Effectiveness of Knowledge Management in the Academic Era: A Case Study

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Abstract: Wiki technology as a Knowledge Management System (KMS) is the new topic of progress for institutional of higher learning in the information age. There has been extensive evidence on the positive impact on student engagement and learning experience. Student engagements are in the form of in-class and out-class engagement. However, both are critical to student's success and learning outcome. The purpose of this study is to look into the issue of in-class and out-class engagement and evaluate Wiki's technology whether it can be a platform to enhance student learning experience in private higher institutions further. Despite, the fact that this research is focused on the primary research method, there has been a significant contribution in filling the gaps of out-class student's engagement. Findings suggest that the student learning experience can be enhanced through collaborative groupware such as Wiki technology.

Key words: Knowledge management, Knowledge Management System (KMS), Wiki technology, education, intellectual capital, organizational learning

INTRODUCTION

In knowledge-based industry, any institute needs to manage its knowledge to gain a sustainable competitive advantage (Alavi and Leidner, 1999). The creation, managing and disseminating knowledge is undoubtedly not an easy task due to its tacit nature and the technical skills (Alavi and Leidner, 2001) but it can be retrieved and managed through various means and methods. One way would be in the form of group collaboration. Wiki technology as one of the collaborative groupware is increasingly being accepted as a method to support knowledge management for sharing in the academic environment (Leuf and Cunningham, 2001; Raman *et al.*, 2005).

There has been a growing body of research on salient factors involved in student engagement (Pascarella and Terenzini, 2005) student's choice of private higher education institutions (Migin *et al.*, 2015a) and their decision-making process (Migin *et al.*, 2015b). These can be directly or indirectly related to physical or psychological effort highlighted by Marks (2000) definition of engagement. Kuh (2009) has introduced in-class and out-classed student engagements. While in-class engagement is about the academic activities when the teacher is teaching, out-class engagement is related to educationally relevant, i.e., curricular activities out of the teaching room. However, both of which are critical to the student's success and learning outcome. The concept of student engagement in the scope of this study is the most related to the out-class engagement.

This study aims to contribute to the literature by examining the effectiveness of Wiki technology to support and management knowledge in the academic era. The study proceeds as follows. The next section presents a summary of definitions and review of the literature on the role of IT, knowledge, Knowledge Management System (KMS) and groupware such as Wiki in the academic setting. At the end of the second phase, needs and expectations of MBA Students are examined and at the third phase, a KMS would be determined accordingly. Finally, in the last phase, Wiki as a collaborative groupware is inspected closely to find out if it can meet the minimum requirements of the KMS, determined by MBA students and if not what are the additional features that should be added to Wiki to enable it to meet the requirements for the above KMS.

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Literature review

Education and knowledge management: Alavi investigated whether the use of Group Decision Support System (GDSS) in a collaborative learning process can enhance student learning and classroom experiences. The researcher stated that both business and the academic environment with the integration of Information Technology (IT) into the classroom would enhance learning and student's ability to apply knowledge and skill to problem-solving situations. Unfortunately, this context of full integration of IT into the classroom activity remained greatly under-utilized. She emphasized that by improving the mental model of the individual through collaborative activities such as discussions and information sharing during the problem-solving process; it can enhance the learning process. Studies have shown that the student's problem solving and critical thinking skills have increased after being involved in the learning process. To promote student learning and academic achievement, the collaborative learning process is more efficient compared to the traditional instructional methods. A collaborative learning procedure has also shown that, it enhances student satisfaction with the learning and classroom experience.

The effectiveness of collaborative learning can be further strengthened through IT in the form of Group Discussion Support System (GDSS). She claimed that GDSS typically, supports groups through one or combination of mechanisms: process support, process structure, task structure and task support. Process support is provided through an electronic communication infrastructure. Process structure refers to techniques or rules. Task support relates to the information and computational infrastructure provided by GDSS. Task structure relates to the analytical techniques and models for processing task-related information and task accomplishment. She stated that these four mechanisms are the primary means by which GDSS increases the effectiveness or efficiency of face to face interacting groups. This is accomplished by increasing group process gains and reducing group process losses. Numerous field studies have shown that GDSS capabilities and features can facilitate group interaction and improve team performance by increasing process gains and reduce process losses. She concluded her findings on 127 MBA students that GDSS-supported collaborative learning leads to higher level of perceived skill development, self-reported learning and evaluation of classroom experience. Furthermore, the final test grades of the group of students who were exposed to GDSS-supported collaborative learning were significantly, higher than those of another group of students who participated in the experiments. However, there has been a different balance of distribution of classes for each course and the possibility of interaction with each other. Besides that, there may have been biasing involved in the research due to the experimenter who was also the instructor for the classes. Lastly, the experiment was only conducted in one semester and the time frame is not long enough to adequately conduct the study.

