ANOVA indicates that there is no significant difference between study levels based on the study variables. Based on the lifelong learning, the analysis of variance showed that the difference of study level on the students lifelong learning was not significant, F (3,376) = 0.31, P =0.81and the p-value is more than 0.05. Thus, the null hypothesis is accepted

Consequently, result with respect to self-regulated learning indicates that the result of ANOVA test showed that the difference of study level on self-regulated learning was not significant, F (3,376) = 0.40, P =0.75 and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

Therefore, based on personal knowledge management skills, the one-way ANOVA indicates that the study level has significant difference on the personal knowledge management (PKM) skills of students. As the result shows F (3,376) = 4.44, P = 0.00 and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

In relation to English competency, the analysis of variance showed that the difference of study level on the students English competency was not significant, F (3,376) = 2.48, P = 0.06 and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

4.7.7 Differences between CGPA

Table 4.21

One- way ANOVA test for differences between CGPA ranking.

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	4.286	2	2.143	8.685	.000
	Within Groups	93.032	377	.247		
	Total	97.318	379			
SRL	Between Groups	.918	2	.459	1.497	.225
	Within Groups	115.604	377	.307		
	Total	116.522	379			

PKMS	Between Groups	6.345	2	3.172	12.469	.000
	Within Groups	95.911	377	.254		
	Total	102.256	379			
EC	Between Groups	7.492	2	3.746	9.403	.000
	Within Groups	150.187	377	.398		
	Total	157.679	379			

Table 4.21 shows analysis of variance (ANOVA) test the difference of age range on lifelong learning, self-regulated learning, personal knowledge management (PKM) skills and English competency. In general, the one-way ANOVA indicates that there is a significant difference between CGPA rankings based on the study variables.

In regards to the lifelong learning, the analysis of variance showed that the difference of CGPA ranking on the students lifelong learning was significant, F (2,377) = 8.69, P =0.000and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

On the other hand, result with respect to self-regulated learning indicates that the result of ANOVA test showed that the difference of CGPA ranking on self-regulated learning was not significant, F (2,377) = 1.50, P =0.21and the p-value is more than 0.05. Thus, the null hypothesis is accepted.

Consequently, based on personal knowledge management skills, the one-way ANOVA indicates that the age CGPA ranking have significant difference on the personal

knowledge management (PKM) skills of students. As the result shows F (2,377) =12.47, P = 0.000 and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

With respect to English competency, the analysis of variance showed that the difference of CGPA ranking on the student's English competency was significant, F(2,377) =940, P =0.000 and the p-value is less than 0.05. Thus, the null hypothesis is rejected.

4.8 Summary of Hypotheses

In this study, there are several hypotheses were developed in general. Consequently, by conducting the correlation test, regression analysis, independent t-test and one-way ANOVA all the hypotheses of the research was tested. The summary of the hypotheses testing is as presented in the table 4.10 below.

Table 4.22

Summary of hypotheses testing

Hypotheses	Result
H1 There is a significant relationship between student's Self-regulated learning and student's lifelong learning.	Accepted
H2 There is a significant relationship between student's personal knowledge management (PKM) skills and Student's lifelong learning.	Accepted
H3 There is a significant relationship between student's English competency and student's lifelong learning.	Accepted
H4 There is a significant relationship between self-regulated learning, personal Knowledge Management(PKM) skills and English Competency on Lifelong learning capability.	Accepted

H5a(i) There are differences between gender with regards to lifelong learning.	Rejected
H5a(ii) There are differences between gender with regards to self-regulated Learning.	Rejected
H5a(iii) There are differences between gender with regards to personal knowledge management (PKM) skills.	Accepted
H5a(iv) There are differences between gender with regards to English competency.	Accepted
H5b(i)There are differences between age with regards to lifelong learning.	Rejected
H5b(ii) There are differences between age with regards to self-regulated Learning.	Accepted
H5b(iii) There are differences between age with regards to personal knowledge management (PKM) skills.	Rejected
H5b(iv) There are differences between age with regards to english competency.	Rejected
H5c(i) There are differences between nationality with regards to lifelong learning.	Rejected
H5c(ii) There are differences between nationality with regards to self-regulated learning.	Rejected
H5c(iii)There are differences between nationality with regard to personal knowledge management (PKM) skills.	Rejected
H5c(iv) There are differences between nationality with regards to English competency.	Accepted
H5d(i)There are differences between marital status with regards to lifelong learning.	Rejected

H5d(ii)There are differences between marital status with regards to self-regulated learning.	Rejected
H5d(iii)There are differences between marital status with regards to personal knowledge management skills.	Rejected
H5d(iv)There are differences between marital status with regards to English competency.	Rejected
H5e(i) There are differences between faculty of study with regards to lifelong learning.	Accepted
H5e(ii)There are differences between faculty of study with regards to self-regulated learning.	Accepted
H5e(iii)There are differences between faculty of study with regards to personal knowledge management skills.	Rejected
H5e(iv)There are differences between faculty of study with regards to English competency.	Rejected
H5f(i) There are differences between education level with regards to lifelong learning.	Rejected
H5f(ii)There are differences between education level with regards to self-regulated learning.	Rejected
H5f(iii) There are differences between education level with regards to personal knowledge management (PKM) skills.	Accepted
H5f (iv) There are differences between education level with regards to English competency.	Rejected
H5g(i)There are differences between CGPA with regards to Lifelong learning.	Accepted

H5g(ii)There are differences between CGPA with regards to self-regulated learning.	Rejected
H5g(iii) There are differences between CGPA with regards to personal knowledge management skills.	Accepted
H5g(iv) There are differences between CGPA with regards to English competency	Accepted

4.9 Chapter Summary

This chapter summarizes the findings obtained from the data analysis of the survey that was conducted to examine the core objectives of this research. The initial outcome basically describes the background of the respondents which is highlighted in the beginning of this chapter. The chapter ends with the regression analysis to examine the relationship between self-regulated learning, personal knowledge management skills, English competency and students' lifelong learning. Out of three hypotheses developed, the study could support all the hypotheses.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter will discuss about the overall finding of the study which examine the relationship between Self-Regulated Learning, Personal Knowledge Management (PKM) Skills, English Competency and Student's Lifelong Learning of UUM students. Consequently, this chapter also will focus on the implication of the study, followed by the highlights on the limitations in conducting the research and suggestions for future research. Finally, the chapter will end up with an overall conclusion.

