CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter discusses some issues related to the correlation between students' participation and their examination score which become the focus of this research. It contains the review of related study or calls the previous study. Some previous studies related to this research are also discussed. Another, it consist of some theories strengthening the problem discussed here.

1. Online Students Participation

Recently, online learning has learning participation element as main part which has been discussed widely. In some research, learning participation has been conceptualized separately. For example, there are six different method of conceptualization that mentioned by Hrastinski : accesing e-learning environments, writing, quality of writing, writing and reading, actual and perceived writing and taking part and joining the dialog. After analyzing several related studies in the literature, Hrastinski proposed following definition of online learner participation :

Since Hrastinski has analyzed some related study in the literature, therefore he proposed online learner participation definition in the following paragraph.

Learning process by draw in part and preserve connections with others is definition of online leraner participation. It is complex process constituting doing,

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communicating, thinking, feeling and belonging, which happens both online and offline.[1]

Moreover, Reverence to Hrastinski reveals that learning outcome can be enhanced through students participation which have interaction connected with peers and teachers in online environments. Researchers express that participation afflicts perceived constructive learning, assesment quality of assignment, examination score, satisfication and retention rates in the literature.[2]

For example, Woods correctly argues that on the succes of online courses and students fulfilment, interaction of quality and quantity with the teacher and peers much more essential than to success and fulfilment in traditional course.

In a study of Davies and Graff found that the relationship between the level of online participation and students grades (i.e high, medium, low, fail). According to them, the students accomplishing high or medium passing grades are engaged more actively than students accomplishing low passing grades, while students accomplishing low passing grades were more active that students who failed in the some units of courses.[3]

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[1] Stefan Hrastinski (forthcoming), "What is online learner participation", A literature review. Computers & Education

[2] Stefan Hrastinski, "A theory of online learning as online participation", Uppsala University, Computer and Systems Science, Department of Information Science, Sweden., pp. 78 – 82

[3] Davies, J., & Graff, M, "Performance in e-learning: Online participation and student grades", British Journal of Educational Technology, 36(4), 2005, pp. 657–663

As Picciano points out that students perceived greated quality and quantity of learning as a result of participating in the discussions.

Accordingly, his opinion found on another study that conducted to anlyze discussion in course delivered for online method.

In the literature, there are several studies that take an interest in factors affecting the participation in online asynchronous discussion. First, attributes of the asynchronous online discussion. Second, role of the facilitator. The last is design of discussion activities.

In addition, turning to Vonderwell and Zachariah, they finds that some factors which influence online students' particpation. There are technology and interface characteristics, content area experience, student roles and instructional tasks, and the last is information overload.[4]

Since another study that examined the nature of interaction in an online course from both perspective of teacher and student which conducted by Vrasidas and McIssac. Consequently, they conclude that some factors are able to affected the interaction. The factors are the structure of course, class size, feedback, and prior knowledge of computer mediated communication (CMC).

In a further, there are other important aspects that influence students' participation and one of them is related to the differences in students' demographic and abilities in online courses.

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[4] Vonderwell, S., & Zachariah, S. "Factors that influence participation in online learning. Journal of Research on Technology in Education", 38(2), 2005, pp.213–230

For example, the work of Godwin, Thorpe and Richardson reveals that there are differences between students who take online course with high level of interaction and the students who take online course with low level interaction. The differences are regarding to age, gender, and previous qualifications. Eventhough the results were not statistically substantial, students who have high interaction were usually younger, male and having had higher educational qualifications.[5]

Carry on study for more detail, reference to McLean and Morrison reveals that the relationship between students participation and six socio demographic variables ((i.e sex, age, education, level, occupation, residence in urban or rural areas, and region of residence). Two variables that belong to the result of their study are two variables which is holding a university degree and living in an urban area. That on the variables become the strongest predictors of participation.