Rowley (2000) investigates on how the concept of knowledge management is applied to the higher education institutions in the United Kingdom. She claimed that no specific agreed model categorizes knowledge management. The information management and knowledge processing and the social construction of knowledge and organizational learning are not integrated seamlessly.

Davenport *et al.* (1998) evaluated knowledge management in higher education in four kinds of project objectives which are knowledge repositories, knowledge access, knowledge environment and lastly, valuing knowledge. As for knowledge repositories, universities have a vast amount of data but it has yet to be integrated into an efficient knowledge repository. Another downside is that not every member of the academic community has access to this kind of knowledge and is not catered to everyone's needs. Knowledge access to published knowledge within the academic community is well developed. However, it focuses on the collaboration and cooperation effort between one institution to another and also there is a lack of development in the individual institutions. The knowledge environment which is revolved around the knowledge management activities focused on the adoption of norms and values related to awareness in the organization. Even though there is a change of standards due to globalization with the increment of electronic journals, a cultural shift within an organization is usually a slow process. Valuing knowledge is taking their intellectual capital as an asset that could add value to their balance sheet. However, universities do not have any experience in valuing knowledge that is imparted by their staff. Furthermore, there is no guideline in assigning values on the knowledge that the universities possess. Only when a proper guideline is developed, two valuable results will be produced that is first to have an improved and shared understanding of knowledge and the ability to monitor the increment and decrement of their intellectual capital within the educational institution. With that by the concept of knowledge management to higher educational establishments, it still needs improvement regarding knowledge repository to valuing knowledge as an asset.

Chaudry and Higgins (2003) has emphasized on a needed multidisciplinary approach in the Knowledge Management (KM) education and to implement strategies for courses in knowledge management programs. They conducted a study at Nanyang Technology University in Singapore to examine the role of knowledge management education in an academic environment which is currently involved with the KM course. This information of this case study is collected from 37 samples of KM courses offered by universities located in 5 countries (Australia, Canada, Singapore, UK and the US) to determine its current trends. Total 30 out of 37 KM courses are mainly designed for the master's program in business, information and computing area. The main course contents are concepts, tools and strategies for managing and supporting knowledge. The content of KM that is used in the academic environment differs according to specialization. Thus, there is a need to have a multidisciplinary approach for an optimized knowledge management program. Without it, there may be an imbalance of coverage of subjects according to courses.

Groupware and Wiki: The rapid development of communication technologies has made three possible kinds of activities that allow educators and their students to communicate with each other outside of the classroom. These activities for learning use the same communication technologies to assist learning through:

- Course delivery system
- Communication among lecturers, students
- Locating and consulting people and information resources

Linking activities appear to hold great promise for improving the quality and education in many ways. Wiki technology can remarkably expand the quantity and quality of information resources that students can access from the classroom such as:

- Both the lecturers and students can work with others at remote sites
- The community of learners can expand to include virtually anyone who wishes to obtain information and who is not excluded by policy or cost
- They can provide real access to experts in universities, research laboratories, the business community, government agencies and political offices

Delivery of educational through a collaborative, computer-mediated environment alters the relationship between the instructors, students and course context. The many-to-many to asynchronous nature of the medium democratizes access and encourages student input (Harasim, 1991).

Chandler (2001) had stated that the current technologies that enable a variety of collaboration methods are called groupware. She defined groupware as a range of network computers within the same room that allow groups to work together or project scheduling tools to some form of video conferencing/computer technology. She mentioned four broad categories of collaboration that occur using contemporary technologies: face-to-face (same place, same time) asynchronous (same place, different time) synchronous distributed (different location, same time) and asynchronous distributed (different location, different time). She stated the advantages and disadvantages of these four technologies. Among them, she stated that the current trend seems to favour the asynchronous distributed tools which provides groups with quick and relatively easy to transfer ideas and documents and allow individual to continue other work assignments while waiting for responses from other group members and also, allow conflicting team members to continue working together with a reduced level of interpersonal interaction, thereby increasing their productivity.

