CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter covers both several theories and previous studies related to the research. The review or related theories are about online learning, online learners, Factors that determine the effectiveness of e-learning, satisfaction theory, while the review of previous studies is described in the last sub-chapter.

A. Online learning

The definition of online learning according to the statement of Allen and Seaman is a learning that only handles trough web. It does not consist of any physical learning materials issued to students or actual face-to-face contact there is no class meeting. Pure online learning is essentially the use of e-learning tools in a distance education mode using the Web as the sole medium for all student learning and contacts. For this study, however, online learning is defined by course work that has at least 80% of the contents and interactivities online. In other opinion that stated by Benson and Carliner, online learning is a recent version of learning in the distance that gives the students chance described as both nontraditional and disenfranchised.1

B. Online Interaction Learning Theory

However conducting an online class, the teacher or the lecturer should be able to handle the interaction among them online that gives impact to the good environment of the online class. Benbunan-Fich designs a model that explains the learning process and outcome in the environment of online learning whereas the 3p model more generally applies to both classroom and online learning. The Inputs, the first building block of the model, consist of characteristics of four factors:

- **Technology**: it is the main media in online learning; as relating to the teaching and learning process, it cannot be done without the technology’s involvement.

- **Student**: when talking about learning, there is of course a learner. As here, the learner that being discussed here is the one who is studying in a University; therefore it is called as student.

- **Instructor**: when there is a learner, of course instructor is needed. Especially because this is a formal course; the learners do not learn something by themselves. Then instructor who gives instructions, materials, exercises, and feedback is existed.

- **Course**: technology as a media has been provided, there are students and instructor; so, course as a set of classes or a plan of study on a particular subject, usually resulting in an examination or qualification is of course being one of the main factor as well.
These four factors are expected to function as moderator variables and to influence how the learning technology is adapted for particular course. It is suggested that unless minimal levels of “input” variables are reached, a course will not be conducted in such a way as to lead to online interaction and communication that are necessary for the outcomes to be favorable. For example, if the Learning Management System (LMS) such as WebCT or Blackboard is not easy to use or requires high cost for students to install certain software, then the barriers to a successful online course are overwhelming. If an online learning instructor has no training or no experience on how to design and teach a course online, then he/she is not likely to be able to use online class effectively. Finally, unless the student has at least the minimal required level of motivation and confidence to do the required activities, he or she will fail to reach a satisfactory level of learning.
Online interaction learning theory

The researcher considers that while inputs produce outputs. The types or the level of interaction influences on the result of the input on output.

C. Online Learners

Hoskins and van Hooff looked at the types of students who typically enrolled in online courses at the high school and college level. They found that one of the factors which seem to indicate overall success and satisfaction with

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online learning was the student's age. In general, they found that more mature students (mature students in the Hoskins and van Hooff study were defined as being 25-40 years of age) participated more in the online discussions and were more actively engaged in the class than were younger students. The older students appeared to be inclined to contribute more in terms of numbers of postings and the quality of those postings to the discussion board postings than were the younger students. The older students were more active participants in the discussions than were the younger students, so perhaps this increased participation accounts for their indications of higher levels of satisfaction with the online environment. Developing an electronic personality requires a student to be able to express emotional concerns through written expression, and because younger students have not mastered this technique, younger students may often find it difficult to participate in discussion boards. However, it is generally through these discussion boards that a sense of community is created online and provides the social connectedness which constructivist theorists feel is so vital to learning. The discussion boards function as the online version of the verbal classroom discussion in which there is a back and forth conversation among participants on a specific topic (i.e. discussing symbolism in a story, arguing points in a mathematical theorem, determining why a particular species adapted in

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a certain way over time). It is through these types of discussions that students get to know one another in the academic setting both in the traditional classroom and in the online classroom and thus help to create a sense of belonging to the group or community. Once again, however, this study focused on students at the college level, not high school or middle level learners.

**Factors that determine the effectiveness of e-learning**

Different from the traditional class, the content of the course in online class should not be an easy task. Some studies evaluating the e-learning system and service, either qualitative or survey study included the quality of information or the quality of contents as dimension of the factors that determine the effectiveness of online learning. In qualitative studies conclude that the quality of information referred to all instructional materials and course design. Instructional materials include course contents posted on instructional web by the instructors, hypermedia, simulations, and game-based learning modules.  

What is taught in online courses is assigned learning and assessment activities, delivered through instructor-delivered content, internet-driven content. Sung Mi found that the information quality of e-learning system/service had the

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greatest effect on users’ satisfaction among the three qualities such as information quality, system quality, and service quality.