In addition, another related study by Prinsen, Volman, and Trewel who examined the influence of students characterisitic on degree and type on participation in a CSCL environment stated that females send more messages to the discussion than males do. They are more dependent on their computer skills.[6]

Participation is often a key predictor for early warning signals of student performance and achievement. Literature indicates that regular participation is an

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[5] Morris, K. V., Finnegan, C., & Sz-Shyan, W, "Tracking student behavior, persistence, and achievement in online courses", Internet and Higher Education, 8(3), 2005, pp.221–231

[6] Yukselturk, "An Investigation of Factors Affecting Student Participation Level in an Online Discussion Forum.," pp. 2.

important factor in a students' success at school. As Roby has indicated, participation is an important variable in measuring academic performance

2. Key Characteristics of Learner participation

a. **Participation is a complex process of taking part and maintaining relations with others**

In the literature, Wenger stated that participation is partially intersects toward as feel of community.

At the fact, most of researcher believed that participation is belonging to a community. Here, Wenger also has opinion that basic aspect of feel community is that participating into in and sensing connected to a group.

In a further, when people have high attachment to a cluster so they tend to likely participate and help each other. Conversely, a cluster attachment exactly driven by students' participation and students' help each other.[7] This case is supported by Palloff and Pratt, they perceptively state that collaboration and community are dual processes. Therefore, online students' participation has assumption that group attachment is important and should not be forgotten.[8]

The work of Rovai, reveals that he has his own definitions of community. Rovai perceptively states that the most essesntial elements of community include

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[7] Wenger, E., "Communities of practice: Learning, meaning, and identity", Cambridge: Cambridge University Press, 1998

[8] Palloff, R. M., & Pratt, K., "Collaborating online: Learning together in community", San Francisco: Jossey-Bass , 2005

"mutual interdependence among members, sense of belonging, connectedness, spirit, trust, interactivity, common expectatations, shared values and goals, and overlapping histories among members".[9] Description of sense of community that Rovai used has rejected by Wenger. Wenger's states erronesously that Rovai definitions' only use positive term. Therefore, Wenger disagree with Rovai's argument that participation in community involves all kinds of relations, i.e "conflictual as well as harmonious, intimate as well as political , competitive as well as cooperative".

Finally, most of research is proven to be obvious that eventhough the participation and sense of community has the similarities and difference between the concept but actually it's related. It will need to be further explored in in future research.

In a further literature, learning communities is popularly used. It has definition that "learning communities is a limited number of people who share common goals and a common culture". In addition, Johnson makes clear that the relationship between community and collaboration as cyclical: "collaboration supports the creation of community and community supports the ability to collaborate".[10] It's characteristic are work together ; learn from each other and from the surrounding culture and environment.

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[9] Rovai, A. "Building sense of community at a distance. International Review of Research in Open and Distance Learning", 2002, 3(1), pp. 1–16

[10] Johnson, D. W., Johnson, R. T., & Stanne, M. B. "Cooperative learning methods: A meta-analysis", (2000). from http://www.co-operation.org/pages/clmethods.html.

In a study Hrastinski found that online learning communities underscores that their learning often mediated online.

Another influential concept is that of knowledge-building communities, which emphasize that the purpose of learning communities should be to increase the collective knowledge by contributing beyond what is already known.

In summary, there are relationship between learning participation and sense of community, learning communities concepts, and knowledge-building communities. It is related each other. However, Hrastinski does not support the argument. He has indicated that this relationship is complex and depends on how each of the concepts is defined. Moreover, he perceptively states participation has drawbacks or negative view include conflictual thing and competitive relations while such relations were not mentioned in the definitions reviewed above.

b. Participation is supported by physical and psychological tools

Nowadays, technologies that have created by human has been developed. It has changed how we communicate and use intellectual resource. As we know that internet made our communicate easier, quicker and cheaper over far or near distance. Furthermore, Saijo correctly argues that people learn by use artifacts eventhough they opposes with traditional approaches to understanding learning, which "treat knowledge and skill as if people were not operating with tools when solving

problems and when managing social activities".[11] Then, a study by Vygotsky shows that there are distinguished two types of tools, there are physical and psychological tools. Usually, physical tools such computer has function to assist person to achieve their aims. He also believed that Psychological tools such language are commonly used together with physical tools. In addition, Hrastinski gives example, It has high possibility to communicate with each other people by using language (physicological tool) while using appropriate tool like computer (physical tool) that connected to the internet.