Although, there are some disadvantages which interaction is less personal, confusion is more frequent and lack of cues. Despite these difficulties, this type of collaboration technology is becoming increasingly popular. She has then brought up a case study focused on the collaborative efforts of the board members of an international professional organization as they endeavored to rewrite the organization's old mission statement. She concludes her finding that the asynchronous distributed is the best viable option.

However, there are a few drawbacks from the study. Firstly, the organization's group members did not have a typical deadline for completing the mission statement and did not experience the pressure of finishing it. Besides that, the member's work with this organization is not within their daily job responsibilities and this also reduces the stress level of the group which is often experienced.

Most of the students agree that asynchronous discussion provides more opportunities for students to participate effectively. An example of an asynchronous communication virtual learning space is a graduate learning class taught at the University of Texas. The students meet in a classroom only three times during the semester. The rest of the course takes place using asynchronous electronic mail. Press (1993) considers E-mail a low-tech innovation that can have a radical

impact on curriculum, commuting patterns, the frequency of class meetings and student-instructor roles. The discussion via. electronic mail was not only multi-level but also multi-speed.

In another project Knoll and Jarvenpaa (1995) students from over ten universities from nearly all the continents are teamed up to work in globally dispersed virtual teams. For 6 weeks, the student's complete group assignments without any face-to-face contact with their team members using electronic mail and computer conferencing technologies. An example in secondary education is geographically dispersed teams of students working together to accomplish tasks associated with science projects for environment studies (Hawkins, 1993). Ehrmann (1995) of the Educational Strategies Program of the Annenberg/CPB Project at the Corporation for Public Broadcasting states: "At virtually every institution I visit, faculty members tell me that students are expressing themselves more and better when using E-mail. Students who say little in the classroom sometimes become wealthy contributors via. E-mail, perhaps because they feel protected from the stares of others."

Raman *et al.* (2005) investigates the use of Wiki to support the Knowledge Management System (KMS) in teaching and learning. They stated that with the capabilities that Wiki has (e.g., storage, retrieval, search, creation and revision, update, online discussion and managing documents and images) can promote some aspect of knowledge management in the academic environment. They derived design requirements for KMS to support teaching and learning from 6 different perspectives of knowledge which was described by Alavi and Leidner (2001)'s framework. They perceive some features of Wiki (e.g., asynchronous discussion, user-friendly, open source, free to download, easy to update and many to many communication) can achieve the teaching and learning objectives. They conducted a case study to gain a better understanding of how Wiki technology could be used to support teaching and learning in the academic setting. The findings were that respondents used Wiki for updating themselves on the current updates happening in the class and seldom contribute to new knowledge in the system. However, the respondents agreed that Wiki technology could be utilized efficiently in the academic setting if it is tailored according to the course schedule and the features are explained thoroughly to them.

Some Wiki's value and advantage in knowledge management era from different author's point of views are listed as below:

Wiki technology is an open-source technology which is available on the internet to download freely and this technology is easy to use and very quickly to understand,

once a Wiki is installed, anyone can very quickly understand how to use key features of the technology (Raman *et al.*, 2005).

Wiki technology support asynchronous discussion which is the best way of interaction for students and instructors to engage in endless discussion when they have the time. This permits the ability to share and update the knowledge base (Bergin, 2002).

Wiki technology can be used as a knowledge repository and once a Wiki page is created, it persists and can be updated (Raman *et al.*, 2005).

Wiki technology supports many-to-many communication and enables the creation of new knowledge based on a given knowledge history (Wagner, 2004).

Instructors can use Wiki technology as a knowledge base to keep track of student study, presentations and projects. These can be viewed and updated using simple edit and link functions (Raman *et al.*, 2005).

