Managing Personal Learning Environments at Higher Learning Instituition: A Case on Distance Learning Program at Asia Graduate School of Business

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ABSTRACT

The purpose of this research is to understand how post graduate students use Personal Learning Environments (PLEs) as a learning strategy at UNITAR International University. This research is also conducted to identify the learning difficulties that students faced and factors that motivate the students to use their PLEs in their learning.

The research is based on current classroom with first year distance learning students of Masters of Management (MOM) program at Asia Graduate School of Business in UNITAR International University. In addition to the face-to-face lectures, e-learning method were also deployed in the teaching and learning.

At the end of the first semester, the researchers observed an evidence of a difficulty experienced by the students, particularly in terms of taking control of their own learning and personal approach of time management. Questionnaires were distributed to a group of students from the September 2014 intake of MOM program. The respondents are mainly adult learners working full time with the government organizations. The instruments were adopted from Costa, Cruz, and Viana's past study in 2010.

The findings show that the difficulties felt by the student is categorized as Organization Difficulties which are related to personal organization difficulties, both in terms of work planning and management of time to carry out the tasks proposed. To counter the difficulties, majority of the respondents adopted Adaptive Strategy which involves the need for the teacher and student to constantly engage in listening and dialogue with each other.

The research is conducted with the aim to create awareness and motivate students to create and use PLEs which best suit their needs. The findings act as a platform for facilitators to strategize and design a teaching strategy at the university which best ensemble a particular group of adult learners. The findings show that PLEs is indeed useful and central to students' learning in the future.

Keywords: A dult learners; distance learning; UNIEC; UNITAR International University; Personal Learning Environment (PLE); teaching and learning strategies.

INTRODUCTION

1.1 Background of Study

The university continuously receive adult learners from diverse corporate organization and public agencies. In September 2014, AGSB received 120 students for Master of Management (MOM) program. The group comprises of high rank officials from government institutions covering diverse background from disperse geographical area. The duration of the program is 2 years and the structure is based on a modular system. This group has completed 2 modules (equivalent to 1 semester for conventional learning). AGSB has been receiving students from corporate organization and public agencies for master programs since 2010. Recently, since two years back the government has been continuously sending a steady and growing number of government officials to study MOM program at the university. These students are adult workers with the government institutions. Their employer has made it mandatory that their employees to graduate from a post graduate program in order to consider a promotion opportunity, hence this opportunity has been extended to the employees to further studies to a higher level. The program fees are fully sponsored as long as they continue to service the government institution. The students are enrolled in part time study through the distance learning mode.

Distance learning mode for post graduate programs runs twice face to face classes within the seven weeks module. Some quantitative courses required four face to face meeting within seven week modules. Students take 1 course per modules. At the end of the semester the students have completed 2 courses. Students need to complete seven modules (13 courses) during the duration of the program. Their physical classes is scheduled on weekends while the rest of the coursework will be conducted using the online approach. In addition to the face-to-face lectures, e learning method through UNIEC were deployed in the teaching and learning. Since the students only meet face-to-face twice or four times in 7 weeks depending on the nature of the course, UNIEC would be able to provide an active learning environment where students can take advantage of the system to create and share knowledge while communicating with lecturers and peers online available 24-hours for students to access materials and interacts with lecturers and peers outside class.

At the end of the first semester, we observed that there has been an evidence of a difficulty experienced by the students, particularly in terms of taking control of their own learning. Before the university measure the effectiveness of the teaching method used vis a vis students performance, it is critical to first understand the students difficulties in their learning process at the university. In post graduate studies, students are encourage to take own responsibility for the organization and management of their own learning (Barret, 2000; Attwell, 2007).

In today's global competitive environment, educational institutions are now looking at ways to give students the necessary tools and skills for lifelong learning. Much of the learning that goes on in higher education is frequently limited to individual course environments that often do not connect students to a wider learning context and to their life experiences.

1.2 Purpose of the Study

The purpose of this research is to investigate how post graduate students use PLE as a strategy for learning at Asia Graduate School of Business. The objectives of the research are to :
  i.   To identify the category of difficulties in learning faced by students, and
  ii. To identify the category of strategies in learning by students to overcome the difficulties in learning.