In conclusion, Hrastinski rightly points out that online learner participation happens at the nexus of physical and psychological tools. Physical tools such software is not enough to make online learning participation. Not only physical tools but also psychological tools such as exercise are extremely needed that engaged the learners.

c. Participation is not synonymous with talking or wtiting

Actually, participation happens on both personal and social levels. Thus, there are clarification, indeed, when we have a socially conversation with someone in the inappropriate situation like we are not engaged at that times :

> *"From Wenger's perspective the engagement with the social, world*
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> *even when it does not clearly involve interactions with others. Being in hotel*

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[11] Säljö, R. "Learning as the use of tools: A sociocultural perspective on the human-technology", link. In K. Littleton & P. Light (Eds.), Learning with computers: Analysing productive interactionLondon: Routledge, 1999, pp. 144–161.

room by yourself preparing a set of slides for a presentation the next morning may not seem like a particularly social event, yet its meaning is fundamentally social. Not only is the audience there with you as you attempt to make your points understandable to them, but your colleagues are there too, looking over your shoulder, as it were, representing for you your sense of accountability to the professional standards of your community. A child doing homework, a doctor making a decision, a traveler reading book – all these activities implicity involve other people who may not be present".[12]

Indeed, according to social theories on learning, Hrastinski makes clear that Wenger's quote above gives illustration that online participation is extremely complex to analyzed. It describes that participation is not same with talking o writing.

In research, simple measure is needed. Online participation usually measured by quantitative design such as how many messages learners have posted on a discussion board.

Further in research, Romiszowski and Mason make clear that there is an assumption which seldom, but it is challenged. Infrequent contributors are "passive recipients rather than actively engaged in learning". They thought that since it may involve engagement, thought and reflection, so much reading is not passive.

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[12] Wenger, E. "Communities of practice: Learning, meaning, and identity", Cambridge: Cambridge University Press.1998

Therefore, from the discussion above, participating by talking or writing should be considered as one aspect of online learner participation.[13]

Moreover, Hrastinski correctly argues this is reflected by two of Kolb, four basic learning modes : abstract conceptualization, which emphasizes thinking, and reflective observation, which emphasize understanding. In conclusion, it is not enough to just calculate the number of messages which learners write depend on quantitative measures when observing online learner participation.[14]

d. Participation is supported by all kinds of engaging activities

In a study, Hrastinski points out that the basis of collaborative involves the construction of meaning with others and individual.

Moreover, Littleton and Hakkinen have drawn attention to the fact that collaboration involve the construction of meaning with others. It's characteristic include joint commitment to a shared aims.[15] Besides, turning to Dillenbourg, found that it is a condition which two or more people can learn and attempt to learn something together. On other hand, since participation may involve all kinds of relations, conflictual as well as harmonious, intimate as well as political, competitive

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[13] Romiszowski, A., & Mason, R. "Computer-mediated communication" In D. H. Jonassen (Ed.), Handbook of research for educational communications and technology, New Jersey : Lawrence Erlbaum, 2004 (pp. 397–431)

[14] Kolb, D. A. "Experiential learning. "Experience as the source of learning and development", Englewood Cliffs", NJ: Prentice-Hall, 1984

[15] Littleton, K., & Häkkinen, P. "Learning together: Understanding the processes of computer-based collaborative learning" In P. Dillenbourg (Ed.), Collaborative learning: 1999 "Cognitive and computational approaches" Oxford: Elsevier, 1999, pp. 20–30

as well as cooperative, so participation should not be regarded as same to cooperation or collaboration.[16]

As mentioned above, reference to Wenger reveals that participation as a process of taking part and also to the relations with others that reflect this process. It is complex process that includes, for example doing, talking, thinking, feeling, and belonging. In short, participation involves everything we do and feel when being part of engaging experiences.

2. E-Learning

A. **Definition of E-Learning**

Essentially, e-learning is educational system or tool which is computer based that enable an individual to learn anywhere and anytime. Nevertheless, e-learning was delivered using a blend of computer-based methods like CD-ROM, but nowadays, e-learning is much more delivered through the internet.[17]

The origins of the term e-learning is not certain, although it is suggested that the term most likely originated during the 1980's, within the similar time frame of another delivery mode online learning.

