

Open Education Bridging the Gap Inequality of Higher Education opportunity

(Case: E-learning Strategy Indonesian Open Distance Education)

Devi Ayuni¹, Andy Mulyana², Gintaginting

Department Of Management, Faculty Of Economics Universitas Terbuka Indonesia

ABSTRACT: E-learning system through a variety of applications can encourage the realization of the ideals of education to provide equality of opportunity to all society. The essence of open education is to eliminate the limitations to be able to gain access to higher education for the community at large. Success story of online tutorial services of Universitas Terbuka (UT/Open University) is a proof that can demonstrate more efficient delivery of educational achievement. Perceived satisfaction of students to the online tutorial services became evident that the optimal use of technology to bridge the establishment of an optimal learning process so that students can obtain a quality education is not inferior to conventional universities. This condition will be able to change the paradigm of society that the opportunity to obtain higher education which was originally impossible becomes possible, which is easy, comfortable, flexible and affordable.

Keywords: E-learning, Open Education, Tutorial Online, Equality.

I. INTRODUCTION

The rapid growth of internet-based technology/innovation has resulted in many approaches to learning development, manifested in different forms of e-learning. These often supplement or replace traditional methods, enabling students to engage with their learning through various web technologies alongside or instead of face-face delivery (Al-Adwanet, Al, 2013; Shawar and Sarie, 2007). E-learning has been defined according to the context and environment where it operates (Asabera and Enguah, 2012). Universitas Terbuka/UT (Indonesian Open University) in the past 15 years has been trying to optimize *e-learning* through online tutorial that plays an important role in improving the quality of learning process (Budiwati, 2007; Daulay and Zaman, 2012).

Delivering quality learning process for Open University is not easy because Indonesia is a developing country located in Southeast Asia with an area of 1,919,440 square kilometers. As an archipelago country, Indonesia has approximately 17,508 islands with a total population of over 250 million people. Open University has 406.027 students, 68% are female and 32% male (UT's Profile, 2015). To support academics and administration activities, Open University has 38 branch offices and 1 foreign branch office handling overseas student (Saudi Arabia, Taiwan, Hongkong, Malaysia, Singapore etc). As a developing country with geographical conditions consisting of thousands of islands, Indonesia still faces educational equity as a main problem to be solved. Good education institutions, elementary school to higher education, only available in certain cities, especially in big cities. This causes most of the Indonesian people living in remote areas to have little access to education, especially higher education. To overcome these problems, Open University (UT) was established as an institution of higher education in Indonesia that implements a distance and open learning system. Through this system, every Indonesian who has graduated from high school has the opportunity to pursue higher education despite the distance between teachers and students. The term distance implies that learning is not performed face-to-face, but makes use of media, whether printed media or non-printed (audio/video, computer/internet, radio and television broadcasts). Open means there is no limitation as to age, year of graduation, period of study, registration time, and frequency of examinations. The only limitation applied is that Open University students must have graduated from high school.

Under this environment, e-learning system is a breakthrough to provide equitable education that is flexible, open and online to face with a challenge of globalization in education. To enable an optimum learning process, online tutorial is a strategy to make educational delivery more efficient. Online tutorial provide benefits for students as learning more communicative and interactive, that the students receives a reply and feedback directly from tutor. Online tutorials are successful if student participation is high. Several factors affecting the student participation are the ability to use the internet, motivation and time allocation (Juleha, 2005). Reliable information technology is an important basis for supporting adaptive behavioral learning. The essence of tutorial online is sharing, interaction between students and tutors, as well as collaboration between tutors.

II. LITERATURE REVIEW

The Importance of Online Tutorial to Make Delivering Education more Efficient

Tutorial online (Tuton/Online tutorials) held by Open University (UT) is the application of e-learning offered to students to assist the learning process. The use of e-learning can improve students' learning effectiveness, broaden the coverage and improve the teaching and learning process. Online tutorials are internet-based tutorial services or web-based tutorials, and participated by the students through the Internet. Online tutorials provide benefits for students as learning becomes more communicative with interactive design and optimal provision of learning support services.

