Does Educational Compatibility Effect on Knowledge Sharing Intention In E-Learning System? A Motivational Factor Analysis in Open University Malaysia (OUM)

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ABSTRACT

The purpose of this paper is to examine the educational compatibility factor influence intention to share knowledge in E-Learning system within Open University Malaysia (OUM). Moreover, its objective is to identify the relationship between educational compatibility and attitude to share and intention to share in E-learning system. The current research expands a theoretical framework of online knowledge sharing factors with the Theory of Planned Behaviour (TPB). An online questionnaire survey was applied to collect data and the analysis was completed according to 583 responses from students who act in EL system of Open University Malaysia (OUM). A semi-structured interview was constructed with 10 participants who were facilitators and teachers in EL system of OUM as the case study to achieve knowledge sharing comprehensible and understandable intention. The outcomes of the study survey and interview support the fundamental statement that educational compatibility direct to influence intention to share knowledge well.

Keywords: knowledge sharing, E-learning, knowledge sharing behavior, theory of planned behavior, educational compatibility, intention to share, attitude to share.

1. INTRODUCTION

The new learning methods assist cooperative experience and virtual students’ society improvement (Bransfordet al., 2000), and valuable knowledge via knowledge sharing (Zhang et al., 2007). Nevertheless, these profits cannot be apprehended lacking of the energetic participation of people. Latest empirical research disclose little points of participation and unwillingness to share knowledge in EL systems and environments (Carr & Chambers, 2006; Ng, 2001), and research of crucial factors influencing participation in some systems disclose that this problem rests unsolved (Xieet al., 2006). E-learning system structure confirmed through constructivist theories of learning and behavior (Prawat, 1996), and assists learning process via increasing knowledge sharing behavior in learning environment (Honebein, 1996; Wilson, 1996). As Hiltz and Turoff (2005) referred, “EL is a modern communicative procedure which gives enjoyment to distance learning students, compared to traditional classrooms (face to face)”. In spite of the attractiveness of the EL environments, there are still major challenges in the willingness to use EL systems, one of which is that the students do not want to share their knowledge and experiences (Zhang and Faerman, 2007).

2. SIGNIFICANT OF THE STUDY

Chiu et al. (2006) believed that the most important problem in predating the online learning communities is the lack of contributions and willingness to share knowledge in the online communities. It is necessary to recognize the motivational factors in order to encourage students in performing and sharing their knowledge and experiences in learning environment (Ma, 2009; Ellis et al., 2002; Liu, 2008). Open University Malaysia (OUM) was created on 10 August 2000 as Malaysia’s seventh private university and was the first to run through open and distance learning (ODL). It is owned by an association of the country’s 11 government universities. Constructed on the philosophy that learning must be flexible and democratic, OUM has concentrated on constructing an affordable and accessible corridor to HEs, while placing significance on flexible admittance requests, a student-friendly HEs, and a blended instruction that mixes diverse styles of learning. Each of these features is planned to accomplish the different requirements of its students and is supported by a state-of-the-art ICT structure. As an ODL association, OUM directs HE courses through a blended pedagogical method that mixes virtual learning, traditional lectures and self-directed learning. Virtual learning practices are planned in an online interface, frequently via OUM’s LMS (learning management system) that is recognized as MyVLE. This feature is meant to expand the face-to-face communications among students and their teachers. The self-directed feature is meant to encourage students to finish the education procedure individually via print components and other learning courses in numerous arrangements (Fadzil and Latifah, 2012).

2.1 Research Questions

According to the statement of the research problem explained before, the research questions have developed the following questions:

a. Does educational compatible influence on knowledge sharing intention in E-learning system?
2.2 Research Objectives

The purpose of the research is to discover the relationship between the motivational knowledge sharing factors and intention to share knowledge in an EL system. In connection to this, the researcher’s other purpose is to achieve the following objectives:

a. To identify the influence of educational compatibility on knowledge sharing behaviour in E-learning system.

2.3 Research Hypotheses

The questions and objectives of the current study can be further studied through the following hypotheses:

H1. The students’ attitude toward knowledge sharing has a positive effect on the intention to share knowledge in EL system

H2. The educational compatibility has a positive effect on the students’ attitude toward knowledge sharing in EL system.

2.4 E-Learning system

EL systems are the principal learning surroundings in Higher Education. EL is recognized as new applications by Learning Management System (LMS) and also Course Management System (CMS) in distance learning universities and institutions (Artino, 2010). Kanuka and Rourke (2008) discover the modifications that are happening in HE as an outcome of the use of EL system. They find that some technical system prepares chances for developed accessibility, compatible with the objective in application of modern technology in education environment. Nevertheless, it is also related to negative influences, as teachers and learners experience to gather a lock of a feel of belonging and responsiveness of borders.

