

# Implementing Online Course Evaluation Rubric on E-Learning Ecologies: Innovative Approaches to Teaching and Learning for the Digital Age

Anas Putra Pamungkas  
Department of Applied Linguistic  
Yogyakarta State University  
Yogyakarta, Indonesia  
[rayleigh.putra@gmail.com](mailto:rayleigh.putra@gmail.com)

Pratomo Widodo  
Department of Applied Linguistic  
Yogyakarta State University  
Yogyakarta, Indonesia  
[pratomo@uny.ac.id](mailto:pratomo@uny.ac.id)

**Abstract**—This paper is aimed to evaluate a selected online course and to make some adjustment. Thus, the online course can further be developed in better ways. The study is a qualitative research. The data were collected through documentation. The data were then analyzed using a set of evaluation criteria developed by Anstey and Watson (2018). The findings show that the assessed online course is considered as good as the results of evaluation. Hopefully, this study is going to be beneficial for both course developers and learners. For course developers, they are expected to design a good online course and for learners, by looking at the criteria, they can choose a good online course. Better online course will lead to better online education.

**Keywords:** online course, evaluation, education

## I. INTRODUCTION

Information age where people are currently living is heavily related to the advancement of technology. This advancement has impacted many human living aspects i.e. economy, information, socio-cultural, and the like. Moreover, there are also shifting from “traditional” approach to “modern” approach where people heavily invested in technology.

The rapid development of technology has also made an impact on educational setting. When computers were not widespread, the education system mainly relied on classroom setting. Nowadays, the teaching learning process has evolved from classroom-based into computer-mediated learning. In 2000s, a new concept of method in teaching learning process was introduced. It is called as electronic learning or e-learning in short. E-learning is interesting method and become a new trend in teaching learning process especially in higher education. This kind of process is going to be more popular since the internet of things becomes more attractive and interesting to people.

In e-learning, the instructor can provide materials for people who are not able to attend the traditional classroom activity due to some reasons [5], such as being busy, located in different places, limited time to participate in traditional setting and the like. Interaction among participants in e-learning setting can be done through two ways: synchronous and asynchronous. Synchronous and Asynchronous is differentiated through how the learners interact with other learners and lecturers/instructors. Both synchronous and asynchronous can be utilized to create an online course.

Nowadays, some websites such as coursera.org, edx.com, and so on are hosting online courses developed by many global universities, mainly in US and Europe. Those online courses are developed and used to provide people chance to learn new knowledge or skills according to people needs. Online courses should be improved. The improvement of online courses can be done by evaluating the course. There are many frameworks to evaluate online course. However, in this paper, a framework developed by Anstey and Watson in 2018 [3]. This framework was developed by extracting and combining findings from researchers. This study is aimed to evaluate an online course entitled e-learning ecologies: Innovative Approaches to Teaching and Learning for the Digital Age.

## II. REVIEW OF LITERATURE

### A. E-learning

The rapid technology development and the existence of internet has created both teachers/instructors and learner/students ways to share and to retrieve information. Furthermore, the advanced technology provides its users to develop learning materials, to teach students, and others.

E-learning is a new method in teaching-learning process. Some definitions of e-learning are explained as follows. According to Abbad et al [1], e-learning is any learning that can be electronically enabled. Then, Liu and Wang (2009) however argue that e-learning is a transformation of distance learning due to the advancement of communication technologies, including internet. Welsh et al. (2003) defines e-learning as providing instruction and explanations to students through the electronic devices. E-learning is a distance learning which is through the advancement of communication technologies, including internet.

### B. Type

Algahtani [2] defines e-learning is classified into two major types: computer-based and internet-based e-learning. The computer-based e-learning use a range of hardware and software. This type of e-learning can be further broken down into two part: computer managed e-learning and computer-assisted e-learning. The internet based e-learning is the evolution of computer-based e-learning. The internet-based e-learning can be classified into synchronous and asynchronous. The main difference between two types is

how the interaction between instructors/teachers and learners/students occurs.

Ghirardini [5] states that e-learning is divided into two categories: synchronous and asynchronous. Synchronous learning means that the teaching learning process is taken place in a real time, while asynchronous time-independent, according to the students/course takers. Bernard et al [4] finds out that both asynchronous and synchronous have their own positive traits. The strengths of asynchronous e-learning are asynchronous e-learning has better effect on education than synchronous one and it has some flexibility in relation to learning place, and schedule. On the other hand, synchronous e-learning has advantages on higher level of retention rate and lower rate of drop out. They even point out that the quality of instructional materials is important in e-learning. In relation to synchronous and asynchronous learning, Hrastinski [6] concludes that synchronous learning support personal participation such as motivation and asynchronous provides better achievement on cognitive participation. Synchronous and asynchronous e-learning that both types of internet-based e-learning provide some benefits for education. However, asynchronous e-learning tend to provide better cognitive advancement than synchronous one. On the other hand, the quick respond or classroom-like situation in synchronous e-learning may provide a boost for learners' personal traits.