The success of online tutorials is influenced by three important components: tutors, students, and supporting facilities. A tutor is required to know the techniques and strategies used so that the aspect of interaction runs optimally. To be able to do their job properly, there are four functions to be executed as a tutor, namely: 1) as manager, demonstrating commitment and professionalism. 2) as facilitator, being responsible to provide learning and feedback, as well as to help students developing study skills. 3) as an assessor/evaluator, assessing student assignments. 4) as a mentor, making students to be enthusiastic and actively participating.

The implementation of online tutorials is successful if the activeness level of student participation is high. Several factors that can affect the involvement of students in online tutorials are the ability to use the internet, concern and time allocation (Padmo and Juleha, 2007). The involvement of students in the online tutorials cannot be separated from the role of tutors who encourage students to become active learners through the development of the intensity of the contact, cooperation, communication, and rapid feedback. Online tutorials require reliable IT infrastructure support because of its internet responsive design, where technology is the basis to change online tutorials to be adaptive behavioral learning.

Ever since online tutorials were first offered in 2001, there are still many challenges in improving its quality. Several empirical studies on the effectiveness online tutorials of several study programs at UT, produce a variety of findings in the field, namely: 1) student difficulty to access, 2) low participation because of limited internet facilities, 3) less management of online tutorials by tutors in indicated by the delay in uploading initiation, tutors provide less feedback and are less responsive to the discussion forum, 4) lack of interaction between online tutorials and participants (Fatia et al, 2012, Dewatisari, et al, 2010, Budiwati 2007; Susanti 2007). In the end, these problems can be solved. At this time, the number of students participating in online tutorials increased slightly from 108,942 (2013) to 226,479 (2014). The number of courses increased from 11% (2013) to 52% (2014). The increasing number of students indicates positive sign of service quality offered. Online tutorials provide great benefits for students not only as a means of online-based interactive learning, as well as an alternative to actively participate in the learning process that cannot be fulfilled by face-to-face tutorials which have major limitations in terms of recruiting qualified tutors.

III. RESEARCH METHOD

In order to gain a deeper insight about online tutorial services, it is necessary to investigate the level of satisfaction. Student satisfaction is an important dispositional factors for withdrawal and persistence in distance education (Zeithalm and Bitner, 2000; Saleh et al 2012; Liaw, 2007; Somers, 2005). The population used in this study was online tutorial students in 2015 of semester 1 from 3 schools (School of Economics, School of Teacher Training and Education, School of Social and Politic Science) and post graduate program. This study used nonprobability random sampling (judgmental sampling). Data collection procedure was done by distributing questionnaire in Google Docs from May to June 2015. The number of respondents participated in this study is **536**. Profiles of respondents showed varied backgrounds: in terms of place of living, there are students who live in cities, remote areas or abroad; in terms of age, there are adolescence students (19-21 years old) up to adult students (above 45 years old), in terms of occupation, there are students who work as civil servants, private employees, there are even Indonesian labors who work abroad.

To analyze the level of satisfaction of online tutorial students, this study used Student Satisfaction Index (Customer Satisfaction Index/CSI) and the Importance Performance Analysis (IPA Method).

IV. RESULT

4.1 Student Satisfaction Index on the Implementation of an Online Tutorial

CSI is a method used to determine the level of overall customer satisfaction with an approach that considers the importance degree of variables. CSI was measured by calculating weighting factors, weighted score and calculated satisfaction index using criteria as follows: 0,00-0,34 (not satisfied); 0,35-0,50 (less satisfied); 0,51-0,65 (fairly satisfied), 0,66-0,80 (satisfied) and 0,81-1,00 (very satisfied) (Stratford, 2007; Uluum, 2007). CSI calculation (table 1) shows 10 attributes with 4 types of score (average score of interest, importance weighting factors, average score of performance and weighted score).