Conclusively, Wiki has the potential to be utilized efficiently in teaching and learning environment if it has been narrowed down according to the students and instructors objectives where it can be quickly understood and be used immediately. To relieve the conflict between students and instructors objectives, instructors should try to match their objectives of his class with the functions of Wiki. Objectives of the system and utilization of it need to be explicitly stated to motivate the students in using Wiki. With that, it reduces the frustration of learning a new regime and enhances the overall learning experience during the designated period.

MATERIALS AND METHODS

The individual's learning process varies from one person to another. It is highly unlikely that lecturers who are responsible for the courses assigned to them have the in-depth knowledge for each of it. This is due to the subjects that are broad in nature and only with specializations that particular topic can be taught in detail. This also applies to students who may or may not have any background in management in their previous tertiary education; they are required to have basic knowledge and later master on every subject that they take during their course. With that, the role of IT-based application and Knowledge Management System (KMS) can be enhanced and facilitate the student's learning process. The student's objective, (e.g., their expectations, demands and experience) from the courses are taken into account and it will be matched with the IT-based applications or any KMS for the courses. Based on that, we can determine the key features of KMS that can be fully utilized in an academic environment.

Many factors can influence the effectiveness of Wiki in student's learning process. This study will focus on some main factors in regards to their learning experience. These factors include student's reaction and satisfaction, learning and achievement. With that, the overall view of the student's expectation and expertise are extracted to measure the related factors that will improve and enhance the learning process in the MBA course.

The initial expectations of the students on what they want to achieve in the MBA course will be investigated. This is before their enrolment in the MBA course. From there, the student's will be asked for their perspective on the current teaching and learning methods that were conducted by the MBA lecturers during the duration of the course. The student's experience will be reviewed against their initial expectations before enrolling the MBA course. This is to determine whether the objectives have been achieved.

The final finding will then be extracted and be taken as factors to determine the features of Knowledge Management System (KMS) which is applicable for the MBA courses in. With that, the feature that was determined in KMS will be compared with Wiki features to see whether it can support the proposed system for MBA courses.

Data collection methods: Despite, the fact that this research is mainly focused on the qualitative research methods, this method is especially useful in developing an understanding of the student's expectations and experiences in taking the MBA courses as well as the benefits and problems associated with it. There has been a significant part of work done related to the development of the secondary data via. secondary research methods.

The data to be collected can be derived from the primary and secondary sources. The collection of the data in this research study was done in two phases via. two distinct methods. The first phase focused on secondary data whereas the second phase emphasizes on qualitative methods whereby semi-structured interviews were conducted. The methodologies for both sources that will be used in this research are illustrated:

First phase: The data from the secondary source will be used to accomplish this study. These data can be obtained from the internet sources, textbooks, journals, newspapers, articles, magazines, school's records or archives, government publications, the industrial analysis offered by the media, website and so on, (Anonymous, 2000). In this phase, the initial step of the study was

reviewing the literature from secondary sources. Knowledge management and knowledge management system in the academic environment, the concept of knowledge management in higher education, the role of IT in creating new knowledge, the usefulness of collaboration methods (groupware) and its classification in the academic setting were reviewed. Then the role of groupware such as Wiki in supporting and enhancing the collaborative learning process and student's experience in the academic environment was examined.

Second phase: The semi-structured interview adopted in this research as one of the most frequently used qualitative methods. In this phase where it consists of the semi-structured interview was conducted with 25 MBA students. This initial stage was aimed to identify the student's objectives, requirements and insights aligned with their experiences after taking the MBA courses. Respondents were asked several questions in general to extract their view before and after taking the MBA courses and their expectations towards it.

Sample of population: The sample for this study consist of 25 students from MBA in one of the private higher education institution. This group of students currently involved in MBA courses. The sample of the participants consists of full-time and part-time students. The overall population of the study is represented by 25 samples selected which are composed of 5 samples of each specialized major consist of Information Technology (IT), marketing, finance, general management and human resource. The chosen students are required to comment in depth and provide any useful feedback on the topic of discussion. They are also allowed to raise any unanticipated questions during the interview session.

Data analysis and method: Face to face interview method was adopted where the researcher is free to exercise his initiative in following up an interviewee's answer to a question. The most important issues that have been used and highlighted during the interview are categorised into three main parts which are listed as:

- Their expectation before enrolling the MBA course
- After completing the MBA course
- Their perspective on what can be done to improve their learning experience in the future

The questions which have been asked for each part are interlinked with one another and every answer is given influences on the upcoming question.