5.2 Discussion

This following part of the chapter will mainly discuss about the result of the hypotheses of the research which was developed from the objective of the study. Therefore, past empirical evidence and related theories also will be included as supporting element for the finding of current research.

5.2.1 Self- regulated learning and lifelong learning.

The Pearson Correlation Analysis (refer to Table 4.4) revealed that self-regulated learning and lifelong learning has strong correlation and significantly correlated (r = 0.540). The multiple regression analysis result (Table 4.7) showed that self-regulated learning does have strong significant relationship with lifelong learning. Although with

the mean value of 3.69, the students have a considerable level of self-regulated learning. This indicates that the self-regulated learning level of the UUM students does impact their lifelong learning because as they emerge into the labor market from the school transition, their considerably high level of self-regulated learning does necessarily mean that they possess lifelong learning.

The core idea behind this development of Self-Regulated Learning is due to the epistemological nature. In the field of cognitive research, social constructivist learning theories can be viewed as the main model in this era of knowledge economy (Loyens, 2007). These theories underline that learners ought to build their own comprehension. One of the common notions of social constructivist learning speculations is the crucial of Self-Regulated Learning as the key element for effective learning in school and lifelong learning (Boekaerts, 1999; Zimmerman, 2001). Self-Regulated Learning is viewed as a collaboration of individual, behavioral and ecological components (Pintrich, 2000; Zimmerman, 2000).

Late models of Self-Regulated Learning incorporate with motivational notions or attitudes together with intellectual and meta-cognitive learning procedures (Wolters, 2003). Pintrich (2000, 2004), for instance, exhibits motivation as a key element of Self-regulated learning. Past researchers have reported that meta-cognitive and motivational factors are positively related to each other (Bruinsma, 2004; Pintrich, 2000 & 2004). As such, more inspired students will probably utilize an assortment of psychological and

meta-cognitive methodologies and are more effectively in their effort of self- regulation. Berger and Karabenick (2011) likewise discovered confirmation for the association between students' motivation and utilization of learning strategies. Even more particularly, their exploration demonstrates no proportional, yet unidirectional impacts between the two constructs: inspiration predicts the utilization of learning techniques; however, the utilization of learning systems does not anticipate inspiration. Thus, empirical studies also affirmed the expected positive connections between the utilization of meta-cognitive learning abilities and motivation for lifelong learning.

5.2.2 Personal knowledge management (PKM) skills and lifelong learning

The Pearson Correlation Analysis (refer to Table 4.5) revealed that PKM skills and lifelong learning has strong correlation and significantly correlated (r = 0.636). The multiple regression analysis result (Table 4.8) showed that PKM skills do have strong significant relationship with lifelong learning. Although with the mean value of 4.00, the students have a considerable level of PKM skills. This indicates that the PKM skills of the UUM students does impact their lifelong learning because as they emerge into the labor market from the school transition, their considerably good PKM skills does necessarily mean that they possess lifelong learning.

Personal Knowledge Management have multidisciplinary ways to deal with concentrated on the improvement of abilities and states of mind that prompt more successful interaction, comprehension, creativity, cooperation, critical thinking, lifelong learning,

social networking, and so on. These methodologies take PKM to a level beyond the management of information and can help the learners have better understanding knowledge and information and place them into a setting that, permits more viable basic leadership (Zuber-Skerritt, 2005; Dorsey, 2000; Jefferson, 2006) with respect to profession, life decisions and individual development through lifelong learning.

Study by Pettenati, Cigognini, Guerin, and Mangione (2009) which concentrates on educating strategy like educating PKM skills to train individual who are expert's lifelong learners, for instance university students for their effective knowledge management purpose. The authors believe that it is practical to initiate training programs which can activate the social and digital proficiency skills and capabilities that can be continuously advanced. Consequently, the study analyzes the effective practices of expert learners in the context of Web 2.0 tools and circumstances. Considering a qualitative research, the goal of the study was to portray skilled profile of the lifelong learner 2.0 to determine a valid training support tool which would develop PKM skills in university students. Besides that, these PKM skills demonstrate bases on fundamental capabilities and Higher-Order abilities (HO-skills). It distinguishes empowering conditions and capabilities which support effective individual personal knowledge management (Mangione, Cigognini and Pettenati, 2007).

Therefore, information Society obliges everyone to gain a set of PKM skills to become well established human capital, experts in different field, and lifelong learners, who know

about the system affordances. Moreover, the current socio-technical educational framework formed by the advancements of technologies and practices of the "Knowledge Society" requires both attitudes and accessible technologies for the individuals to take part in an individual 2.0 web based lifelong learning experience.

5.2.3 English competency and lifelong learning

The Pearson Correlation Analysis (refer to Table 4.6) revealed that English competency and lifelong learning has strong correlation and significantly correlated (r = 0.571). The multiple regression analysis result (Table 4.9) showed that English competency does have strong significant relationship with lifelong learning. Although with the mean value of 4.08, the students have a considerable level of English competency. This indicates that the English competency of the UUM students does impact their lifelong learning because as they emerge into the labor market from the school transition, their considerably good English competency does necessarily mean that they possess lifelong learning.

English language learning considers as one of the objective to make a lifelong craving to learn and develop mentally (Dimova, 2012). As per Kubota (2011), "expert in a foreign language, specifically English, can be a lifelong interest driven by curiosity of intellectual or a for easygoing or genuine leisure. Research by Elaldi(2015), was intends to determine the lifelong learning nature of English Language and Literature students as far as gender, level of grades, and age factors, and thus, it would be productive idea for future researchers to analyze the effect of knowing a foreign language (English language) on

lifelong learning. The discoveries made in this review uncovered that the English Language and Literature students had higher level of lifelong learning behavior. Additionally, in a study performed by Ozcan (2011), lifelong learning view of English language on educators was found in the "most" competent level (4.04 out of 5). However, in contrast past literature also demonstrated that lifelong learning demeanors of university students were lower than the medium score of the scale which was utilized as a part of that study.

On the other word, it can be explained that lifelong learning at higher education institutions is more about enhancement of a "want to learn" demeanor and the expertise in competences rather than "Learning to learn". It concentrates fundamentally on the requirements of the learners within their learning context and encouraging lifelong learning experiences (Crosier et al., 2007). In this regard, it is possible to mention that university students who participated in this research have adequate inspiration or motivation for active learning that encloses the philosophy of the lifelong learning. Thus, learning a foreign language, especially English as a lingua franca which is one of the significant factors affecting lifelong learning competencies, English Language and Literature students are expected to enrich their lifelong learning experiences.