Especially, Ellis rightly points out that e-learning not only include content and instructional methods delivered via CD-ROM, the internet or intranet but also

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[16] Dillenbourg, P. Introduction: "What do you mean by collaborative learning? In P. Dillenbourg (Ed.), Collaborative learning: Cognitive and computational approaches" Oxford: Elsevier Science, 1999 pp. 1–19

[17] " E-learning concepts,trends,aplications", Epignosis LLC., San Francisco, California - United States of America, pp.5

involves audio and videotape, satellite broadcast and interactive TV. Therefore, Ellis states that she totally disagree with Nichols who have other definition about e-learning. According to Nichols, e-learning is something that just has limitation in web-based, web-distributed, or web-capable using technological tools.[18]

Some researchers like Tavangarian, Leypold, Nolting, Roser ,and Voigt as well as Triacca, Bolchini, Botturi, and Inversini believe that the technology being used was not enough as a descriptor even the technological feature are involve the definition of the term. [19]

In a further, Tavangarian involve the constructivist theoretical model as a framework for their definition. Through knowledge building process, the work of Tavangarian reveals that e-learning indicates some metamorphosis from an individuals' experience into the individuals' knowledge through the knowledge.[20]

Though Triacca points out that e-learning was type of online learning, she indicated that some level of interactivity needs to be included to make the true definition in describing the learning experience as Ellis thought.

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[18] Ellis, R. "Down with boring e-learning", Interview with e-learning guru Dr. Michael W. Allen., (2004). Learning circuits. Retrieved from. http://www.astd.org/LC/0704_allen.htm,

[19] Tavangarian, D., Leypold, M. E., Nölting, K., Röser, M., & Voigt, D. "Is e-Learning the solution for individual learning?" Electronic Journal of e-Learning, 2(2), 2004, pp.273−280.

[20] Triacca, L., Bolchini, D., Botturi, L., & Inversini, A.. "Mile: Systematic usability evaluation for e-Learning web applications", AACE Journal, 12(4), 2004

B. Online Learning

Recent, online learning has few definition on it's term. Online learning can be described by using different phrases such as distance learning, e-learning, mobile learning, computer-based training (CBT), web-based training (WBT), instructor-led training (ILT), online training, online learning, blended learning, classroom training, or webinars.

The work of Howatson and Jones found that online learning provides a means of delivering flexible education as well as increasing the scope of academic programs.

In other opinion, Benson stated that most of authors featured online learning as acces to learning experiences through the use of some technology.

Further, both Benson and Conrad perceptively indicate that learners are able to have educationally chances via online learning as the newest version of distance learning. Others authors like Oblinger, Hiltz, and Turrof found that not only the accessibility of online learning but also its connectivity, flexibility and ability to promote different interactions.[21]

Likewise, clear statement from Benson that online learning is a newer version and improved version of distance learning. As well as Benson, Hiltz, and Turrof also

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[21] Hiltz, S. R., Coppola, N., Rotter, N., Turoff, M., & Benbunan-Fich, R. "Measuring the importance of collaborative learning for the effectiveness of ALN": A multi-measure, multi-method approach. Journal of Asynchronous Learning Networks, 4(2), 2000, pp.103–125.

believes that although there is differentiation in their own descriptive narrative but actually, there is a relationship between distance learning and online learning.[22]

C. **Synchronous Learning**

Synchronous communication enables real time communication between individuals. Such tools include text chat rooms, audio or video conferencing and shared whiteboards. Synchronous communication occurs when collaboration take place at the same time such as within chat rooms, web conferencing or virtual classrooms. These tools require simultaneous communication between students and teachers. Reference to Brown and Green reveals that distance courses that employ synchronous communication, such as video conferencing or teleconferencing, could be compared to traditional classroom instruction relatively easily in terms of the time spent by students in course participation.

Examples of synchronous learning are online chat and video conferencing. Every learning tool that is in real time, such as instant messaging that allows students and teachers to asks and answer question immediately. Students who participate in synchronous learning courses are able to interact with other students and their teachers during the lesson rather than learning on their own.