Data collection: In this case, study where face to face interviews was used, the respondents were asked to obtain an in-depth view on their expectations before and their experiences after taking MBA and what can be done to enhance the learning progress for the courses.

To have a better understanding of the type of knowledge involved in the MBA course, a study was conducted that generates an overview in accordance to the expectation before and after enrolling and the suggestions on ways on improving the learning experience for future students. With that knowledge at hand, it is then compiled as the requirements and prerequisite for determining an efficient KMS and decides if Wiki can support the requirements.

All the students are allowed to express their experiences and views informally through the interviews on the student's satisfaction, learning achievements and also analyzing the role of information technology in managing and facilitating knowledge management.

Interview results: The students were asked on their expectation before enrolling the MBA course where the following are extracted from the conversation with students:

I expected the MBA courses to be more challenging and have an interactive discussion in class among students. The lecturer's role is more as a moderator rather than lecturing the subject. This can be in forms of deliberations and debates.

It is a prestige in acquiring an MBA certificate. I expected that the level of learning and studying are a higher level in comparison with my degree studies.

I expected to have a broad knowledge of the current events happening is integrated with the theories during the lessons. It would be great that the whole class is discussing a particular topic and different perspectives are brought up. I believe learning happens at this phase. There would be sharing of experiences and knowledge during the class discussions from every student from various countries. This will lead to an understanding of different views about the current affairs and also gain familiarity with different cultures.

I see that going for MBA courses gives me the certificate and also, to build relationships with my course mates. This is regarding friendship and also business networking. This will be an essential aspect of having businesses with other countries.

Having a different experience from undergraduate studies in undergraduate mostly there is one side lecturing and the one hand question would occur but I expect MBA to have more interaction and discussion.

Besides that, there would be more utilization of the internet, more on online discussion and knowledge sharing within the class.

In conclusion, the general expectation from students of the MBA courses is that they believe MBA is more or less means 'learning from experience' and personally improving themselves. They would like to have an overall different learning experience and somehow access to the real knowledge experience which can be delivered through interactive debate and discussions. This may include utilizing modern methods such as active and interactive discussion based on practical rather than theoretical experiences. The next section is about students experience when they have completed all MBA modules:

The classes did not challenge me enough. Some classes have a lack of interactivity between the students; there were no active or live discussions or exchange idea and opinion happening during the whole semester.

The lectures are mainly one-sided, the lecturer does most of the talking. The lecturers seem to be focused on finishing one chapter within the 3 h designated for that particular class which it would not adequately improve and enhance our learning experience as students.

Unfortunately, the method of teaching is the old way and they are using the technology in old ways and approaches. Each semester there is some group discussion which needs group member gathering and discusses a particular topic in this case mostly there are some students which are working and can not take part in the discussion.

In conclusion, majority replied that the MBA course improve their personality, ability and capability but still they are not satisfied because they believe MBA course should base more on practical rather than theories. The lecturer was not able to facilitate the discussion with one student to another and this discourages students from being prepared for class discussions. No interaction among students and lecturers after class, all students are not able to participate in group discussion because of stay and live far from the university not such method to provide a facility for asynchronous group discussion. Following section is based on the MBA student's perspective on what can be done to improve their learning experience in the future.

I would recommend on having an online discussion. This is because some students find it hard to initiate or to be in an open debate with the lecturer and debate in front of others, here, the lecturer should be a moderator.

I think it would be great having an open online discussion on different topics at the convenience of my home. During class, there is more pressure to perform and people can see how one reacts and sometimes I feel tensed up when people shoot questions at me which I am unsure of the answer. With an online discussion, I can freely add my comments whenever I feel like it and reply it with good references for articles and journals. This makes my comments or answers more reliable.

Have an online forum or something similar where the lecturer and students can post notes, questions or upload relevant articles and journals for the class to read. It is in some form of knowledge sharing with one another. A chat room where students can hold discussions with one another is one way to learn from each other.

The lecturer should consider that MBA course is management based and classes should be conducted more on discussion with the students sharing their views concerning topics raised during the class. In fact, by dividing the time of class between theory and practice and spending more time on practicing the theory in practical form this problem can be solved.