3. EDUCATIONAL COMPATIBILITY

According to Wang and Wang (2009), learning outcomes can improve and facilitate a successful learning process by supporting HEs in EL systems. Achieving educational compatibility in EL refers to ensuring the system can meet students’ learning requirements. When there is greater educational support, there is also a higher acceptance of an EL system among students. To put it simply, educational compatibility should be seen as the key factor to achieve success in designing and implementing an EL system, as it was mentioned. In order to examine knowledge sharing in EL systems effectively, it is crucial to include existing educational paradigms compatibility. Due to the degree of compatibility in a new system, it is seen whether it is in harmony with existing socio-cultural values and beliefs with experience and level of user’s knowledge and the requirement of possible adopters as it was mentioned by Moore and Benbasat (1991). Perceived compatibility that in turn it has positive effect on knowledge sharing intention (Lin and Hung, 2009)? Liao and Lu (2007) have examined relationship among individuals’ perceptions of the comparative advantage and compatibility of the EL system and their adoption intention (Almahamid and Abu Rub, 2011). As the purpose of this study, educational compatibility is regarded as the level in which the EL system is viewed as in harmony with possible student learning. More clearly educational support is perceived as the level in which the common expectation of student learning such as the education standing, preference of learning, learning styles and activities is met by the EL system.

4. THEORETICAL APPROACH

4.1 Theory of planned Behavior (TPB)

Theory of Planned Behaviour (Ajzen, 1985) is recognized as an advanced version of the theory reason action (TRA). Fishbein and Ajzen (1991) completed obligatory by the second representation ‘inability to contract with Behaviours done which individuals have imperfect optional control. TPB recognizes actual performed Behaviour as a people's effort of a convinced Behaviour is performed by his or her/his intention to fulfil that Behaviour. Attitude towards the actual Behaviour, Subjective Norm (SN) about involving in the Behaviour, and perceived Behaviour control (PBC) are supposed to impact intention and online learning by Behaviour in TPB producer (Baker and White, 2010). An attitude towards Behaviour is a positive or negative examination to achieve that actual Behaviour.

4.2 Intention to Share Knowledge

According to Ajzen (1991), the Intention is the most important cause of people’s Behaviour. The sophisticated purpose will be achieving certain Behaviour, the advanced chances of the authentic enactment of that exact Behaviour.

4.3 Attitude toward Behavior

A positive or negative sensation is defined about the objective of Behaviour of people.

4.4 Educational Compatibility (EC)

Educational compatibility referred to adopt students’ value and experiences with system features as well as students enjoy learning by system constantly (Jian Tan, 2009).

H2 Educational compatibility

H1 Attitude to share knowledge

Fig 2.1: Research Model and Hypothesis

5. OPEN UNIVERSITY MALAYSIA

(OUm)

OUM was named as Open Distance Learning (ODL) in 2000. It is the seventh private university in Malaysia and it is owned by Malaysia’s eleven public university associations. Based on the philosophy that learning is supposed to be democratized, OUM has
6. RESEARCH METHOD

Research methodology has many classifications, such as, research methodology in terms of qualitative and quantitative methods (Williams, 2007). These approaches can be used as single and mixture method by investigators linked in OUM. For this study, mixed method is performed. Researcher has used both qualitative and quantitative approaches and he also examines and establishes the data gathered from selected cases (Creswell, 2012). Studies show that Quantitative and qualitative approaches are appropriate to grow the fortes and the reducing of weaknesses of the research methods (Johnson and Onwuegbuzie, 2004). Thus, in this method we can say that the findings and outcomes are more valid. Furthermore, Quantitative study shows the actuality of the cause and effectiveness of relationships among variables. On the other hand, qualitative study approaches to discover the implications and outlines, consider to particularly the activities and records carefully. There are many researches in the Knowledge management area in which utilized the qualitative and quantitative methods as their key resources to collect data and to use the features of individual behavior constantly, which are frequently veiled (Nonaka and Takeuchi, 1995; Chennamaneni, 2006; Jones, 2007; Bock et al., 2005; Ma, 2009; Stewart, 2008; Vashisthet al., 2010; Jewels and Ford, 2006).

7. INSTRUMENT DEVELOPMENT

Researcher gathered the data in two steps. Firstly, the online questionnaire as a survey instrument is distributed. After the online questionnaire, the interview questions followed to improve the survey, and to evaluate more appropriate outcomes and to develop the survey's validity and reliability. In addition, the investigator applied online questionnaire as pre-test to evaluate the 25 questions and to enhance its value. In this research, a pre-test investigation was applied with emphasizing on the validity of citing knowledge sharing in the EL.