Several empirical comparison studies showed that students in online courses perceived that they consider course content as much more important than instructor’s presence. Miyazoe and Chiyodaku examined the relationship between course design and interaction in terms of satisfaction. After conducting a comparison study between traditional classes and online, they noticed that students in online class indicated that information was their first priority. In contrast, students learning on traditional class indicated student-instructor interaction was their first priority. This tendency was increased as students got older. Perceiving this finding, the researcher considers the mature students' skills of self-direction were higher than younger student so that they preferred content-interaction to student-instructor interaction or student-student interaction. Interestingly, there were gender differences on the perception of the course of the content. Young and Norgard found that female students give more positive feedback about the lecture material and course assignments effectiveness than male students.

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D. Satisfaction

According to Oliver, satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided a pleasurable level of consumption-related fulfillment.\(^9\) Thus, satisfaction is captured as a positive feeling, indifference, or a negative feeling.\(^10\) Tse and Wilton define satisfaction as the consumer’s response to the evaluation of the perceived discrepancy between prior expectations (or some norm of performance) and the actual performance of the product as perceived after its consumption.\(^11\) With the rise of e-commerce, researchers introduced the concept of e-satisfaction. Hise and Szymanski defined e-satisfaction as the consumers’ judgment of e-service offerings in the virtual marketplace.\(^12\)

In the e-learning context, a student is considered a customer of e-learning services. Satisfaction can be the result from the interactions between the student and the e-learning environment surrounding students, which includes instructional course website, instructors, peer students, support service. Therefore, satisfaction with learning is a multidimensional concept. Giese and Gote define e-learner satisfaction as a summary affective response of varying intensity that follows asynchronous e-learning activities, and e-learner satisfaction is stimulated by

several focal aspects, such as content, user interface, learning community, customization, and learning performance.\textsuperscript{13} For this study, the definition of satisfaction is students’ affect with (feelings about) prior e-learning use.

1. Factors that Determine Students’ Satisfaction in Online Learning

Several researchers conducted both qualitative studies. In their efforts to understand what students’ experience of online learning are like. Qualitative studies focused either on students’ positive/negative experiences, or on critical incidents, or on comparison between online and classroom learning. Empirical studies focused either on the validity of previously established constructs in marketing and IT areas or on elements of teaching and learning or learning process or on online course evaluation.\textsuperscript{14}

Yang and Cornelius examined positive and negative experiences of students regarding the quality of online learning. They employed interviews, observations, and document collection for the examination. Interviews and observations were conducted with three students. Various data were collected from two universities and one community college. According to the results, factors that contributed to students’ positive experiences were flexibility, cost-effectiveness, electronic research availability, ease of connection to the internet, and well-designed class interface. In addition, factors that contributed

\textsuperscript{14} Sung Mi Song. 2010. “E-learning: Investigating students’ acceptance of online learning in hospitality programs” Iowa State University p.42
to students’ negative experiences were: delayed feedback from instructors, unavailability of technical support from instructors, lack of self-regulation and self-motivation, and the sense of isolation, monotonous instructional methods, and poorly-designed course contents.\textsuperscript{15}

Using the critical incident technique (CIT), Gil focused on identifying the critical incidents that may have impacts on learners’ satisfaction with e-learning. The technique has been used to identify various scenarios of user behaviors, providing rich data of original user experiences that may be explored in detail to understand their behavior, its causes, and its consequences. As the researcher expected, frequent occurrence of negative critical incidents had significant potential of negatively affecting satisfaction. The researcher found four categories of critical incidents that affected e-learning satisfaction, those are:

- \textit{Administration}: the arrangements and tasks needed to control the operation of a plan or organization. In online learning context, administration refers to the learning community, customization, and learning performance.

- \textit{Functionality}: any or all of the operations performed by a piece of equipment or a software program. This means functionality is mostly related to the technological learning process.

- **Instruction**: something that someone tells you to do. When taking online course, instructor’s instruction is very important because the students and the instructor do not see each other real life, the instruction about what students have to do is should be clear.