There should be more interactive group debates, discussions with the class and having continuous relation with each other and lecturer out of the class about some topics and subjects which they discussed during the class or suppose to go through it later.

WhatsApp is usually used to communicate with one another. There should be a central system that can organize and store the communication in some archive that can be read and reviewed by both the students and the lecturers.

RESULTS AND DISCUSSION

Discussion and evaluation: When we measure the knowledge that is being used, the collaborative interest needs to be matched with knowledge management to make it more efficient. Raman *et al.* (2005) have previously mentioned that Wiki as a knowledge management system can enhance and support teaching and learn in an academic environment if it is efficiently implemented. Based on this statement we measured the knowledge within the MBA courses by interviewing students to get a better understanding of the student's perception. We then determine knowledge management system accordingly and extracted a Wiki features which can support teaching and learn in an academic environment from Raman *et al.* (2005) to see how far Wiki technology can support and can be adapted to MBA courses Table 1.

Wiki can enhance the class learning by bringing the class discussion and questions which are raised about the subject outside of the real class (Raman *et al.*, 2005). In other words, students can contribute and interact with post comments and questions according to their own convenient time. Knowledge can be implicitly extracted with the help of discussion among students. Group members can also easily post asynchronous notes to one another and maintain a smooth flow of communication compared to physically meeting regularly and lack of communication after that. Wiki can provide continuous learning among students throughout the semester and it is possible for it to continue after completion of the course.

Besides that, it provides an extensive evaluation for students through the duration of the semester which encourages students to contribute more to get more marks. It can allow students to access the previous knowledge such as assignment, article, journals or any information which are contributed by previous batches.

Table 1: Wiki support knowledge management systems requirements for MBA

Knowledge management systems requirements for MBA	How Wiki technology supports these requirements (Raman *et al.*, 2005)
Assist students to grasp the important information presented in class	Wikis use server-based technology. Once students and instructors create Wiki pages, it can be used by other members and it persists. This could enhance student's ability to grasp information in class from anywhere and anytime they wish to do so
Enable continue the discussion over different topic among student and with lecturers	
Allow students to access to the previous knowledge such as assignment, study, journals or any information which are contributed by previous batches	Wiki design principles include being open, universal and incremental. Students and instructors can document and share their experiences continuously
Allow students and instructors to share their experiences, ideas, opinions beyond regular classroom sessions regardless of time and place	Wiki technology is web-based. It permits both wireless and wired access to knowledge bases
Enable students and instructors to know where knowledge is locate	
Permit web and wireless access to the system	
Permit students to gather, store, update, discuss and disseminate knowledge	Students and instructors can create and edit pages to share experiences and discuss issues that relate to a particular topic discussed in class
Students can communicate with one researcher to further discuss the subjects that were presented in class or group discussion beyond classroom sessions	Wiki pages are created based on a simple markup language
Knowledge sharing in the base of online chatting, forums, bulletins, surveys to enhance the student's learning process. Experiences, ideas, opinions and different perspectives can be openly discussed with one researcher	Pages can cite other pages based on a powerful backlink function
Provide a platform for each session that enables the students and lecturers to review future topics that will be discussed in class. If a particular subject needs to be further discussed after the class session has ended that platform can provide it and highlight important and relevant information	The open nature of Wikis enables anyone to create and update pages Other features of a Wiki can include online chatting, blogs, FAQ, surveys, trackers and forums that can be used to generate and share knowledge in a classroom environment

Table 1: Continue

Knowledge management systems requirements for MBA	How Wiki technology supports these requirements Raman *et al.* (2005)
Each chapter or topic taught should be conducted in class not to be brought forward to the next week	
Provide students with links to various internal and external knowledge sources include Web-based systems, hyperlinks, markup languages and access to databases	Wiki pages can be linked to other pages through the use of back links. Wikis can also be used to manage text and image documents
Knowledge management systems should offer students breadth and depth of knowledge flows that extend beyond textbooks and class notes	Wiki pages can be linked to external information sources. This would include links to other Web sites relevant to a particular topic
An integration of the course's textbooks and practical examples that can be linked with credible sources from other books and also online websites	
Students can retrieve the current events and latest information on the courses taught sheets and indexing capability	Indexing and quick links can be designed in a Wiki to enable information retrieval. Wiki technology enables cascading style
Provide quick access to the information by categories, index and search to find out relevant information	
Increase student's intellectual capital through individual and group competencie	Wiki features can be configured to increase intellectual capital through collaborative student efforts
The students can post new information or recommend extra reading for their classmates	
Enable students can access to previous knowledge such as assignment, study, journals or any information which are gathered by previous batches	
Student's evaluation can be conducted not only during the final exam but throughout the whole semester	Wiki features can be configured to save track records of each student such as time login, creation, alter and update Wiki pages which could be called as students contributions