8. INTERVIEW

This research has shown the semi-structure interview questions that are comprised with; the research was created in 6 knowledgeable interviews selected online and off line by the facilitators and teachers in different faculties of OUM. The data have been gathered during two semesters in 2012-2013 academic years. In semi-structured interviews where some facilitators, technical administrators, and some online teachers were in charge of distance learning system or EL. As revealed, the questions on the interview were open-ended; and each interview was about 10 to 15 minutes created on their arrangement, while some of the interviews were voice-recoded. The knowledge sharing intention factors and the effects of the knowledge sharing on the success of the EL were discussed in the case study area. Table 3.6 shows the interview questions.

<table>
<thead>
<tr>
<th>NO.</th>
<th>QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Are the students learning in the EL system, frequently exchange and share knowledge and experiences with others? If not, what factors and situations preventing them? If you think yes, why? And what factors affect it?</td>
</tr>
<tr>
<td>2</td>
<td>In your opinion, are the students in E-Learning system interested in participating and willing to share their knowledge and courses with other students?</td>
</tr>
<tr>
<td>3</td>
<td>In your opinion, do they (students) share knowledge and develop learning experiences within EL system easily? Do they think that knowledge sharing is useful?</td>
</tr>
<tr>
<td>4</td>
<td>In your opinion, what are the individual factors that affect on the student’s attitude toward knowledge sharing?</td>
</tr>
<tr>
<td>5</td>
<td>Do they (students) think that they are comfortable and can trust and share better by EL system?</td>
</tr>
<tr>
<td>6</td>
<td>Is EL system compatible with students’ values, current requirements and previous experiences?</td>
</tr>
</tbody>
</table>

9. QUESTIONNAIRE

9.1 Instrument Plan

Questionnaire survey based on the research conducted in DTPB is composed of two main sections. In the first part of the questionnaire, respondents were asked questions about personal characteristics, such as sex, age, educational level, duration of study, study courses. This section uses EL system as a moderating variable in the study. The second section of the questionnaire is extracted from the DTPB model. Question components are measured as well as what the students ask and a Likert scale was used to rank it from very low to very high. The investigator as a viewer can approve examination methods of collecting data and assessments by viewing how the learners engaged in learning activities in EL system. The five-point Likert scale was applied to measure each paradigm which comprised 1= strongly disagree to 5=...
strongly agree. The Likert response allocated numeric values to help the analysis of the answers.

Table 3.1: the learning centers that collect questionnaire

<table>
<thead>
<tr>
<th>NO.</th>
<th>LEARNING CENTER (BRANCH)</th>
<th>STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bangi Learning centre</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>Ipoh Learning centre</td>
<td>85</td>
</tr>
<tr>
<td>3</td>
<td>Johor Learning centre</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Kelantan Learning centre</td>
<td>68</td>
</tr>
<tr>
<td>5</td>
<td>OUM KL center</td>
<td>180</td>
</tr>
<tr>
<td>6</td>
<td>OUM Petaling Jaya (PJ) Learning centre</td>
<td>100</td>
</tr>
</tbody>
</table>

9.2 Construct Measures

The research theoretical model of this research is comprised of following paradigms, the independent variables which comprise four individual attitude factors (trust, perceived ease of use, perceived useful, educational compatibility). Additionally, dependent variables which contain individual factors, attitude toward knowledge sharing, contributes in this study. There are also thirteen main constructions of the hypothetical model that are used in this study. Knowledge sharing intention plays a double role: dependent and independent paradigms. The 43 questionnaire items measured the relationship between variables; these statements were calculated according to a 5-point Likert scale which include 1=strongly disagree to 5= strongly agree.

9.3 Descriptive statistic of the questions and variables

Descriptive statistic questioner includes quantity value, value, mean, standard deviation drawing was taken for each question that its results is visible in table 4.1.