5.3 Implications

This research was undertaken to examine the relationship between self-regulated learning, personal knowledge management (PKM) skills, English competency and

university student's lifelong learning. there are similar past studies have been conducted in the field of knowledge management especially those related with the acquisition of new knowledge and competencies to being sustainable and competent in this ever-changing world of information age. In a theoretical manner, this study has given insights for researcher to explore more on the emergence of new knowledge and skills which can be a greater strength for the cultivation lifelong learning of students or an individual in overall learning process. This implication will lead to the increase of new literature on the field of knowledge management as the future researcher; will intent to add up the existing literature by conducting deeper study on abilities and competencies which lead to individual lifelong learning.

On the other word, this research also contributes some major implication from practical perspective. Even though advanced education has dependably been formally composed as a structure for the generation and association of advanced knowledge, the development of a learning economy and the important of globalization and ICT puts new requests on higher education institution especially when encountering lifelong learning as a prospect element of their student in future.

Consequently, it is clearly explained that higher education institutions have a major role in enhancing student's level of competencies, ability and motivation toward lifelong learning. The higher education system can make new learning openings and execute school procedures; builds up educational modules considering the upgrade of individual

skills and qualities to enhance information and understanding, and to empower students to oversee change through their lives. Besides that, by considering the advancement of information technology, the educational provider can utilize current technology broadly over all disciplines of the institution, and including the investigation of synergistic learning opportunities for their students through information systems. This pragmatic move will eventually enhance university student's personal knowledge management skills in ICT and prepare them to participate in lifelong learning with technological competence.

Finally, to encourage lifelong learning among students, the school and institutions must play its role as medium by involving all the students and staff in the development of personal learning plans and other individual development practices in relation to produce well productive human capital for future needs.

5.4 Limitations of the research

To complete this study, the researcher has stumbled upon few limitations. Facing a limitation issue in completing a research work is very common thing for a researcher. The first problem faced by the researcher is regarding size of the sample, the sample size for this study was chosen from the population of UUM students which is considered as such a small part of tertiary students rather than focusing the overall university students throughout Malaysian region. This is because of due to the time limitation factor which forces the researcher to focus only one higher educational institution for her initial study.

Besides that, the current study only indicates three predictors namely self-regulated learning, personal knowledge management skill and English competency which is limited to represent the ability of student's lifelong learning and their tendency towards involve in the process of lifelong learning. There was other ability or factor that probably leads to the student's involvement in the learning to learn process such as motivation, interest, and other knowledge management competencies.

Therefore, another limitation of this study related to the research design which focuses individual unit of analysis rather than organizational unit of analysis. The individual unit of analysis will provide a narrower perspective where the findings of the study were more to a personal perspective. This study also can be conducted by choosing organizational unit of analysis to get broader perception of lifelong learning in the nation.

5.5 Suggestion for future research

On the other hand, besides highlighting the problems and limitations in this study, the researcher also offers some recommendation for future research. First, it would be worthwhile, if the future researcher could expand the population size to a bigger size. For instance, this study only focuses on UUM students as the sample size of the research but in future the study can focus on all the university students' allover Malaysia for the reliability of the research findings. Moreover, the researchers should explore more on the

field of study to encounter more new or effective independent variable which will be more prominent with their dependent variable.

5.6 Conclusions

This research has done to examine the abilities and competencies of students that impact the tendency of lifelong learning of the tertiary educational students. The target population of students of this study was the students of Universiti Utara Malaysia. Overall, 380 students were participated in this correlation study where all those students were comprised of student from foundational studies, undergraduates and postgraduates of the university. The research focuses on the abilities and competencies which will impact the student's involvement in the lifelong learning. From the findings of the research it has been found that all the predictors of the study have significant relationship with students' lifelong learning.

On the other hand, to encourage the sustainable development of student's lifelong learning in this knowledge society, higher education institution should include program and training which and enhance the ability and competency of students to prepare their self for lifelong learning environment. Besides that, it is prominent for the educational institution integrates the modern technology into acquisition lifelong education, since the technology development has brought the knowledge society to new paradigm in the epistemological discipline.

REFERENCE

Alamen, K. M., & Tasir, Z. B, (2015). An Assessment of Personal Knowledge Management for Teachers in Malaysian Secondary Schools. *International Journal of Sciences: Basic and Applied Research (IJSBAR) 24* (4)188-19

Ashton, J., & Newman, L. (2006). An unfinished symphony: 21st century teacher education using knowledge creating heutagogies. *Journal of Educational Technology, 37*(6), 825-840

Aspin, D., & Chapman, J. (2001, July). Lifelong learning: concepts, theories and values. In Proceedings of the 31st Annual Conference of SCUTREA (pp. 38-41). of East London: SCUTREA.

Bennett, S. (1993). *The EPI Cluster Sampling Method: A Critical Appraisal*. Invited Paper,International Statistical Institute's 49th Session, Florence.

Berger, J-L., & Karanebick, S.A. (2011). Motivation and students' use of learning strategies: Evidence of unidirectional effects in mathematics classrooms. *Learning and Instruction, 21*(3), 416-428.

Berry, W., & Feldman, S. (1985). Multiple Regression in Practice. Beverly Hill CA: Sage Publications.

Boekaerts, M. (1999). Self-regulated learning: Where we are today. *International Journal Educational Research, 31*(6), 445-457.

Bolhuis S. (2003). Towards process-oriented teaching for self-directed lifelong learning: a multidimensional perspective. *Learn Instruct 13*(3), 327–347

Bonnet, G. (2002). *The assessment of pupils' skills in English in eight European countries: a European project.* European network of policy makers for the evaluation of education systems.

Buntat, Y., Puteh, N. A., Azeman, S. H., Nasir, A. N. M., Iahad, N., & Aziz, M. A. (2013). The Need of Lifelong Learning towards Learning Community Development in Malaysia. *Procedia-Social and Behavioral Sciences, 93,* 1541-1545.

Bruinsma, M. (2004). Motivation, cognitive processing and achievement in higher education. *Learning and Instruction, 14*(6), 549-568.

Bruner J S (1996). *The culture of education. Harvard University Press*. Cambridge.

Candy, P.C. (1991). *Self-direction for lifelong learning: A comprehensive guide to theory and practice.* San Francisco, CA: Jossey-Bass.

Cheetham, G. and Chivers, G. (1996), "Towards a holistic model of professional competence",*Journal of European Industrial Training, 20* (5), 20-30.