Wiki can also highlight information during the class and create a suitable system for students to update themselves by posting the relevant and exciting news and events that they encounter regularly and use their knowledge and experiences to interpret it which can enhance their learning process.

CONCLUSION

This research adds another finding to the literature on the effectiveness of Wiki technology to support knowledge management in the academic environment. However, this study may not represent other universities because this research is revolved within the MBA course of one particular university. Nevertheless, there are some general points which can be used as a guideline for other universities.

This research touches on Knowledge Management System (KMS) and Wiki technology which are applicable in an academic setting. In a more precise point, this study was conducted to determine the KMS requirements from MBA's students and investigated whether Wiki as KMS can support the requirements of MBA course objectives. A Wiki is undoubtedly a powerful tool that can be significantly utilized in the education environment. It may even be too high for the students to comprehend, understand and utilize in a short period (for instance, within a semester). If the students do not see the benefits of using it for themselves and the objectives are not stated, the perceived advantages of Wiki may be the opposite for the students at the end.

With that said, each Wiki should be specified according to the needed usage in each class. The features need to be tailored according to the course and not use the general outlay of the Wiki system. One class that is specialized in knowledge management may require more features compared to a physiology class. With the adequate preparation, training and motivation of using Wiki, it can be implemented well and the outcomes are invaluable for the students and the educational institution as a whole.

Limitations of the study: The setting of this study has led to a few limitations. The limitations are discussed in this section to pave the way for future improvements. Firstly, the sample consists of only 25 students and all are involved in the MBA course in a single higher learning institution. It may not represent the population of all MBA courses and cannot be generalized to all MBA courses in all universities.

Secondly, most of the students believe that using Wiki or any knowledge management system can enhance the process of learning and they know it would be useful to integrate knowledge management in the MBA course. However, there needs to be further studying whether the faculty can provide such facility and embed it within the MBA courses that are offered in University.

The following limitation is that it focused on the requirements and needs of the MBA students on achieving their study objectives without the consideration of the instructor's objectives who are teaching them. It may seem that it is a one-sided view and

it may not generate the overall view of the utilization of Wiki as KMS. The instructor's objective needs to be integrated with the student's objectives to produce a mutual satisfaction of teaching and learning at the end of the semester. Instructors are an essential element to facilitate the use of Wiki to provide resources (e.g., knowledge) needed to generate and encourage collaboration from one student to another. The instructor also needs to familiarize the system to the students and motivate them to use it.

Another limitation is that Wiki is subjected to management courses in the MBA. Topics that are discussed in management courses can be expanded thoroughly due to different perspectives and views that each student has on it. It is harder to expand the discussion on subjects such as accounting or quantitative analysis whereby the answers to each question for a particular topic is straightforward.

Finally, the quality of knowledge sharing slowly depends on the size of the class. If the class size is too big not all of the students will participate actively; they will rely on their classmates to post comments. When the class size is small, each student knows that they have a responsibility in posting comments or sharing their views when each of them actively does so. It is in a way pressures the students to participate in collaborating with one another.

RECOMMENDATIONS

Lecturers who are facilitating the MBA courses should be given introductory sessions and later be given refresher courses in methods of utilizing Wiki within their subject. During the early stages, these lecturers should be given the support and sufficient training for them to go through their learning curve with fewer obstacles. This is done, so that, the lecturers will be familiar with the tools and will later integrate it seamlessly into the subject that they are teaching.

Role-playing according to different specialization can also be conducted in class. This is where the students are given a case study and they are required to take up different role positions and provide solutions according to the roles they are in. This makes the students seek solutions and answers from other sources besides their specialization. This gives a challenging task for students to learn as much as they can before their class and later would learn and see views at another angle on the assignment given to them.

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