Table 1: CSI Calculation

No	Attribute	Average Score Of Interest	Importance Weighting Factors (%)	Average Score Of Performance	Weighted Score
1	Stability And Reliability Of Online Tutorial Application System	4.20	10.04%	3.72	0.37
2	Ease To Use Online Tutorial Application (User-Friendly)	4.11	9.84%	3.59	0.35
3	Quality Of Online Tutorial Material	4.08	9.76%	3.58	0.35
4	Tutorial Video Equipped With Enrichment Material Such As Video, Audio, Or Animation	4.00	9.57%	3.38	0.32
5	Equipped With Discussion Forums	4.29	10.27%	3.86	0.40
6	Equipped With Exercise Questions And Tasks	4.35	10.40%	3.89	0.40
7	Integrated And Self-Practice	4.19	10.04%	3.64	0.37
8	Timeliness Of Tutor In Providing Initiating Material	4.15	9.94%	3.27	0.33
9	Tutor Speed In Giving Feedback	4.08	9.75%	3.06	0.30
10	Ease To Access Online Tutorial	4.34	10.39%	3.79	0.39
Total		41.79	100.00%	35.78	
Weighted Average					3.58
Csi					71.66%

Source: Data processed (2014)

Description:

Formula of Importance weighting factors = average score/Total

Weighted Score 1: $3.72/10.04\% = 0.37$

Customer Satisfaction Index = Weighted Average/Likert Scale (range) = $3.58/5 = 71.66\%$

Based on the results of the calculation, the score of customer satisfaction index obtained for online tutorial for students participating is **71.66%**. Based on this value, it can be said the students were satisfied with UT's performance because it is in the range of **0.61-0.80** which is a range that states that a student has been satisfied. Online tutorials execution with quality attributes most necessitated by the students are tutorials equipped by practice questions and tasks (No.6), the ease of access to online tutorials (No.10) and tutorial completed with a discussion forum (No.5). Based on the value of weighted scores, attributes that contribute to the greatest student satisfaction are tutorials that include discussion forums and practice questions and tasks.

4.2 The Importance Performance Analysis (IPA Method)

The Importance Performance Analysis (IPA) was described using Cartesian diagram, the X axis represents the level of performance and the Y axis represents the level of interest (Figure 1).

- **Quadrant I:** This quadrant depicts areas with levels of performance below expectations of students. Attribute included in Quadrant I is priority for repair. On the implementation of online tutorials, there are no attributes that are located in this quadrant. So there, is no attribute with the level of performance below expectations of students.
- **Quadrant II:** Attributes included in Quadrants II are ideal conditions where high levels of performance are capable of meeting the high level of expectations of students against this attribute. Attributes included in this quadrant are (A1) The stability and reliability of the online tutorial application system, (A5) Equipped with discussion forums, (A6) Equipped with practice questions and tasks, (A7) Integrated with Self-

Exercise, and (A10) Ease of access to online tutorials. These five attributes that have met the high expectations of the students should be maintained and sustained. In addition, it is necessary to find new ways and new innovations in accordance with the changing tastes of students.

- **Quadrant III:** Attributes included in Quadrant III or low priority where performance level is low and less important for students are (A4) Tutoring material including enrichment in the form of video, audio, or animation, (A8) Tutor timeliness in providing materials initiation, and (A9) Tutor speed to provide feedback.
- **Quadrant IV:** Quadrant IV or excessive presents high levels of performance but low expectations of students. Attributes included in this quadrant are (A2) Ease of use online tutorial application (user-friendly) and (A3) the material quality online tutorials. Allocation of resources used in this quadrant attributes should be reduced by allocating the attributes that are on the top priority to be fixed.