Cheetham, G. and Chivers, G. (1998), "The reflective (and competent) practitioner: a model of professional competence which seeks to harmonise the reflective practitioner and competence-based approaches", *Journal of European Industrial Training, 22* (7), 267-76.

Cheng, E., (2011). "A Study of The Predictive Effect Of Pre-Service Teacher Personal Knowledge Management Competency On Their Instructional Design Skills". *Journal of Knowledge Management Practice, 12*(3).

Cheong, R. K. F., and Tsui, E., (2011). "From Skills and Competencies to Outcome-based Collaborative Work : Tracking a Decade's Development of Personal Knowledge Management (PKM) Models". *Knowledge and Process Management, 18*(3), 175 193.

Cigognini, M. E., Mangione, G. R., & Pettenati,M. C. (2007, September 5–6). *Favouring a critical, creative and ethical use of the network resources through Web 2.0 applications.* Paper presented at the Towards a Social Science of Web 2.0 Conference, York, UK. Retrieved October 24, 2007, from http://www.york.ac.uk/res/siru/ web2.0/cigognini.htm.

Cigognini, M. E., Pettenati, M. C., & Paoletti, G. (2008). *Personal knowledge management skills model for expert lifelong learners: A validation method.* In J. M. Nunes & M. A. McPherson (Eds.), Proceedings of the IADIS International Conference e-Learning 2008 (pp. 215–222). Lisbon:International Association for Development of the Information Society.

Cigognini, M. E., Pettenati, M. C., & Edirisingha, P. (2010, July). Personal knowledge management skills in Web 2.0-based learning. In Web (pp. 109-127).

Clayton, V. (2000). *Detective fiction: focus on critical thinking*. Retrieved from http://www.yale.edu/curriculum/units/html [Date of access: 13/06/02].

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Collins, J. (2009). Lifelong learning in the 21st century and beyond. *J. Radio Graphics, 29* (2), 613-622.

Commission of the European Communities. (2000). *A Memorandum of Lifelong Learning. Brussels*. Retrieved fromhttp://tvu.acs.si/dokumenti/LLL memorandum Oct2000.pdf, March 20, 2006,

Corno, L. (1993). The Best-laid plans: Modern conceptions of volition and educational research. *Educational Researcher, 22*, 14-22.

Creswell, J. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle River, NJ: Merrill Prentice Hall.

Cropley C, & Dave, P.N. (1978). *Research in classroom: The study of teacher, teaching and instruction.* In: L.W.Anderson and Burns R.C. (1989). New York: Pergamon.

Crosier D, Purser L, Smidt H (2007). *Trends V: Universities Shaping the European Higher Education Area, Brussels: EUA.* Retrieved on 22 February 2015 from http://www.eua.be/publications

Dave, R.H. (1975). *Reflections on lifelong education and the school*. Hamburg: UNESCO (VIE Monograph No 3).

Delors, Jacques. (1996). Learning: The Treasure Within. Paris: UNESCO UNESCO. 2004. EFA Global Monitoring Report. Paris: UNESCO

Dewey, J. (1916). *Democracy and education*. The Free Press, New York

Dimova S (2012). Foreign language for content: Aiming to develop lifelong learning dispositions. *Doctoral Dissertation*. Georgia State University, the U.S.A.

Dorsey, P.A. (2000). *Personal knowledge management: educational framework for global business.* Millikin University, available at: www.millikin.edu/pkm/pkm_istanbul. html

EC, Commission of the European Communities (2000) Memorandum on Lifelong Learning. SEC(2000) 1832. Brussels

Elaldi, S. (2015). Investigating lifelong learning dispositions of students studying English language and literature in terms of different variables. *Educational Research and Reviews, 10*(16), 2340-2351.

Elias, S. M. & MacDonald, S.,(2007) "Using Past Performance, Proxy Efficacy, and Academic Self-Efficacy to Predict College Performance" *Journal of Applied Social Psychology, 37*(11), 2518-2531.

Ng, M., Abdullah, L. Y., & Abu Bakar, K. (2006). Motivational Belief And Self-Regulated Learning A Study On Malaysian Students.

European Commission. (2000). *European Report on the Quality of School Education Sixteen quality indicators.* Retrieved from http://aei.pitt.edu/42406/1/A6503.pdf, March 20, 2006.

Europa. (2003). *European Commission: Policy Areas: Lifelong Learning, what is Lifelong Learning?* Retrieved from: http://europa.eu.int/comm /education /policies /lll/ life /what_islll_en.html [2011, April 22]

European Council. (2000) Lisbon: Lisbon European Council Presidency Conclusions. Of 2324.03.2000Retrievedfromhttp://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/ec/00100-r1.en0.htm on 11 November 2012.

Field, J. (2005). *Social capital and lifelong learning*. Bristol: The Policy Press.

Fischer, G. (2001). *Lifelong learning and its support with new media*. In: Smelser, N.J. and Baltes, P.B. (Editors), International Encyclopedia of Social and Behavioral Sciences. Elsevier, (2001), 8836-40.

Freire, P. (1973). *Education for the critically conscious*. New York, Continuum.

Gačić, M. (2009). Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning.

Gorman, G.E. and Pauleen, D.J. (2011), ''The nature and value of personal knowledge management'', in Pauleen, D.J. and Gorman, G.E. (Eds), Personal Knowledge Management: Individual, Organizational and Social Perspectives, Gower Publishing Limited, Farnham, pp. 1-16.

Graham, S. & Harris, K. R. (2000). The role of self-regulation and transcription skills in writing and writing development. *Educational Psychologist, 35*(1), 3-12.

Hair, J. F., Money, A. H., Samouel, P., & Page, M. (2007). *Research Methods for Business.* USA, West Sussex: John Wiley & Sons.

Haley Wing Chi Tsang, Eric Tsui, (2017) "Conceptual design and empirical study of a personal learning environment and network (PLE & N) to support peer-based social and lifelong learning", *VINE Journal of Information and Knowledge Management Systems,* 47 Issue: 2, doi: 10.1108/VJIKMS-03-2017-0010

Hancock,V.E,. (1993). *Information Literacy for Lifelong Learning.* ERIC Digest CDROM Fulltext. Syracuse, New York: ERIC Clearinghouse on Information Resources.

Harste, J,. (2003). What do we mean by literacy now?. Voices From the Middle, 10(3), 8-12.