The main advantage of synchronous learning is that it enables students to avoid feelings of isolation because they are in communication with others throughout the learning process. However, synchronous learning is not as flexible to students

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[22] Joi L. Moore,Camille Dickson-Deane,Krista Galyen, "E-Learning, Online Learning, and Distance Learning Environments: Are They the Same?"pp. 1

who have limit time as to attend a live teaching session or online courses in real-time. So, it may not be ideal for those who already have busy schedules. [23]

D. Asynchronous Learning

Asynchronous learning on other hand can be carried out even when the student or teacher is offline. Coursework and communications delivered via web, email and messages posted on community forums are perfect examples of asynchronous e-learning. In these instances, students will typically complete the lessons on their own and merely use the internet as a support tool rather than venturing online solely for interactive classes.

A student is able to follow the curriculum at their own pace without having to worry about scheduling conflicts. This may be a perfect option for users who enjoy taking their time with each lesson plan in the curriculum and would prefer to research topics on their own. However, those who lacks the motivation to do the coursework on their own may find that they do not receive significant benefit from asynchronous learning. Asynchronous learning can also lead to feelings of isolation, as there is no real interactive educational environment.

Ideally, effective e-learning courses should include both asynchronous and synchronous learning activities. This allows students and teachers to benefit from the different delivery formats regardless of their schedules or preferred learning

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[23] "E-Learning, concept, trends and application", Epignosis LLC, 315 Montgomery Street, 8th and 8th Floors San fransiso - California USA, pp. 44/www.efrontlearning.net

methods. This approach provides students with access to immediate help if needed, while still giving them the ability to learn at their own pace. [24]

E. Blended Learning

Blended learning is a combination of offline (face-to-face, traditional learning) and online learning in a way that the one compliment the other. It provides individuals with the opportunity to enjoy the best of both worlds. For example, a student might attend classes in a real world classroom setting, and then supplement the lesson plan by completing online multimedia coursework. As such, the student would only have to physically attend class once a week and would be free to go at their own pace and without worrying about scheduling issues.

Blended learning is often also referred to as "hybrid" learning, and can take on a variety of forms in online education environments. While some organizations may only use blended learning techniques on rare occasions, other might utilize it as a primary teaching method within their curriculum. There are two key principles commonly associated with blended learning. Students who can share information and work with other students directly in a collaborative setting have a more enriched learning experience, and collaboration between students can be improved upon if group activities rely on information gathered from online resources or lessons. It's

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[24] "E-Learning, concept, trends and application, Epignosis", LLC 315 Montgomery Street, 8th and 8th Floors San fransisco - California USA, pp. 45/www.efrontlearning.net

also been suggested that students who complete online coursework followed by interactive, face-to-face class activities have richer educational experiences. [25]

Tools and platforms that complement blended learning include LMSs and mobile devices such as tablets and smartphones.

F. Learning Management System

LMS stands for Learning Management System and it's a global term for a computer system specifically developed for managing online courses, distributing course material and allowing collaboration between students and teachers. A LMS will allow you to manage every aspect of a course, from the registration of students to the storing of test results, as well as allowing to accept assignments digitally and keep in touch with the students. In essence, the LMS is the backbone of most e-learning activities.

LMSs are built on various platforms, commonly PHP, Net or Java and they will hook up to a database such as PostegreSQL, MySQL or SQL server. There are many LMSs out there, both commercial and open source.

In a corporate environment such a system can be used to monitor staff, and keep records of appraisals and training. Whether the course is run for a few learners over a long period of time, or for many over a shorter period, a Learning Management System makes the course easier. A good LMS will also have a

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[25] Ibid…pp. 69-70

reporting system so the teacher can access information that would be tricky to gather ourself.

4. Element of Online Courses

When creating an online course, there are a number of criteria must be prepared to ensure that students receive the benefits when they signed up for. Below is a list of important ones :

A**. Consisten instructor presence : the value of feedback**

It is very important to decide the role of the instructor in the e-learning process. As we know that there are much things which the instructor have to do as like to encourage, inspire and gives proper feedback to the learners in the learning process. Moreover, the instructor also have to facilitate such a relationship between learner and instructor. Learning Management System (LMS) offer options like instant messaging between peers, email and other tools that ensure the relationship between learner and instructor running properly.

B**. A streamlined and well-designed LMS**

Learning Management System (LMS) have to be an efficient e-learning site that will be easy to operate, well-organized and contains high quality of material. Surely, the instructor and the learners want that e-learning process run efficiently. For example, daily task should include the distribution of the new material and sending, receiving and grading assignments. Furthermore, LMS have to ensure that

the user can easily to operate the features which is important part of e-learning process.