1.3 Significance of the Study

Throughout this study, the researchers expect that the outcomes of this study will provide a valuable information to the organization to develop programs to assist students learning experience in AGSB. This is hope to further improve the program which is related to adult learners needs and requiremnets. With the findings, the researchers hope that AGSB can create awareness on PLEs and encourage students to use PLEs for their learning.

LITERATURE REVIEW

Personal learning environment (PLEs) is designed around a student's needs. Downes (2007) stressed that PLE is a recognition that the 'one size fits all' approach characteristics of the learning management system will not be sufficient to meet the varied needs of students. Miligan et al. (2006) stated that in a PLE setting, the learner would utilize a single set of tools, customized to their needs and preferences inside a single learning environment. PLEs are environments where the learner can access and share a range of tools and services in an integrated way for supporting their own needs (de Freitas, 2006).

Chatti (2011). posit that a PLE includes the tools, communities and services that constitute individual educational platforms learners use to direct their own learning and pursue educational goals. This represents a change from the

traditional model of learning towards a model where students draw connections from a growing medium of online and offline resources that they select and organize.

PLE is not seen as an application (Attwell,2006; Wilson, 2008) but it is rather a concept for organizing learning. Anderson (2006). stated that PLE is a unique interface into the owner's digital environment. It integrates their personal and professional interests (including their formal and informal learning), connecting these through a series of syndicated and distributed feeds. In universities that formally support and encourage PLEs, instructors or institutions generally provide a framework for student study. This framework can just be a desktop application or a web-based service and could include links to web tools.

In the 21st century, PLE is essentially a computer-based organizing scheme to enhance self-directed learning (Van Harmelen, 2008) especially for long life learning. The 2010 ECAR (EDUCAUSE Center for Applied Research) study of undergraduate students and information technology revealed that students' use of social media has steadily increased from 2007 to 2010 and that the gap between older and younger student use of social media is shrinking (Smith & Caruso, 2010). Recent studies demonstrated that students who used PLEs acquired new sets of skills in addition to content competence (Modritscher, Wild & Sigurdardson, 2008).

Atwell (2007) suggests that PLEs can be perceived as individuals organizing their own learning in multiple contexts where informal learning can be used to supplement formal learning and added that PLEs play an important role in advancing the understanding of e learning. Rubin (2010); McGlughlin & Lee (2010). suggest that PLEs empower students to take charge of their own learning prompting to select tools and resources to create, organize and package learning content to learn effectively and efficiently.

In 2006, University of Bolton researchers identified 77 different patterns of use of PLE tools and organized them into the following eight broad categories (JISC-CETIS, 2006). The categories are mainly: (i) Chat and messaging tools, (ii) Groupware and community tools, (iii) Calendaring, scheduling and time management tools, (iv) News aggregation tools, (v) Weblogging and personal publishing tools, (vi) Social software tools, (vii) Authoring and collaboration tools and (viii) Integration tools. PLE allow students to learn in a collaborative, participatory and distributed way, which results in the development of 'new literacies" (Lankshear & Knobel, 2007).

In this study, the researchers have adapted the work of Costa et al. (2010) in categorizing the learning difficulties faced by students. These learning difficulties are, namely (i) Organization related to personal organization difficulties, both in terms of work planning and management of time to carry out the tasks proposed; (ii) Learning related to difficulties in the learning process, situated as regards the cognitive processes of a higher order that imply, for example, the application of information selection, analysis and assessment skills; (iii) Participation related to the difficulties of participation in the activities proposed and in carrying out the learning tasks; and (iv) Resources difficulties related to the use of digital technologies and tools needed to achieve the aims.

Costa F. (2010) also mentioned that Laurillard (1993, 2002). in past studies mentioned that students have used learning strategies to overcome their learning difficulties. These strategies are (i) Discursive strategy, which is characterized by acknowledgement of the importance of adopting an investigative and systematic researching attitude by both parties; (ii) Adaptive strategy, the focus of which lies in the adjustment of processes, procedures and actions taking into account the ideas of the different intervening parties; (iii) Interactive strategy, which involves the need for the teacher and student to constantly engage in listening and dialogue with each other; and (iv) Reflective strategy, which should supply opportunities to facilitate the reflection not only about what is being learned, but also about how one learns and the role of each intervening party in the teaching and learning process.