Hein, G. (1991). *Constructivist learning theory.* Institute for Inquiry. Retreived from /http://www. exploratorium. edu/ifi/resources/constructivistlearning. htmlS.

Hemerka, V. (2009). Low speaking performance in learners of English. *Doctoral dissertation*. Masarykova univerzita, Pedagogická fakulta).

Jefferson, T.L. (2006). Taking it personally: personal knowledge management. *VINE, 36* (1), 35-37.

Jessup-Anger, J. E. (2009). Inspiring the life of the mind: An examination of the roles of residential college environments and motivational attributes in promoting undergraduate students' inclination to inquire and capacity for lifelong learning. Michigan State University.

Kauffman, D.F. (2004). Self-regulated learning in web-based environments: Instructional tools designed to facilitate cognitive strategy use, metacognitive processing, and motivational beliefs. *Journal of Educational Computing Research, 30,*139–161.

Kist, W, (2004). The new literacies movement: Reading and writing in the digital age. *Independent School, 63*(4):28-36.

Knapper, C.K., & Cropley, A.J. (2000). *Lifelong learning in higher education* (3rd ed.). Sterling, VA: Stylus Publishing, Inc.

Knowles, M. (1975). *Self-directed Learning: A Guide for Learners and teachers*. New York: Cambridge Books.

Kubota, R. (2011). Learning a foreign language as leisure and consumption: enjoyment, desire, and the business of eikaiwa. *Int. J. Bilingual Educ. Bilingualism 14*(4), 473-88.

Krejcie, R. V., & Morgan, D.W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement, 30*(3), 607-610.

Leedy, P. & Ormrod, J. (2001). *Practical research: Planning and design* (7th ed.). Upper Saddle.

Lenne, D., Abel, M.H., Trigano, P. & Adeline, L. (2008). Self-regulated learning in technology enhanced learning environment: an investigation with university students. *Technology, Pedagogy and Education, 17* (3), 171-181.

Loyens, S. (2007). Students' conceptions of constructivist learning. *Doctoral dissertation*. Erasmus University, the Netherlands. Retrieved from http://publishing.eur.nl/ir/repub/asset/9264/Sofie%20Loyens-%20Proefschrift.pdf

Madill HM (1984). Lifelong education in an occupational therapy context. *Can. J. Occupat. Therapy 51*, 68-72.

Maier, P., & Warren, A. (2000). *Integrating Technology in Learning and Teaching: A Practical Guide for Educators.* USA: Stylus Publishing Inc.

Malaysia Education Blueprint (Higher Education): Transforming Higher Education for Excellence [Discussion Document]. Retrieved January 19, 2015, from http://moe.gov.my/en/hebluepriint

Malaysia, Government of (1996a) Seventh Malaysia Plan: 1996-2000. Prime Minister's Department.

Malaysia. (2001). Eight Malaysia Plan 2001 – 2005, Government of Malaysia, Government Printers, Kuala Lumpur.

Ministry of Higher Education (2007). The National Higher Education Strategic Plan (2007-2020). Putrajaya: MOHE.

Ministry of Higher Education Malaysia (2011). Blueprint on Enculturation of Lifelong Learning for Malaysia: 2011-2020. Putrajaya, MOHE.

Mok, M., Lung, C. L., Cheng, P. W., Cheung, H. P. & Ng, M. L. (2006) Self-assessment in higher education:experience in using a metacognitive approach in five case studies, *Assessment and Evaluation in HigherEducation, 31*(4), 415–434.

Myers, J. L., & Greenson, J. K. (2012). Life-long learning and self-assessment. *Archives of Pathology and Laboratory Medicine, 136* (8), 851-853.

Myint, D. (2004), "PKM: the starting blocks for KM", Inside Knowledge Magazine, Vol. 7 No. 9, available at:www.ikmagazine.com/xq/asp/sid.0/articleid.6F740303-B55D4CCCB9045926814873AE/eTitle.PKM_The_starting_blocks_for_KM/qx/display.htm (accessed 8 August 2008).

Narsee, S. (2001). Literacy and workplace communication: a South African Technikon perspective. *South African Journal of Higher Education, 15* (3), 46-51.

Nieman, M.M., Swanepoel, J.I., & Venter, E. (2000). *Language, literacy and communication.* University of South Africa.

Neuman, W. L. (2000). *Social research methods: Qualitative and quantitative approaches* (4th ed.). Boston: Allyn and Bacon.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw Hill.

Ozcan D (2011). Evaluation of 4th And 5th classes teacher's competence perceptions towards lifelong learning. *Int. J. Learn. Teach. 3*(1), 1-9.

Parker, S. (2003). Widening participation and lifelong learning–some theoretical and practical considerations. LTSN generic centre http://www. heacademy. ac. uk/accessed, 13, 02-09.

Pettenati, M.C., Cigognini, E., Mangione, J. and Guerin, E. (2007), "Using social software for personal knowledge management in formal online learning", *Turkish Online Journal of Distance Education, 8* (3), 52-65

Pettenati, M.C., Cigognini, M.E., & Sorrentino, F. (2007). Proceedings from EDEN 2007 Annual Conference: Methods and tools for developing personal knowledge management skills in the Connectivist Era.13-16JUNE, 2007, Naples, Italy.

Pettenati, M. C., & Cigognini, M. E. (2009). *Designing e-tivities to increase learning-to-learn abilities*. Elearning Papers, 12.

Pettenati, M. C., Cigognini, M. E., Guerin, E. M. C., & Mangione, G. R. (2009). *Personal knowledge management skills for Lifelong-Learners2.0.* In Hatzipanagos, S., & Warburton, S. (Eds.), Handbook of research on social software and developing community ontologies (pp. 298–315). Hershey, PA: Information Science Reference.

Piaget, J. (1973). *To understand is to invent: the future of education Grossman*. New York.

Pienaar, G.E. (2000). Teaching critical thinking skills in the language classroom. *Journal for language teaching, 35* (283), 125-137.

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology, 82*(1), 33.

Pintrich, P. R., & Schrauben, B. (1991). Student's Motivational Beliefs and Their Cognitive Engagement in Classroom Academic Task. In D. Schunk, & J. Meece (Eds.*), Student Perception in the Classroom; Causes and Consequences,* (pp. 149-183). Hillsdale, NJ: Lawrence Erlbaum.

Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1993). *Reliability and predictive validity of the Motivated Strategies for Learning Questionnaire (MSLQ). Educational and Psychological Measurement, 53*(3), 801-813. doi: 10.1177/0013164493053003024

Pintrich, P. R. (1995) *Understanding self-regulated learning* (San Francisco, Jossey-Bass).