- **Interaction**: to communicate with or react to. Instruction here is focused on communication between instructor and students during the online course process.¹⁶

Among those categories, interaction and instruction were the most important factors that have impacts on satisfaction with online learning environment. Using Thorndike’s law of effect and Herzberg’s motivation-hygiene theory, Chyung and Vachon (2005) proposed a model aiming at providing a practical guideline to e-learning practitioners. The purpose of the study was to investigate benchmarks of satisfying (motivational factor) and dissatisfying factors that students perceived during e-learning. In order to do that, researchers took a qualitative approach. The satisfying factors that found by reported were¹⁷:

- Relevant to learning content
- Effective teaching methods

¹⁶ Chyung, S. Y., & Vachon, M., An investigation of the satisfying and dissatisfying 113 factors in e-learning. *Performance Improvement Quarterly* (2005), 18, 97-114

• Instructor’s expertise.

On the other hand, e-learners described lack of their instructor’s participation during class discussions and lack of clarity in instructional directions as dissatisfying factors. In relating to this, Ali and Ahmad put the factors all together in three highlighted factors, those are18:

• Instructor’s performance

Different from traditional system, instructor’s performance in online learning environment has to be improved in skills and responsibilities; because technologies always change something that instructor needs to do to students. In addition, Collis states that instructor should be the center of learning process in online class; it is not only because of technology but practical accomplishment of the technology that has certain effects on learning. Online class is more challenging for instructor because it needs higher level of interactions and discussion with students, and here, the instructor is a mediator between the students and the materials. This factor resembles to instruction and instructor’s expertise; however, the instructor’s performance tends to give negative experience based on the previous research, those are delayed feedback from instructors, unavailability of technical support from instructors and monotonous instructional methods. In specific, the items are: the instructor’s

encouragement for students to be actively involved in the e-learning process, the instructor’s feedback on students’ works through comments, the instructor’s ways to make students to interact with him during the e-learning process, the instructor’s individual treatment to students, the instructor’s way is sharing information to students about the learning progress.

- **Student-Instructor Interaction**

In educational point of view, interaction between students and teacher is very significant. The quality of learning process mostly can be considered based on this factor. Not only to deliver lessons and monitor the learning process; interactions can be a way to persuade and motivate learners regarding to the materials or even moral value. Ali and Ahmad explores that amount of researchers found out that overall success and effectiveness of a teaching and learning process depends on the interaction. In an online course, the information, assistance, and feedback by the instructor determine students’ satisfaction. This factor resembles to effective teaching methods and interaction. Furthermore, this can give both positive and negative experiences; lack of self-regulation and self-motivation, and the sense of isolation, also monotonous instructional methods. Particularly, the details points that can be measure for this factor are: The instructor’s effectiveness for the e-learning process, the instructor’s
available time to be contacted for the lessons or consultations (during office hours or by appointment), the instructor’s motivations for students to learn, the instructor’s fair treatments to all students, the instructor’s esteem to students (for teacher-students relationship), the instructor’s appreciations for students’ questions and comments, the instructor’s way in presenting materials and instructions, the instructor’s highlight for important points and lessons outline to students, the instructor’s confirmation about the highlighted lesson for each topic.

- Course Evaluation
  
  Online course environment can increase students’ interest and satisfaction with the lesson material and how it is designed. According to Yang and Cornelius stated that students can be frustrated when instructor did not participate in the classroom process and their courses were poorly designed. In the other words, for e-learning environment, feedback from students about their needs and their preferences is very important. In addition, this can affect the learning outcome for students. This can be related to relevant to learning content and the clear evaluation and assessment process as the result of their learning process. In particular, this study is focused on these followings details to be measure: the courses materials (relevant and useful), the assignments (relevant and useful), stated lesson plan (e-learning process) and the syllabus (written or
explained by the instructor), stated scoring rubric and feedback, the testing and evaluation procedures.

Specifically, as shortly mentioned above, it is also included two additional factors in general, to make the survey clearer for both respondents and researchers:

- **Administration**
  The immediate accessibility of the information, assistance, and feedback can give a strong impact for students. The way they access various things in the online course can determine whether they are comfortable or not. Furthermore, this factor is related to the implementation and good design of e-learning process. Mostly, well-designed class interface gives positive experience; and poorly-designed course contents give negative experience. This factor is specified by these following points to be measure: e-learning process in general, the display’s design of the materials, and the display’s design of the examination/practice pages.

- **Functionality**
  This factor seems not really significant and it is simply neglected by most of instructors. This factor tends to focus on students’ points of view. In particular, it is related to flexibility, cost-effectiveness, electronic research availability, eases of connection to the internet. There are three specific items regarding to this factors that are responded by the students, those
are: Internet access requirement, electronic research availability, the website used in e-learning process, and flexibility in cost, time and place.