METHODOLOGY

Exploratory design using survey questionnaire was carried out on 120 students from MOM program for the September 2014 intake during their second semester of the program. The response rate is 63 percent and all completed questionnaire were analysed. Non Probability Sampling Technique were adopted using Purposive Sampling. Research Instruments were adapted from Costa, Cruz, & Viana. (2010) Survey Questionnaire on learning difficulties and learning strategies.

Section A of the instrument covers information on Respondents. Section B of the instrument is "Difficulties in Management of the Learning", aimed to find out the students' opinions in relation to the difficulties felt in the management of the learning process. It covers 22 items and a 6 point Likert Scale ranges from Completely Disagree (1), Mostly Disagree (2), Somewhat Disagree (3), Somewhat Agree (4), Mostly Agree (5) and Completely Agree (6) is used to answer the question. Section C of the instrument is "Management of the Learning Process Strategies" aimed to find out the students' opinions in relation to the strategies in the management of the learning process. It covers 12 items and a 6 point Likert Scale ranges from Never (1), Rarely (2), Often (3), Sometimes (4), Most of the time (5) and Always (6) is used to answer the question. Section C is adapted from Laurillard (1993, 2002). past studies. Section D of the instrument is "Critical Factors for Success" aimed to find out the students' opinion on what factors motivated their learning. It covers 5 questions on critical factors, types of intrinsic and extrinsic factors, which PLEs the students used and which PLEs were the most useful and an open ended question on the current learning environment.

The data collection took place during their second semester so that respondents had at least one semester's experience of university study. Questionnaire were distributed during the start of their class and collected at the end of the class. Statistical Package for the Social Sciences (SPSS), version 22 were used for data analyses to conduct descriptive analysis to develop a profile of respondent and to illustrate central tendency of the data and measurements.

RESULTS

3.1 Background of Respondents

Table 1

The frequency and percentage of the background of respondents reported under gender, age , unit or services, education background, number of years (last attended tertiary education), average time spend using computer and average time spend using computer (for study).

Items	Frequency	Percentage
Gender		
Male	**65**	85.5
Female	11	14.5
TOTAL	76	100.0
Age		
20 to 30 years old	20	26.3
31 to 40 years old	**43**	56.6
41 to 50 years old	13	17.1
Above 51 years old	0	0
TOTAL	76	100.0
Services		
Army	14	18.4
Navy	**47**	61.8
Air Force	15	19.7
TOTAL	76	100.0
Education Background		
High School	0	0
Undergraduate	**57**	75.0
Post Graduate	19	25.0
TOTAL	76	100.0
No of Years (last attended tertiary education)		
Less than 2 years	9	11.8
2 to 5 years	**27**	35.5
6 to 9 years	18	23.7
More than 10 years	22	28.9
More than 20 years	0	0
TOTAL	76	100.0
Average Time Spent using Computer		
Less than 2 hours a day	11	14.5
3 to 5 hours a day	**62**	81.6
6 to 9 hours a day	0	0
More than 10 hours a day	3	3.9
TOTAL	76	100.0
Average Time Spent using Computer (for Study purposes)		
Less than 2 hours a day	**49**	64.5
3 to 5 hours a day	27	35.5
6 to 9 hours a day	0	0
More than 10 hours a day	0	0
TOTAL	76	100.0

3.2 The Results of Data Analyses and Research Findings.

Analysis of the Learning Difficulties

Learning Difficulties on Organization

Table 2

The Mean Scores for Section B on Difficulties in Management of Learning (Organization) of the Questionnaires

No	Items	Mean	Std. Deviation	Difficulties
1	Keeping up with the activities proposed by the lecturer.	4.56	1.01	Organization 4.43
2	Managing time in line with the activities proposed.	4.27	1.00	
3	**Stick to the planned time to hand in the work requested.**	**5.03**	5.90	
4	Define my personal learning aims.	4.14	1.07	
5	Working continuously and systematically on my portfolio	4.19	1.08	

The questionnaire on Section B were rated with 6 Likert scale ranges from Completely Disagree (1), Mostly Disagree (2), Somewhat Disagree (3), Somewhat Agree (4), Mostly Agree (5) and Completely Agree (6).