Pintrich, P. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology,* 92, 544-555.

Pintrich, P.R. (2000). *The role of goal orientation in self-regulated learning.* In M. Boekaerts, P.R. Pintrich, & M. Zeidner (Eds.), Handbook of self-regulation (pp. 451-502). San Diego, CA: Academic Press.

Pintrich, P.R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review, 16*(4), 385-407

Preece, J. (2011). Research in adult education and lifelong learning in the era of CONFINTEA VI. *Int. J. Lifelong Educ. 30*(1), 99–117.

Reid, R., & Lienemann, T. O. (2006). Strategy instruction for students with learning disabilities. New York: Guilford Press.

Ricky K.F. Cheong, Eric Tsui, (2010) "The roles and values of personal knowledge management: an exploratory study", VINE, Vol. 40 Issue: 2, pp.204-227, https://doi.org/10.1108/03055721011050686.

Royce, J. (1999). *Reading as a basis for using information technology efficiently.* In Henri, J. and Bonanno, K. (Eds), Information-Literate School Community: Best Practice, Centre for Information Studies, Wagga Wagga, pp. 145-56.

Savuran, Y. (2014). Life-Long Learning Competencies Of Prospective English Language Teachers in Comparison With Their Mentors.

Schraw, G. (1998). Promoting general metacognitive awareness. *Instructional science, 26*(1), 113-125.

Schunk, D.H., & Zimmerman, B.J. (Eds.). (1994). *Self-regulation of learning and performance: Issues and educational applications*. Hillsdale, NJ: Erlbaum.

Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach* (4th Ed.). New York: John Wiley & Sons.

Sekaran, U. & Bougie, R. (2013). *Research Methods for Business: A Skill-Building Approach* (6th ed.). Wiley, New York.

Sell, G. (1978). *A handbook of terminology for classifying and describing the learning activities of adults.* Denver, CO: National Center for Higher Education Management Systems.

Sen, A. (1999). *Development as freedom*. New York: Oxford University Press.

Seval, K., & Gulsun Atanur, B. (2012). Village Institutes and Life-long Learning. *Procedia - Social and Behavioral Sciences, 46,* 5937- 5940.

Stoeger, H., & Ziegler, A. (2008). Evaluation of a classroom based training to improve self-regulation in time management tasks during homework activities with fourth graders. *Metacognition and Learning, 3*(3), 207-230.

Sulaiman, N. & Burke, M. (2009). A case analysis of knowledge sharing implementation and job searching in Malaysia. *International Journal of Information Management, 29*(4), 321.

Świgoń, M. (2013). Personal knowledge and information management–conception and exemplification. *Journal of information science, 39* (6), 832-845.

Tashakkori, A., & Teddlie, C. (2003). *Handbook of mixed methods in social & behavioral research.* Thousand Oaks, CA: Sage.

Tight, M. (1996). *Key concepts in adult education and training*. London: Routledge.

Van den Berg, M.E.S. (2000). Is there a need for critical thinking skills modules at tertiary level? *South African Journal of Higher Education, 14 (1),* 96-107.

Verhoeven, J., Heerwegh, D. & Wit, K. (2012). First year university student's self-perception of ICT skills: Do learning styles matter? *Education and Information Technologies, 17*, 109-133.

Vygotsky, L. S. (1978). *Mind in society.* Harvard University Press, Cambridge

Wain, K. (1987). *Philosophy of lifelong education*. London: Croom Helm Ltd.

Wessels, M., & van den, R. (1998). *Practical guide to facilitating language learning, Johannesburg*. International Thomson Publishing.

Wirth, J. & Leutner, L. (2008). Self-regulated learning as a competence. Implication of theoretical Models for Assessment Methods. *Journal of Psychology, 216* (2), 102-110.

Wolters, C. A. (2003). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning. *Educational Psychologist, 38,* 189-205.

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329-339.

Zimmerman, B. J. (1995). Self-regulation involves more than metacognition: *A social cognitive perspective. Educational psychologist, 30*(4), 217-221.

Zimmerman, B. J. (2001). Theories of Self-Regulated Learning and Academic Achievement: An Overview and Analysis, In B. J. Zimmerman, & D. H. Schunk (Eds.), *Selfregulated Learning and Academic Achievement: Theoritical Perspectives,* (pp. 1-38)., 2nd ed. Mahwah, NJ:Erlbaum

Zimmerman, B.J. & Schunk, D.H. (2004) Self-regulating intellectual processes and outcomes: *a social cognitive perspective, in* D. Y. Dai & R. J. Sternberg (Eds) *Motivation, emotion and cognition* (Lawrence Erlbaum Associates, New Jersey).

Zimmerman, B. J. (2004). *Sociocultural influence and students' development of academic self-regulation: A social-cognitive perspective*. In D. M. McInerney & S. Van Etten (Eds.), Big theories revisted (pp.139-164). Greenwhich, CT: Information Age.

Zuber-Skerritt, O. (2005). A model of values and actions for personal knowledge management. *Journal of Workplace Learning, 17* (1/2), 49-64.

APPENDIX

Appendix A: Questionnaire

GRADUATE SCHOOL OF BUSINESS

OTHMAN YEOP ABDULLAH

QUESTIONAIRE

The relationship between Self- Regulated Learning, Personal Knowledge Management (PKM) Skills, English Competency and Lifelong learning on university Students.

Dear Respondent,

The researcher is carrying out a study whose main objective is to examine the relationship between Self- Regulated Learning, Personal Knowledge Management (PKM) Skills, English Competency and Lifelong learning on university Students. You have been selected as one of the respondents for the study and the information you will give will be treated with utmost confidentiality and used purely for academic purposes. The findings and recommendations from this study are likely to benefit University Utara Malaysia in areas such admission of students and teaching and learning. Kindly please spare some of your valuable time to answer these questions.

Thank you.

Yours Sincerely,

Dinithambigai Nadahrajan

Master of Science in Management

University Utara Malaysia

Section A: Background Information

Please tick (x) in the appropriate box or fill the space provided.