C**. Content that is up to par**

The design of content have to offer both teachers and learners a set of guidlines. It's quality must be on par with the impression of LMS. Therefore, a system must be well designed and efficient.

D. **Tested delivery methods**

Things that need to always be sure is the posted material for learners have to compatible with all the possible web browsers or platforms being used. When all of these essential components are in place online learning establishment have the ability to not only provide students with the skill sets and knowledge but also a virtual education platform that helps to contribute to their future success.

E**. Online test and quizzes**

At the fact e-learning lacks the component of physical presence, thus tests and quizzes become an essential part of the educational process. Through online test and quizzes, an instructor is able to track the progress of students and assess the effectiveness of the curriculum, while at the same time students have the ability to track their own progress and improve on their skills accordingly. [26]

5**. Students Examination Score**

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[26] Ibid..pp .53

Examination score refers to the learner ability within a classroom lesson, unit, or even curriculum.[27] In addition, a reference to Nunan in his book, reveals that examination score is student mastery of specific curricular objectives.[28] It means that examination score is student mastery of specific objectives within the lesson or curriculum. In this case, students' examination score refers to the students' acquisition in PeerWise web-based application which is contained in lesson, unit, or curriculum. Likewise, Richards has drawn attention the fact that curriculum goals are to represent the outcomes of a language program.[29]

6. PeerWise

PeerWise is web-based learning tool that leverages the familiarity students have with social software and web 2.0, engaging them directly in the assesment process. Using PeerWise, students work collaboratively with their peers to construct, share, evaluate, answer and discuss a repository of assesment questions relevant to their course. Students are responsible for creating and moderating the resource, typically generating many hundreds of questions and submitting many thousands of answer. Since its first use at the University of Auckland in 2007, more than 200.000 questions and 5 million answers have been contributed by students from over 200 institution around the world.

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[27] H. Douglas Brown and Priyanvada Abeywickrama," Language Assessment: Principles and Classroom Practices", pp 9.

[28] David Nunan, "Task-Based Language Teaching", pp. 143

[29] Jack C. Richards, The Language...,pp. 67.

PeerWise was purposefully developed to exploit students' familiraty with social software and the web 2.0 phenomenon and places the responsibility of learning into the hands of students in a way is that is consistant with CSP. Wickersham and McGhee argue that deeper learning is evidenced when learners don't just regurgitate information but reflect on it to produce knowledge. The use of student-generated MCQs for learning is one example of this approach, and has a wide range of documented benefits including the development of a deeper understanding of the subject content learned, with a shift from acquiring knowledge. The use of student generated MCQs for learning is one example of this approach, and has a wide range of documented benefits including the development of a deeper understanding of the subject content learned, with a shift from acquiring knowledge to using knowledge and developing a sense of ownership of the subject content. Through question construction and response ; composition of explanations to contributed questions, and feedback submission to their peers, students engage in the application of higher order cognitive thinking skills. This points to a shift from the old paradigm where questions are created by teachers and lecturers then administered to student.

A number of studies on PeerWise focus on patterns of contribution and correlations between student contribution and final examination scores. In addition, students' perception and the quality of items contributed by students are also explored. Denny, Luxton and Hamer reported that students developed high quality questions and were able to determine the quality of questions to the question bank.

Similarly, Sykes, Denny and Nicolson and Feely and Parris reported that students contributed significantly more than was expected of them. Overall, positive correlations were reported between students' contribution and the grades obtained.

Denny, Luxton-Reilly and Harmer reported that students believed PeerWise helped them to learn and that they were willing to use the tool again. Bottomly and Denny stated that students rated PeerWise very highly and found it to be useful learning tool. PeerWise was similarly rated by students in the studies by Sykes, Denny and Nicolson and Feeley and Parris.