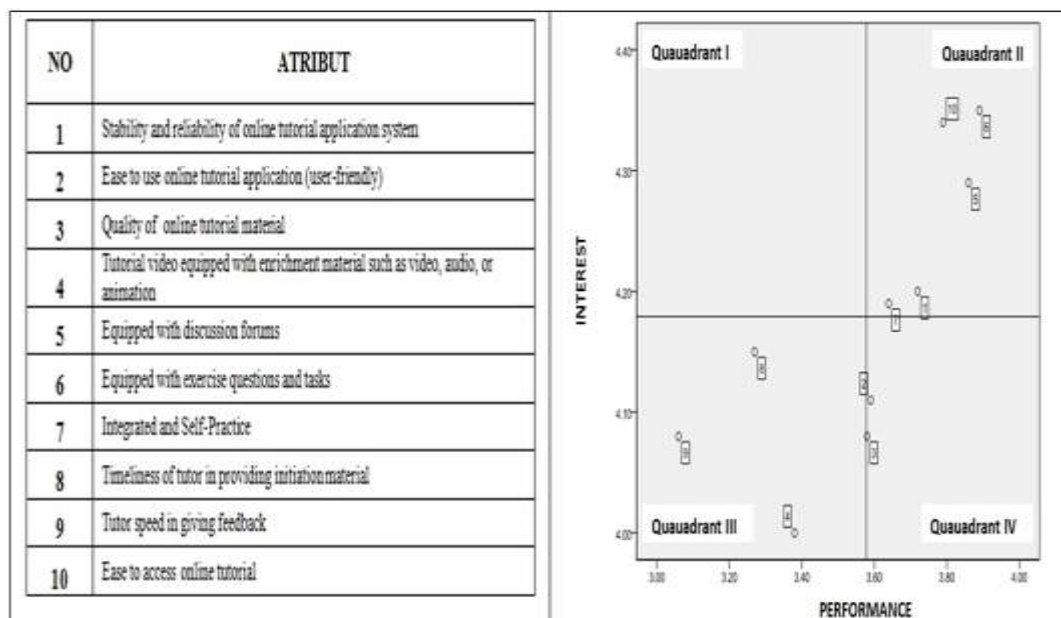


Figure 1: The Importance Performance Analysis

4.3 Summary and Further Research

Online tutorial service performance consisting of 10 attributes has been running well. It can be seen from all service attributes that are in Quadrant II, III and IV of Importance Performance Analysis (IPA) Cartesian diagram. Five attributes are in Quadrant II, which means that high performance is given in accordance with the high expectations of the students. The fifth attribute is the stability and reliability of the application system online tutorials, supplemented with discussion forums, including practice questions and tasks, integrated with Self-Practice, and the ease of access to online tutorials. Furthermore, three attributes are in quadrant III with low performance of service in accordance with the low expectations of students. These three attributes include tutoring material equipped with enrichment materials such as video, audio, or animation, tutor timeliness in providing initiation materials, and tutor speed in giving feedback. The last, Quadrant IV includes two attributes, namely ease to use online tutorial application (user-friendly) and the quality material of online tutorials. In this quadrant, students have low expectations, but the performance of Open University as a tutorial service provider is high enough.

Implementation of an online tutorial has been satisfactorily performed by Open University students. The level of student satisfaction with CSI = 71.66%, that is, based on the criteria of Customer Satisfaction Survey Guide, is at a satisfactory level. When sorted by the level of interest, the satisfactory tutorial attributes are tutorial fitted with a forum for discussion, practice questions and tasks, ease of access to online tutorial, integrated with self-exercise, the stability and reliability of the tutorial application system, ease to use tutorial application, the quality of tutoring material, tutor timeliness in providing initiation material, tutoring material equipped with enrichment, and tutor speed to provide feedback.

Although the performance of UT's performance and student satisfaction with the tutorial services showed satisfactory results, but Open University must keep looking for ways to maintain and improve the services that it provides online tutorials. Ease of tutorial access is an important element of tutorial service. Therefore, Open University needs to continue to refine the use of applications that do not require high bandwidth for bandwidth limitation would complicate access especially in the remote parts of the country.

Additionally, Open University needs to constantly remind tutors to improve the sense of responsibility in carrying out the tutorial activities, such as providing on time material initiation, discussion and assignments, and providing rapid feedback. Satisfactory online tutorials service is expected to have a positive impact on students in the form of loyalty, for example, remain studying at Open University until graduated or want to give a positive recommendation to others to study at UT. Although in general, the level of satisfaction of online tutorial students is high enough, this study found a fact that the quality of tutorial materials and feedbacks are less optimum. Based on this finding, further studied should be developed to investigate the readiness of tutors in preparing material for tutorials and their commitment in providing intensive feedbacks to students.

V. CONCLUSION

It is undeniable that e-learning system as one of distance learning applications can encourage the realization of delivering quality learning process which can be accessed openly by community without being restrained by distance, space, cost and time. The essence of open education is to provide equal opportunity for everyone to be able to access the higher education. Online tutorials are breakthrough strategies in delivering education to be able to support the realization of optimum learning quality. In the future, distance open education will still be an excellent education alternative with competitive advantage than conventional education in terms of openness, affordability, collaboration, and sharing of knowledge, so hopefully there will be acceleration of granting access to higher education expected by developing countries such as Indonesia.

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