No	Item	Description
1.	Gender	☐ Male ☐ Female
2.	Age	☐ 18-25 ☐ 26-33 ☐ 34-41 ☐ 42 – 49 ☐ 50 and above
3.	Nationality	☐ Malaysian student ☐ International student
4.	Marital status	☐ Single ☐ Married ☐ Widowed ☐ Divorced
5.	Faculty of Study	☐ College of Business (COB) ☐ College of Art (CAS) ☐ College of Law and Governance (COLGIS)
6.	Highest education level	☐ Foundation Studies ☐ Bachelor Degree ☐ Master's Degree ☐ Ph.D.
7.	CGPA	☐ Below 3.00 ☐ 3.00 -3.59 ☐ 3.60 and above

Section B: Students Lifelong Learning

Please tick (/) in the appropriate box to indicate your level of agreement for each statement below.

1-strongly disagree 2-disagree 3-neither agree nor disagree 4-agree
5-strongly agree

Item	Statement	1	2	3	4	5
1	I believe on my ability to put ideas together, to see relationships, similarities, and differences between ideas.					
2	I believe on my ability to think analytically or logically.					
3	I believe on my ability to learn on my own, pursue ideas, and find information I need.					
4	I believe on my ability to function as a team member.					
5	I can Understand other people and I believe on my ability to get along with different kinds of people.					
6	I am able write clearly and effectively.					
7	My lifelong learning capacity help me in gaining a broad general education about different fields of knowledge.					
8	My lifelong learning capacity help me in acquiring familiarity with the use of computers.					
9	My lifelong learning capacity help me in acquiring background and specialization for further education in some professional, scientific, or scholarly field.					
10	I am able understand quantitative thinking like probabilities, proportions and etc.					

Section C: Self-Regulated Learning

Please tick (/) in the appropriate box to indicate your level of agreement for each statement below.

1-strongly disagree 2-disagree 3-neither agree nor disagree 4-agree
5-strongly agree

Item	Statement	1	2	3	4	5
1	I ask myself questions to make sure I know the material I have been studying.					
2	When work is hard I either give up or study only the easy parts. (*R)					
3	I work on practice exercises and answer end of chapter questions even when I don't have to.					
4	Even when study materials are dull and uninteresting, I keep working until I finish.					
5	Before I begin studying I think about the things I will need to do to learn.					
6	I often find that I have been reading for class but don't know what it is all about. (*R)					
7	I find that when the teacher is talking I think of other things and don't really listen to what is being said. (*R)					
8	When I'm reading, I stop once in a while and go over what I have read.					
9	I work hard to get a good grade even when I don't like a class.					

Section D: Student Personal Knowledge Management (PKM) Skills

Please tick (/) in the appropriate box to indicate your level of agreement for each statement below.

1-strongly disagree 2-disagree 3-neither agree nor disagree 4-agree
5-strongly agree

Item	Statement	1	2	3	4	5
1	I can use an online library catalog to retrieve books, journals and journal articles.					
2	I know the difference between an online search engine, a directory of sites, and a metasearch engine.					
3	I know when it is appropriate to use scholarly books or journal articles for a project and when to use the more popular information from the Web.					
4	I know when to use primary sources of information and when to use secondary sources.					
5	I have successfully classified, organized and stored documents into folders for later retrieval.					
6	I can create, edit, and resize images/graphics for use in documents and presentations and organize and store the resulting images for future use.					
7	I can extract and manipulate data and information in a variety of formats.					
8	I know when and where to incorporate data into an assessment document article, or presentation.					
9	I can use a word processing application to create reports and documents.					
10	I can create a PDF document from a word processed document, presentation, or spreadsheet.					
11	I know when to communicate via telephone, email, chat, or instant messaging.					

12	I can send, delete, reply to and print email messages can attach documents to email messages.					
13	I back up my important documents regularly to another disk or to CD-ROM to protect my work.					
14	I understand the (increased) risks to privacy, loss of data, and to intellectual property rights associated with information environments relying on electronic technologies.					

Section E: English Competency

Please tick (/) in the appropriate box to indicate your level of agreement for each statement below.

1-strongly disagree 2-disagree 3-neither agree nor disagree 4-agree
5-strongly agree

Item	Statement	1	2	3	4	5
1	I can take notes from a text or lecture in English to report about it.					
2	I can write English texts that are perfectly understandable, even though they may contain some mistakes.					
3	I can read through English texts to find out what they are all about or if they are useful.					
4	I can understand English literary texts well enough to be able to say something about them.					
5	I can choose English texts from brochures, magazines, newspapers etc., and get information from them which I need to use for example in a project.					
6	I can express my own opinion by writing English essays about a drawing, picture or painting.					

Thank you for your participation.

Appendix B: Reliability coefficients for variables

Reliability Statistics (LLL)

Cronbach's Alpha	N of Items
.882	10

Reliability Statistics (SRL)

Cronbach's Alpha	N of Items
.759	9

Reliability Statistics (PKMS)

Cronbach's Alpha	N of Items
.888	14

Reliability Statistics (EC)

Cronbach's Alpha	N of Items
.902	6

Appendix C: Descriptive statistics of variables

Descriptive Statistics			
	N	Mean	Std. Deviation
mean lifelong learning	380	4.0655	.50673
mean self-regulated learning	380	3.6874	.55440
mean PKM	380	4.0086	.51938
mean English competency	380	4.0754	.64534
Valid N (listwise)	380		

Appendix D: Pearson correlation table

Correlations

		mean lifelong learning	mean self-regulated learning	mean PKM	mean English competency
mean lifelong learning	Pearson Correlation	1	.540**	.636**	.571**
	Sig. (2-tailed)		.000	.000	.000
	N	380	380	380	380
mean self-regulated learning	Pearson Correlation	.540**	1	.488**	.355**
	Sig. (2-tailed)	.000		.000	.000
	N	380	380	380	380
mean PKM	Pearson Correlation	.636**	.488**	1	.655**
	Sig. (2-tailed)	.000	.000		.000
	N	380	380	380	380
mean English competency	Pearson Correlation	.571**	.355**	.655**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	380	380	380	380

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

Appendix E: Multiple regression table

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.714[a]	.509	.505	.35636

a. Predictors: (Constant), EC, SRL, PKMS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.570	3	16.523	130.113	.000[b]
	Residual	47.749	376	.127		
	Total	97.318	379			

a. Dependent Variable: LLL

b. Predictors: (Constant), EC, SRL, PKMS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.996	.157		6.337	.000
	SRL	.265	.038	.289	6.984	.000
	PKMS	.321	.050	.329	6.410	.000
	EC	.198	.038	.252	5.271	.000

a. Dependent Variable: LLL

Appendix F: Independent sample t-tests' table

Gender differences between all groups

Group Statistics

	1.Gender.	N	Mean	Std. Deviation	Std. Error Mean
LLL	MALE	143	4.0902	.55580	.04648
	FEMALE	237	4.0506	.47529	.03087
SRL	MALE	143	3.6936	.61626	.05153
	FEMALE	237	3.6833	.51496	.03345
PKMS	MALE	143	4.0917	.54004	.04516
	FEMALE	237	3.9585	.50110	.03255
EC	MALE	143	4.1830	.65292	.05460
	FEMALE	237	4.0105	.63275	.04110