As shown in Table 2, for Difficulties in Organization of learning, the mean obtained with most of the respondents answered Mostly Agree (M=5.03, Item 3). The respondents mostly agreed that they stick to the planned time to hand in the work requested or following the time line given by the lecturer. This may be due to lack of organizing skills by the respondents during their first semester in the program. Assuming that some of the respondents have left tertiary education between 2 to 5 years.

Learning Difficulties on Learning Process

Table 3

The Mean Scores for Section B on Difficulties in Management of Learning (Learning Process) of the Questionnaires

No	Items	Mean	Std. Deviation	Difficulties
6	Remembering the work concepts in the lessons.	4.32	1.01	Learning 4.23
7	**Reflecting on the learning undertaken on a regular basis.**	**4.33**	**0.88**	
8	Using and taking advantage of some of the tools tackled in the lessons in other context.	4.28	1.03	
9	Outlining the knowledge involved in undertaking the tasks proposed.	4.19	0.96	
10	Managing the quantity of information available in UNIEC	4.27	1.07	
11	Selecting and summarizing the relevant and pertinent information.	4.14	1.02	
12	Deepening the issues discussed in the classroom through complementary research.	4.11	0.97	

The questionnaire on Section B were rated with 6 Likert scale ranges from Completely Disagree (1), Mostly Disagree (2), Somewhat Disagree (3), Somewhat Agree (4), Mostly Agree (5) and Completely Agree (6).

As shown in Table 3, for Difficulties in Learning Process, the mean obtained with most of the respondents answered Somewhat Agree (M=4.33, Item 7). The respondents somewhat agreed that reflecting on the learning undertaken on a regular basis is a difficult learning process. This may be due to unfamiliar learning system experienced by the respondents during their first semester in the program. Assuming that some of the respondents have left tertiary education between 2 to 5 years.

Learning Difficulties on Participation

Table 4

The Mean Scores for Section B on Difficulties in Management of Learning (Participation) of the Questionnaires

No	Items	Mean	Std. Deviation	Difficulties
13	**Regularly taking part in the discussion forum about the course.**	**4.25**	**0.99**	Participation 4.13
14	Reading the material suggested by the lecturers.	4.17	1.11	
15	Documenting the learning process on a weekly basis in the individual portfolio.	3.89	1.12	
16	Keeping track of the work carried out by colleagues and giving them constructive feedback.	4.11	0.97	
17	Independently exploring some of the tools suggested by the lecturers.	4.13	1.20	
18	Sharing information, reflections and experiences with colleagues, lecturers and other participants in the process.	4.24	1.09	

The questionnaire on Section B were rated with 6 Likert scale ranges from Completely Disagree (1), Mostly Disagree (2), Somewhat Disagree (3), Somewhat Agree (4), Mostly Agree (5) and Completely Agree (6).

As shown in Table 4, for Difficulties in Participation, the mean obtained with most of the respondents answered Somewhat Agree (M=4.25, Item 18). The respondents are somewhat agreed that sharing information, reflections and experiences with colleagues, lecturers and other participants in the process is difficult. This may be due to student centered learning or outcome based learning delivery experienced by the respondents during their first semester in the program. Assuming that some of the respondents may have had teacher based learning or traditional learning delivery in the past education.

Learning Difficulties on Resources related to Use of Technology

Table 5

*The Mean Scores for Section B on Difficulties in Management of Learning (Use of Technology) of the Questionnaire*s

No	Items	Mean	Std. Deviation	Difficulties
19	Learning how to use all the functionalities supplied by the tools of UNIEC (discussion forum, videos, message, chat etc.)	4.11	1.11	Resources 4.20
20	Accessing UNIEC is worth the time invested.	4.10	1.02	
21	**Having to use digital technology to achieve the aims of the course.**	**4.35**	1.09	
22	Managing the public exposure that the UNIEC tools imply.	4.25	0.99	

The questionnaire on Section B were rated with 6 Likert scale ranges from Completely Disagree (1), Mostly Disagree (2), Somewhat Disagree (3), Somewhat Agree (4), Mostly Agree (5) and Completely Agree (6).