Table 4.1: Descriptive statistics of the questions

<table>
<thead>
<tr>
<th>Q?</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS1</td>
<td>1.00</td>
<td>5.00</td>
<td>3.94</td>
<td>0.77</td>
<td>0.778</td>
<td>0.819</td>
</tr>
<tr>
<td>IS2</td>
<td>1.00</td>
<td>5.00</td>
<td>3.73</td>
<td>0.88</td>
<td>0.882</td>
<td>0.121</td>
</tr>
<tr>
<td>IS3</td>
<td>1.00</td>
<td>5.00</td>
<td>4.14</td>
<td>0.68</td>
<td>0.681</td>
<td>0.722</td>
</tr>
<tr>
<td>IS4</td>
<td>1.00</td>
<td>5.00</td>
<td>3.61</td>
<td>0.85</td>
<td>0.853</td>
<td>0.480</td>
</tr>
<tr>
<td>IS5</td>
<td>1.00</td>
<td>5.00</td>
<td>3.44</td>
<td>0.83</td>
<td>0.837</td>
<td>0.646</td>
</tr>
<tr>
<td>IS6</td>
<td>1.00</td>
<td>5.00</td>
<td>3.71</td>
<td>0.82</td>
<td>0.822</td>
<td>0.525</td>
</tr>
<tr>
<td>IS7</td>
<td>1.00</td>
<td>5.00</td>
<td>3.46</td>
<td>0.86</td>
<td>0.868</td>
<td>0.436</td>
</tr>
<tr>
<td>AI1</td>
<td>1.00</td>
<td>5.00</td>
<td>4.14</td>
<td>0.71</td>
<td>0.715</td>
<td>1.144</td>
</tr>
<tr>
<td>AI2</td>
<td>1.00</td>
<td>5.00</td>
<td>3.88</td>
<td>0.71</td>
<td>0.718</td>
<td>1.144</td>
</tr>
<tr>
<td>AI3</td>
<td>1.00</td>
<td>5.00</td>
<td>3.94</td>
<td>0.71</td>
<td>0.711</td>
<td>1.149</td>
</tr>
<tr>
<td>AI4</td>
<td>1.00</td>
<td>5.00</td>
<td>4.11</td>
<td>0.72</td>
<td>0.722</td>
<td>1.632</td>
</tr>
<tr>
<td>COM1</td>
<td>1.00</td>
<td>5.00</td>
<td>3.76</td>
<td>0.68</td>
<td>0.685</td>
<td>0.588</td>
</tr>
<tr>
<td>COM2</td>
<td>1.00</td>
<td>5.00</td>
<td>3.57</td>
<td>0.80</td>
<td>0.804</td>
<td>1.085</td>
</tr>
<tr>
<td>COM3</td>
<td>1.00</td>
<td>5.00</td>
<td>3.53</td>
<td>0.90</td>
<td>0.909</td>
<td>0.591</td>
</tr>
<tr>
<td>COM4</td>
<td>1.00</td>
<td>5.00</td>
<td>3.76</td>
<td>0.72</td>
<td>0.727</td>
<td>0.875</td>
</tr>
</tbody>
</table>

IS: Intention to knowledge sharing Behavior, AI: Attitude toward knowledge sharing, COM: Educational compatibility,

9.4 Descriptive statistic of variables

Dimensions of each question are made then descriptive statistic include standard deviation and mean is gotten by compute device in SPSS software that it’s results are presents in table 4-12 the results of above table defines the people are studies have gotten advantages more than supposed mean, once these aren’t limitation for their learning as electronic and their condition is suitable in terms of the dimensions, special in subjects like attitude toward knowledge sharing (AI) with mean 4.02, succession in electronic teaching system (ES) with mean 3.94 and to be useful this system (PU) with mean 3.86.
Table 5.1: Hypothesis Testing Results

<table>
<thead>
<tr>
<th>NO.</th>
<th>Relationship</th>
<th>Hypotheses</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Attitude towards knowledge sharing and intention to share knowledge</td>
<td>H1. The students’ attitude toward knowledge sharing has a positive effect on the intention to share knowledge in EL system.</td>
<td>The findings of two sources agreed that attitude towards knowledge sharing has a positive impact on intention to share knowledge.</td>
</tr>
<tr>
<td>2</td>
<td>Educational compatibility and attitude towards knowledge sharing</td>
<td>Ha4. The educational compatibility has a positive effect on the students’ attitude toward knowledge sharing in EL system.</td>
<td>The results of the study showed that the educational compatibility has a positive impact on attitude towards knowledge sharing.</td>
</tr>
</tbody>
</table>
University which educates through online system where students are not required to attend classes in the traditional classroom as in face to face education. Secondly, the investigation of some variables in this research like intention to share knowledge is sometimes very difficult because the control on effective changes on this structure is hard, for example, the application of the whole factors of knowledge sharing behavior in research model. Another research limitation is the lack of examination tools for all main factors on students’ knowledge sharing behavior in EL system. The third limitation was to adjust factors in relation to the intention to share knowledge in online environment that students can use many tools and technologies based on their skills and abilities.

10.2 Recommendations for Further Study

In the other aspect of this research it is also recommended that the relation among research structures must be investigated for successful results as what this current study did, for example, the investigation of the main factors on intention to share, where it introduced two levels of intent to share. There are three more effective structures in each level. Thus, the effective examination of the factors of the variables such as educational compatibility and Self-Efficacy on this study will improve the student’s intent to share knowledge in EL system if these factors and variables will be applied. And because of this, the need to work on more studies and examining the related theories and models in the future can be much easier.

11. CONCLUSIONS

Consequently, the educational compatibility effects on knowledge sharing intention are the conclusions of this research. This research contributes to the filling up of the gap in the better understanding of knowledge sharing in online learning environment such as EL system through literature review and by the involvement of OUM students thus it answers the questions “how to share?”.

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