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LLL	Equal variances assumed	6.997	.009	.737	378	.461	.03958	.05369	-.06599	.14514
	Equal variances not assumed			.709	264.025	.479	.03958	.05580	-.07029	.14944
SRL	Equal variances assumed	8.089	.005	.175	378	.861	.01028	.05879	-.10532	.12587
	Equal variances not assumed			.167	259.177	.867	.01028	.06144	-.11071	.13126

PKMS	Equal variances assumed	5.120	.024	2.438	378	.015	.13323	.05465	.02578	.24067
	Equal variances not assumed			2.393	282.061	.017	.13323	.05567	.02365	.24280
EC	Equal variances assumed	2.065	.152	2.544	378	.011	.17254	.06781	.03921	.30588
	Equal variances not assumed			2.525	292.094	.012	.17254	.06834	.03804	.30705

Nationality differences between all groups

Group Statistics

	3.Nationality.	N	Mean	Std. Deviation	Std. Error Mean
LLL	malaysian student	311	4.0576	.50698	.02875
	international student	69	4.1014	.50773	.06112
SRL	malaysian student	311	3.6962	.54638	.03098
	international student	69	3.6464	.59205	.07127
PKMS	malaysian student	311	3.9881	.53702	.03045
	international student	69	4.1014	.42233	.05084
EC	malaysian student	311	4.0402	.66153	.03751
	international student	69	4.2342	.54080	.06511

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LLL	Equal variances assumed	.000	.995	-.650	378	.516	-.04389	.06748	-.17658	.08880
	Equal variances not assumed			-.650	100.335	.517	-.04389	.06755	-.17790	.09011
SRL	Equal variances assumed	.093	.760	.675	378	.500	.04983	.07384	-.09536	.19501
	Equal variances not assumed			.641	95.379	.523	.04983	.07772	-.10445	.20411
PKMS	Equal variances assumed	2.687	.102	-1.644	378	.101	-.11338	.06897	-.24898	.02223
	Equal variances not assumed			-1.913	122.090	.058	-.11338	.05926	-.23070	.00394
EC	Equal variances assumed	2.311	.129	-2.273	378	.024	-.19404	.08536	-.36189	-.02619
	Equal variances not assumed			-2.582	117.796	.011	-.19404	.07514	-.34284	-.04524

Marital Status differences between all groups

Group Statistics

	4. Marital status.	N	Mean	Std. Deviation	Std. Error Mean
LLL	single	352	4.0616	.51311	.02735
	married	28	4.1143	.42314	.07997
SRL	single	352	3.6866	.55953	.02982
	married	28	3.6946	.49550	.09364
PKMS	single	352	4.0014	.53086	.02829
	married	28	4.0996	.33836	.06394
EC	single	352	4.0715	.66099	.03523
	married	28	4.1243	.39674	.07498

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
LLL	Equal variances assumed	.606	.437	-.529	378	.597	-.05264	.09959	-.24847	.14319
	Equal variances not assumed			-.623	33.650	.538	-.05264	.08451	-.22446	.11918
SRL	Equal variances assumed	1.395	.238	-.074	378	.941	-.00808	.10902	-.22244	.20628

PKMS	Equal variances not assumed			-.082	32.729	.935	-.00808	.09828	-.20809	.19193
	Equal variances assumed	5.180	.023	-.963	378	.336	-.09822	.10200	-.29878	.10234
	Equal variances not assumed			-1.405	38.495	.168	-.09822	.06992	-.23972	.04327
EC	Equal variances assumed	8.980	.003	-.416	378	.677	-.05278	.12679	-.30208	.19652
	Equal variances not assumed			-.637	40.089	.528	-.05278	.08284	-.22020	.11464

Appendix G: One- way ANOVA tests between groups table

Age differences between all groups

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	.768	4	.192	.746	.561
	Within Groups	96.550	375	.257		
	Total	97.318	379			
SRL	Between Groups	3.229	4	.807	2.672	.032
	Within Groups	113.293	375	.302		
	Total	116.522	379			
PKMS	Between Groups	.762	4	.191	.704	.590
	Within Groups	101.494	375	.271		
	Total	102.256	379			
EC	Between Groups	1.859	4	.465	1.118	.347
	Within Groups	155.820	375	.416		

	Total	157.679	379			

Faculty differences between all groups

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	2.892	2	1.446	5.772	.003
	Within Groups	94.427	377	.250		
	Total	97.318	379			
SRL	Between Groups	1.836	2	.918	3.017	.050
	Within Groups	114.686	377	.304		
	Total	116.522	379			
PKMS	Between Groups	1.487	2	.744	2.782	.063
	Within Groups	100.768	377	.267		
	Total	102.256	379			
EC	Between Groups	2.067	2	1.033	2.504	.083
	Within Groups	155.612	377	.413		
	Total	157.679	379			

Study Level differences between all groups

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	.242	3	.081	.312	.816
	Within Groups	97.076	376	.258		
	Total	97.318	379			
SRL	Between Groups	.374	3	.125	.404	.750
	Within Groups	116.147	376	.309		
	Total	116.522	379			
PKMS	Between Groups	3.501	3	1.167	4.443	.004
	Within Groups	98.755	376	.263		
	Total	102.256	379			
EC	Between Groups	3.053	3	1.018	2.475	.061
	Within Groups	154.626	376	.411		
	Total	157.679	379			

CGPA differences between all groups

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
LLL	Between Groups	4.286	2	2.143	8.685	.000
	Within Groups	93.032	377	.247		
	Total	97.318	379			
SRL	Between Groups	.918	2	.459	1.497	.225
	Within Groups	115.604	377	.307		
	Total	116.522	379			
PKMS	Between Groups	6.345	2	3.172	12.469	.000
	Within Groups	95.911	377	.254		
	Total	102.256	379			
EC	Between Groups	7.492	2	3.746	9.403	.000
	Within Groups	150.187	377	.398		
	Total	157.679	379			