2. Satisfactions Measurement

In this study, focused on e-learning point of view, students’ satisfaction can be defined as students’ responds and feelings towards the ‘Computer Assisted Language Learning’ online class based on the factors mentioned above. Specifically, this research tends to consider responds from the students’ answer the survey questions honestly and to the best of their ability. Furthermore, factors explored by Ali and Ahmad above bring up brief explanations about intensity of satisfactions that might be expressed by learners.

• Very Satisfied

In expressing satisfactions of course indicate what the respondents feeling about the e-learning process and every part of it. Relating to the factors affecting students’ satisfaction, ‘very satisfy’ means the students give more positive feedback in various aspects. It is considering flexibility, cost-effectiveness, electronic research availability, ease of connection to the internet, and well-designed class interface. In addition fast feedback from instructors, availability of technical support from instructors, strong of self-regulation and self-motivation, and the sense of isolation,
monotonous instructional methods, and highly-designed course contents also drive students get very satisfy.

- **Satisfied**

Basically, feeling satisfy is not so much different from very satisfy; however, feedback showing stronger anticipation and enthusiasm refers to very satisfy. While ‘satisfy’ tends to indicate that students’ responds are neutral, but they get more positive experiences, or less negative experiences. They probably think that the lesson is relevant enough and can be understandable; also, they comfortable with the lesson process and the teaching method, including instruction, motivation and feedback from the instructor.

- **Neutral**

The middle scale of satisfaction levels is neutral. This feeling is neither feeling satisfy nor dissatisfy. The respondents had been feeling nothing during the e-learning process for every aspects mentioned as the factors of online learning. The students maybe didn’t have strong enthusiasm or passion in the course; moreover, they get are not really motivated by the instructors, friends or even the environment even though when they had accepted that. The students who choose this option did not really care about the lesson, materials, learning process, feedback, until the scores for
their results of the course; as long as they pass the class, they do not have any problem.

- **Dissatisfied**

  Regarding to the 3 factors mentioned above, including the factors that are comparable as the other terms or as the details of those, dissatisfy can be identified as students’ negative experiences. So, the students feel that the lesson content was not really interesting, and the way instructors explained it was not really attractive; even though they understand the lesson, they cannot really enjoy the process and felt almost like under-pressure. They did it because they had to; also, they do not really get motivation from instructors; therefore, they felt something was missing in the online course.

- **Very Dissatisfied**

  This means students really could not enjoy the online class. The e-learning process was boring, and the interaction between the instructors and the students was really unwell. The lesson content was not relevant, and the way it is delivered to the students was poorly design. The teaching method was monotone. In sum, all of the factors mentioned above give the students negative experiences and make them do not want to retake the online course even though they have to.
E. Previous Study

The researcher provided previous studies that have been completed by the previous researchers. There are some previous studies which have been read by the researcher. First, the research entitled “Investigating students' acceptance of online learning in hospitality programs”. It was done by Sung Mi song from Iowa State University. The purpose of this study is to identify key determinants of the behavioral intention of students in the context of online learning in hospitality programs, and to examine the contributory factors to students’ perceived quality satisfaction with online course. This study focused on the students’ perspective. The subjects of the study were the top thirteen 4-year public universities that have graduate programs and the students who have ever taken at least one online learning course in the hospitality programs from Spring 2009 to Summer 2010. The result of this research is the online learners are typically segmented by student status (full-time, part-time), gender, or age. Rather, the results of this study find the importance of segmenting online learners in hospitality programs by cognitive factor, affective factor, and personal and motivational factors.19

Second, the research entitled “Key Factors for Determining Students’ Satisfaction in DistanceLearning Courses: A Study of Allama Iqbal Open University”. Afzaal ali and Israr Ahmad from international Islamic University. the main purpose of this study was to examine the relationship between student

19 Sung Mi song. Investigating students' acceptance of online learning in hospitality programs. (2010).
satisfaction and the following variables of the distance learning environment: Instructors’ performance, course evaluation, and student-instructor interaction. The subject of this study was students of AIOU in Pakistan. This research used qualitative research method. The results of this study indicated that the majority of the students at this campus showed high levels of satisfaction regarding student-instructor interaction, instructor’s performance and course evaluation. This reveals that just like in traditional education, in distance learning education at AIOU, enough interaction takes place between students and their instructors, courses are up to date and well designed, instructors are devoted, motivated and equipped with the required skill and knowledge.