#### C. Use

The advancement of the information technologies shifts how teaching-learning process is conducted. In many colleges, universities, and other educational institutions take e-learning as a new approach in conducting courses. The impact of the decision is the many online courses are available from many educational institutions. Algahtani [2] states the adoption of e-learning is divided into three models: adjunct, blended learning, and online. Adjunct e-learning means that e-learning is employed as an assistant in classroom. In Blended e-learning, the teaching learning process occurs in a mix between traditional and e-learning method. Online e-learning means that teaching learning process occurs without any traditional method and it totally relies on e-learning method.

#### D. Evaluation

Developing e-learning system, including an online course, the developer can exclude the evaluation process. This process is important. Thompson [7] states that the general purpose of evaluation being conducted is to answer stakeholders' questions. For teaching learning purpose, evaluation is employed to address several issues. First, evaluation is to measure the course progress to achieve predefined objectives. Second, it serves as a basis to ensure quality and or effectiveness of the course online. Third, evaluation is used as a basis of improvement. By evaluating an online course, the problems and lacks of online course are identified. Thus, problems and lacks can be addressed and fixed. Another reason of conducting evaluation is to help instructors in selecting best online courses to augment their learners or to help people in choosing the best online courses.

This study is going to use e-learning tool evaluation rubric developed by Anstey and Watson [3]. This rubric

covers functionality, accessibility, technical, mobile design, personal information and intellectual property (IP), social presence, cognitive presence aspects of e-learning. Functionality refers to how tools operations and quality of the course/e-learning achieve the intended purposes. Accessibility is defined as flexibility of the course to accommodate multiple learning approaches to engage all kinds of students. Technical refers to the basic technologies to minimally operate the course. Mobile design means that the course can be accessed through mobile platform. Privacy, data protection and rights consider the risks entailing the online course. It is related to personal information and intellectual property. The social presence category focuses on environment that encourages collaboration, teamwork among learners. Cognitive presence refers to the ability of the course to support learner's engagement in cognitive task.

### III. METHOD

This paper belongs to qualitative research. The data were collected through documentation. It is because the data were in the form of multimedia and it is accessible for people who already sign up in that online courses. The data analysis was conducted by employing rubric for e-learning tool evaluation. The application of this rubric is because rubric provides simple yet meaningful evaluation. This rubric is freely available under a creative commons attribution-Non Commercial-Share Alike 4.0 International License.

### IV. RESULTS AND DISCUSSION

#### A. Result of the Research

TABLE 1. RESULT OF RESEARCH

Category	Criteria	Assessment
Functionality	Scale	Well
	Ease of Use	Well
	Tech Support	Well
	Hyper-medially	Limited
Accessibility	Accessibility standards	Well
	User-focused participation	Limited
	Required equipment	Well
	Cost of use	Limited
Technical	Integration within a Learning Management System	Well
	Desktop / Laptop Operating System	Well
	Browser	Well
	Additional Download	Well
Mobile Design	Access	Well
	Functionality	Well
	Offline Access	Limited
Privacy, Data Protection and Rights	Sign Up / Sign In	Limited
	Archiving, Saving and Exporting Data	Limited
Social Presence	Collaboration	Well
	User Accountability	Limited
	Diffusion	Well
Cognitive Presence	Enhancement of Cognitive Task	Well
	Higher Order Thinking	Well
	Metacognitive Engagement	Well

Table 1 shows that there are seven aspects being evaluated in this paper. Those aspects are functionality, accessibility, technical issues on how the online course is accessed and integrated into a system, mobile design of the online course if it is being accessed through mobile, privacy, data protection, and learners' right in this course, social presence where learners can provide feedback, have discussions with each other within the course, and cognitive presence. The following paragraphs will be describing each categories and criteria being evaluated.

The first category, functionality, consists of four criteria. First, scale of the online course varies from small scale to gigantic scale. As on July 15, 2019, 10.200 enrolls in the online course. Second, the interface of the online course is easy to use. It contributes to usability or user-friendliness. Third, the online course is fully supported by website support. The learners can use FAQ section. In the criterion of hypermediality, there is minor issue related to commitment between instructors and learners.

The second category, accessibility, is made up of four aspects. The first aspect is accessibility standard. The standard needs to adhere Web Content Accessibility Guidelines. In second criterion, user-focused participation, the online course is basically opened for people. However, it is recommended for people interested in the future of education and learning society. To access the course, learners are not required to buy additional software and hardware and use available equipment such as computer, mobile platform, and others. In terms of cost, the course is free for limited access. However, if learner want to have a full access, they can pay \$49.