As shown in Table 5, for Difficulties in Resources, the mean obtained with most of the respondents answered Somewhat Agree (M=4.35, Item 21). The respondents are somewhat agreed that having to use digital technology to achieve the aims of the course is difficult. This may be due to UNIEC system that drive the program at AGSB. Many learning tools are used to support students PLE in UNITAR International University that respondents may not be familiar with.

3.3 Analysis of the Learning Strategies

Table 6

The Mean Scores for Section C on Learning Process Strategies

No	Items	Mean	Std. Deviation	Strategies
1	I shared and exchanged information with colleagues using the communication tools in UNIEC (e.g. message, discussion, forum, chat, video etc.)	3.78	1.27	Discursive 3.57
2	I asked for support from the lecturers whenever issues arose in carrying out a given item of work, by forum in UNIEC.	3.46	1.29	
3	I tried to deepen certain ideas or concepts, through content production in an individual blog.	3.48	1.37	
4	I adapted to the use of the tools available in UNIEC in line with my learning goals.	4.43	3.50	**Adaptive 4.12**
5	I adopted an attitude of permanent curiosity, trying to register my personal portfolio which was the best record of my learning evolution.	3.76	1.10	
6	I selected the UNIEC tools that best suited my personal learning interest.	4.17	2.36	
7	I independently managed the development of my portfolio throughout the semester.	3.60	1.10	Interactive 4.10
8	I valued the assessments and/or suggestions supplied by the lecturers, looking to improve my productions in the portfolio.	4.03	0.97	
9	I took advantage of the different digital systems to present my ideas and content in a variety of ways.	4.40	5.94	
10	I reflected on a regular basis about the teaching and learning process, looking to understand my role in this process as much as possible.	4.30	2.30	Reflective 4.06
11	I took advantage of the different digital systems to organize and register my reflections in a creative way.	3.92	1.10	
12	I showed a critical attitude relative to the different teaching strategies implemented by the lecturers.	3.96	1.15	

The questionnaire on Section C were rated with 6 Likert scale ranges from Never (1), Rarely (2), Often (3), Sometimes (4), Most of the time (5) and Always (6).

Based on Table 6 above, among the strategies that the students said they most useful are the strategies included in the Adaptive Strategy (Mean = 4.12). Second strategy that the students said that are most useful are the strategies included in the Interactive Strategy (Mean = 4.10).

CONCLUSIONS

The aim of this study is to identify the learning difficulties felt by the student and how the students overcome the learning difficulties. The learning difficulties for this particular group of students is categorized as Organization Difficulties which is related to personal organization difficulties, both in terms of work planning and management of time to carry out the tasks proposed. Further to that, the students have adopted Adaptive Strategy to overcome difficulties in learning. Adaptive strategy involves the need for the teacher and student to constantly engage in listening and dialogue with each other. Not all students use the same tools, therefore they do not cover all the functions; thus PLEs differ between students.

Based on the understanding of the student group, their difficulties of learning and their strategies to manage the learning, it is hoped that facilitators or lecturers can create a better engagement with the students. The findings is also useful for facilitators to strategize using PLEs as an effective teaching strategy at the university. There is no single solution for PLE but efforts are being done to best suit students learning needs.

There are several limitation to this study. The students responded to the limited examples (tools) given to them in the questionnaire. The list of tools in PLEs is not exhaustive. The other limitation is that the number of respondents is small, only 63 percent agreed to submit the completed questionnaire. The difference of 37 per cent could give a different perspective to the study.

Future research could explore personalized learning spaces, resources and environments to be developed, supported and created through systematic design as well as by inclusion of both lecturer and students perspectives as well as integration of web tools and strategies. This can be central to the effectiveness of adult learning experience at higher learning institution.

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