While evidence points to the significant utility of PeerWise to education, a number of related issues are also highlighted. From the students' perspective, Denny, Luxton-Reilly and Hamer noted that external motivation is needed to support question generation in PeerWise. Further, issues related to students' dissatisfaction with moderation of the question bank were reported by Sykes, Denny and Nicolson. The quality of MCQs created by students is also an issue underlined for attention in the literature. From the teachers' perspective, Denny, Hanks and Simon identified three concerns in using PeerWie for their course : the quality of questions in the repository ; the evidence of learning benefits, and the issue of students' perceptions of activity value when using PeerWise.[30]

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[30] Lenandlar Singh, "Technology enhanced peer learning with PeerWise: Experiences and perceptions from a developing country ", *Department of Computer Science, University of Guyana , Caribbean Teaching Scholar* , Vol. 4, No. 1, April 2014, pp.2-3

B. Previous Study

By this day, there are researches on PeerWise but only limited on students' perception. The first is research by Lenandlar Singh, the title is "*Technology enhanced peer learning with PeerWise: Experiences and perceptions from a developing country*". Singh discussed about the students' perception of PeerWise and reports on experiences of using PeerWise. Evidence from this review suggests that most students were able to contribute to PeerWise and that approximately 25% of students contributed much more than was expected . Second, *"PeerWise-The marmite of Veterinary Student Learning" by Amanda Sykes, Paul Denny and Lesley Nicolson, Student Learning Service, The University of Glasgow*. They focuses on student engagement of the class with the tool and their perception toward PeerWise. Thus, we can conclude that both research focus on student perception of PeerWise. The difference is located on student engagement which only conduct by Amanda Sykes in second research. From the both research, the researcher summarize that the variable used by Lenandlar and Amanda are different compare with the variable which the writer will used. Here, the writer will try to looking for about the students' participation and student' examination score. Nevertheless there are similarity between participation and engagement but actually it has differences.

Generally, the researcher attempts to analyze some research that used online learning as main topic. This case happened because the research about PeerWise is rarely to found. At least, there are previous studies that have same topic with the

researcher have in order to avoid the plagiarism.Third, *"Toward constructivism for adults learners in online learning environment"*, the research discuss of examining the impact of constructivism in online learning environment when focusing on adult learners. The author of that research develops the connection between constructivism and adult learning theory. In addition, the paper proposes instructional guidlines using the constructivist approach in online learning for adults. Fourth, "*Evaluation of evidence-based practices in online learning : A meta-analysis and review of online learning studies*", the research examined that on average, students in online learning conditions performed better than those receiving face-to-face instruction. The difference between student outcomes for online and face-to-face classes measured as the difference between treatment and control means,divided by the pooled standard deviation was larger in those studies contrasting conditions that blended elements of online and face-to-face instruction with conditions taught entirely face-to-face. Fifth, *"Virtual interaction : Design factors affecting student satisfaction and perceived learning in asynchronous online courses"*, the research looks at factors affecting student satisfication with and perceived learning from asynchronous online learning. It reports on an empirical investigations that explored relationships between students perceptions and course design factors in 73 SUNY learning network courses in the spring semester. Sixth,*"The learning styles, expectations, and needs of online students"*. The study sought to establish learning styles, expectations, and needs of students taking an online courses. Seventh, *"Examining social presence in online*

courses in relation to students' perceived learning and satisfication". This study explored the role of social presence in online learning environments and its relationship to students' perceptions of learning and satisfication with the instructor. A correlational design was used. This study found that students with high overall perceptions of social presence also scored high in terms of perceived learning and perceived satisfication with the instructor. Eighth, *Performance in e-learning : online participation and student grades.* The findings of the study revealed that greater online interaction did not lead to significantly higher performance for students achieving passing grades, however, students who failed in their courses tended to interact less frequently. Ninth, *The Impact of Frequency on Achievement in Online Courses : A study from a South Texas University.* This study addresses this issue by exploring a case study of over 1600 online learners at a university in South Texas. Researchers looked at student demographics and activity patterns as they relate to cognitive outcomes. Factors such as gender and ethnicity which have been found to play a significant role in success in face-to-face environments, were not found to be significant in this study. Tenth, *Relationship between students' motivation and their participation in asynchronous online discussion.* This study shows that students' perceived value, autonomy, competence, and relatedness have different levels of impact on their online discussion behavior. This study also found that students' intrinsic motivation and their perceived value of online discussion remained at a

moderate-high level over time, although the perceived value had a significant drop from the mid-point to the end of the semester.