The third is a research conducted by Rizky Nurmeida by the title “Tingkat Kepuasan Peserta Didik Terhadap Pelayanan Proses pembelajaran di SMK Averus”. The purpose of the study is to find out student’s satisfaction to the learning process service at SMK Averus. The student’s satisfaction was identified in many aspects, such as Intra-curricular service, co-curricular service, extra-curricular service. This research founded that the services learning process that has the highest satisfaction score is in intra-curricular aspect with the percentage

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of 70.44%. The service has the lowest satisfaction score is extra-curricular with a percentage of 69.03%.\textsuperscript{21}

The fourth is a research that was done by Dany Dwi Setyawan by the title “Tingkat Kepuasan Siswa Kelas Terhadap Penggunaan Sarana dan Prasarana Pendidikan Jasmani di SD Negeri Lempuyangan 1 Yogyakarta”. Dany found that there are 29 students (18.8\%) are very satisfied, there are 95 students (61.7\%) are satisfied, and 30 students (19.5\%) are satisfied enough, while no students (0\%) are dissatisfied. He concluded that the satisfaction level of students on the use of facilities and physical infrastructure in primary schools Lempuyangan 1 Yogyakarta is satisfying.\textsuperscript{22}

The fifth is “A study examining the students’ satisfaction in higher education”, done by Babar Zaheer Butt and Kashif ur Rehman this study examines the students’ satisfaction in higher education in Pakistan. The study focuses on the factors like teachers’ expertise, courses offered, learning environment and classroom facilities. Students’ response measured through an adapted questionnaire on a 5-point likert scale. The sample size of the study consisted of 350 students belong to different private and public sector universities. The results of regression analysis reveal that all attributes have significant and positive impact on students’ satisfaction in higher education

\textsuperscript{21} Rizky Nurmeida., Tingkat Kepuasan Peserta Didik Terhadap Pelayanan Proses Pembelajaran di SMK Averus
\textsuperscript{22} Dany Dwi Setyawan. 2014. Tingkan Kepuasan Siswa Kelas Terhadap Penggunaan Sarana dan Prasarana Pendidikan Jasmani di SD Negeri Lempuyangan 1 Yogyakarta
though with varying degree of strength. However, teachers’ expertise is the most influential factor among all the variables, therefore it requires special attention of the policymakers and institutes.\textsuperscript{23}

The sixth is “Developing a decomposed alumni satisfaction model for higher education institutions”. Done by Sheng-Hsun Hsu, Yu-Che Wang, Chao-Jih Cheng, and Yu-Fan Chen. As there is competitive pressure to provide quality education, this study aims to explore the determinants of alumni satisfaction in higher education. The customer satisfaction index (CSI) provides a common set of measures to interpret customer satisfaction. Although CSI models can measure customer satisfaction, they lack the ability to diagnose areas for improvement. To address this issue, in this study we suggested a decomposed alumni satisfaction model. Decomposed models provide greater explanatory strength than pure models. Based on the results, we built several strategic management maps to help the department of a higher education institution identify areas for continuous improvement. The results showed that course design needs the most attention. Based on this result, the department took several measures to improve the quality of course design. The second survey showed that the improvement was significant, with the score for course design having the greatest improvement.\textsuperscript{24}

\textsuperscript{23} Babar Zaheer Butt and Kashif ur Rehman, \textit{A study examining the students’ satisfaction in higher education} (Bangladesh: Elsevier Ltd, 2010)

\textsuperscript{24} Sheng-Hsun Hsu, Yu-Che Wang, Chao-Jih Cheng, Yu-Fan Chen, “Developing a decomposed alumni satisfaction model for higher education institutions (Chung Hua University, Taiwan, Republic of China)”
The seventh is “A model of graduates' satisfaction and loyalty in tourism higher education: The role of employability”. Done by Sofia Teixeira Eurico, João Albino Matos da Silva and Patrícia Oom do Valle. This study seeks to examine the role of employability in the process of satisfaction and loyalty formation towards higher education institutions (HEI), when considering tourism graduates. It explores how employability has been approached within HEIs and how graduates' satisfaction and loyalty have been assessed in higher education. A structural equation model, including the employability construct, is proposed and validated, and the results confirm that the HEIs' image is strongly influenced by employability. These results might represent a valuable source of information for HEIs in the process of finding the balance between the service provided and the needs of the stakeholders.25

25 Sofia Teixeira Eurico, João Albino Matos da Silva and Patrícia Oom do Valle, “A model of graduates' satisfaction and loyalty in tourism higher education: The role of employability (Polytechnic Institute of Leiria, University of Algarve, Portugal)”