The third category, technical, is dealing with three criteria. In this category, technology employed in this course is up to date. It means that the course goes well with LMS/Learning Management System. Second and last criteria are closely related to operating system and browser of the platform.

The fourth category, mobile design, is divided into three criteria. Mobile design refers to how well performance of the course being accessed through mobile platform. The functionality of mobile design is simply the same as the desktop. The offline access of the course is limited as it can be accessed in offline mode, but the core of functionality and content are affected. However, learners can download the materials.

The fifth category, privacy, data protection, and rights, as the name suggests, cover two aspects. The first aspect under scrutiny is requirement to sign learners' account in particular course providers. That is because the privacy and intellectual property of the course are prone to be used by third party.

The sixth category, social presence, is made up of three criteria. The first criterion is collaboration. The course provides collaboration among learners as the course provides a forum to share discussion. The second criterion is user accountability. The accountability of users is limited as instructors can act as the moderators. User accountability also support social presence and student assessment. The course is easy to use because it is quite popular.

The last category, cognitive presence consists of three criteria. The course enhances learners' engagement as it transforms learning process to be more engaged in learning.

Next criterion is higher order thinking. The course encourages learners to improve their analytic capability to solve complex problems. The last criterion being evaluated is meta-cognitive engagement. The course promotes learners to be autonomous person as they should be aware and should improve through self-regulated learning.

## *B. Discussion*

There are seven categories that were evaluated in this paper. In first category, functionality of the course is considered as good. It can be seen from scale, ease of use, tech support criteria are marked well. The marks mean that three criteria are maximally developed. On the other hand, there is one limited aspect. It is because communication channels are not fully supported. There is a lack of visual interaction among instructors and learners. It can be addressed through increasing the supports of functional engagement among instructors and learners. The second category receives mixed responses. Two criteria receive "good" marks as there are no limitation and problems when accessing the course. However, there are two minor concerns related to user-focused and cost. User-focused participant receives least good as instructors recommend projected learners to be interested in future education. Learners are required to pay if learners want to get certificate. The third category, technical, receives good mark. This is because the course is built in up to date system. Thus, learners have no difficulty in accessing the course. The course regarding to this category can be considered as good. The course should be improved over time so that learners enjoy to learn. The fourth category, mobile design is considered as good. Two criteria are classified as good because they provide the same experience with desktop for both accessibility and functionality. However, the course provides limited offline access. This is because the core of functionality of the course is affected. The fifth category receives average marks or limited marks. It means that the developers or online course providers should pay attention to privacy and intellectual property. Although online course is different with traditional course, the course is encouraging social interaction among learners. The instructors also act as moderators, so that they can also maintain and monitor the discussion among learners. In this category, the developers do a good job so that learners can enjoy socializing. The last category is considered as good. It is because learners are forced to and trained to perform higher order thinking and reflective thinking.

## V. CONCLUSION

According to the results and discussion above, it can be concluded that e-Learning Ecologies: Innovative Approaches to Teaching and Learning for the Digital Age course is considered as a good online course as a result of evaluation rubric. The rubric is also useful to assess other online courses as it provides a complete framework that make evaluators ease of evaluating online courses. The findings of this paper are beneficial for developers and learners to achieve each stakeholder objectives.

## REFERENCES

- [1] Abbad, M. M., Morris, D., & de Nahlik, C. 2009. Looking under the Bonnet: Factors Affecting Student Adoption of E-Learning Systems in Jordan. *The International Review of Research in Open and Distance Learning*.
- [2] Algahtani, A.F. 2011. Evaluating the Effectiveness of the E-learning Experience in Some Universities in Saudi Arabia from Male Students' Perceptions, Durham theses, Durham University.
- [3] Anstey, L. and Watson, G. 2018. A Rubric for Evaluating E-Learning Tools in Higher Education. <https://er.educause.edu/articles/2018/9/a-rubric-for-evaluating-e-learning-toolsin-higher-education>. Accessed on July 12, 2019.
- [4] Bernard, R. M., Abram, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L. et al (2004). How does distance education compare with classroom instruction? A metaanalysis of the empirical literature. *Review of Educational Research*, 74, 379–439.
- [5] Ghirardini, B. 2011. *E-Learning Methodologies: A Guide for Designing and Developing ELearning Courses*. FAO: Rome
- [6] Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *EDUCAUSE Quarterly*, 31, 4, 51–55.
- [7] Thompson, M., M. 2004. Evaluating Online Courses and Programs. *Journal of Computing in Higher Education*, 15(2): 63-84.