

# Critical Success Factors of E-Learning in Higher Education Using Social Media

Lola Yorita Astri<sup>1</sup>, Brestina Gultom<sup>2</sup>, Setiawan Assegaff<sup>3</sup>

STIKOM Dinamika Bangsa Jambi, Jl. Jendral Soedirman, Jambi 36133, Indonesia

<sup>1</sup>astri0206@gmail.com, <sup>2</sup>brestinagultom0905@gmail.com, <sup>3</sup>setiawan@stikom-db.ac.id

**Abstract** - The aim of this study is to identify the critical success factors that impact the using of social media as e-learning tools. We conduct a literature review study to identify the factors by collecting fifteen papers from reputable database journal such as emerald, educause, Science Direct, and Google Scholar. We are using “e-learning in higher education using social media” as a keyword. After we reviewed and analyzed the abstract of each paper, we selected fifteen papers that are related with our topic. We found that Collaborative, Interaction, Sharing, easy access to information, Cost reducing, Discussion, Efficiency, Transparency, and Interactivity as critical success factors impact the use of social media in e-learning. Further research can be conducted to validate our finding by developing an instrument and take a survey in higher education in Indonesia.

Index Terms - CSF, e-learning, social media

## 1. Introduction

Nowadays social media have become famous tool in most every aspect in internet base activities. One of the internet activities influenced by social media is e-learning. Previous studies have identified social media gives many opportunities to enhance the performance of e-learning. Web 2.0 social media provide features such as collaborative tools and shareable content.

Features of social media to enhance e-learning performance are an opportunity for higher education institution to develop more effective and efficient strategy implementation of e-learning in their institution.

Although social media bring values to e-learning, in fact many e-learning implementations in higher education were not fully successful in achieving their mission. This is because higher institution management still has low understanding on how social media should be implemented in e-learning.

In this study, we would like to investigate the factor associated with successful of social media implementation in e-learning. By conducting literature review to the previous research in relevant topics, we successfully identified the factor that influences successful implementation of social media in e-learning.

This article is divided into five sections. Next section will discuss about study and theory that are relevant with our topic. The third section describes methods we used in this study. Results and analysis will be provided in forth section. The last section will discuss our conclusion of this study.

## 2. Literature Review

### 2.1 E-learning

E-learning is also recognized as internet base learning or web-base learning, online learning, and distributed learning. Nowadays, there are two famous e-learning approaches: distance learning and computer assisted instruction. Distance learning is a learning approach that provides students in the remote area, so they can access e-learning materials or join courses by using information technology. Computer assisted instruction gives opportunity to students to access multimedia packages for e-learning and teaching in standalone computer. The forerunner of e-learning is multimedia learning that use two or more media such as text, video, or audio. The purpose of multimedia learning is to create content that can be accessed on computer [1]. E-learning can also be used as a part of blended learning which combines conventional learning and e-learning.

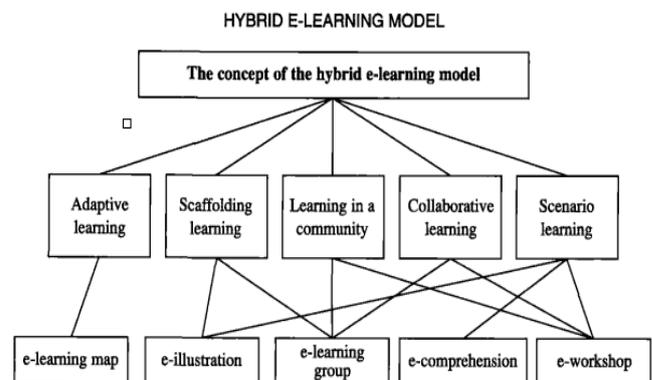


Fig. 1 The conceptual design of the hybrid e-learning model.

Another definition of e-learning stated by Sun, et al. is a tool to deliver information or knowledge without limitation of time and place supported by web-base system. So, e-learning applies electronic media to provide information and knowledge that can be accessed by educators and participants, anytime and anywhere.

XML based description language has been used to develop e-learning because its feature can be used to create contents of e-learning and combine multimedia modules. [2]. The latest technology which enhances e-learning is web 2.0. This technology enables students and teachers to share files, discuss and social bookmark to elaborate topics of their

study [3]. Yun, et al. also discuss e-learning and implement it as hybrid learning [4]. This learning provides collaborative learning in many environments as described in Fig. 1.

## 2.2 Social media

In general, social media are defined as mechanism on how people related each other and organization context how members of organization is connected each other to achieve the missions of their organization [5]. In his article, Bryan Alexander mentions that nowadays as an internet era. Social media has growing to the advanced concept of Alexander [6] which defines social media today as the use of information technology to connect people to people and to provide information and knowledge so they can learn each other. Another article said that social media is a technology for global community to share and publish their opinion about any issues by using internet. There are many platforms that support the implementation of social media, such as: facebook at the top, MySpace, YouTube and Tweeter [7].

The common technology using in social media tools such as Usenet groups, discussion software, groupware and web-based communities.

Categories of social media applications:

- a. Project's collaborative: In this category, user can create, add, remove and change knowledge between other users in remote area. Other users can also correct any contents which have not suitable with references. [8]
- b. Content communities: by using social media, user can create groups with others who have similar interest. In this group all members can share photos, songs, videos and other files related with their interest.

## 3. Methodology

This study is a literature review. The research finding is based on review and analysis from relevant articles in e-learning and social media topics. We collect articles from reputable database journal such as Emerald, Educause, Science Direct, and Google Scholar. We use "e-learning in higher education using social media" as a keyword. We limited the article only for ten years back. We found twenty papers, and did some review to the article abstract. Finally, we selected fifteen relevant papers to be reviewed and analyzed. The analysis result was present in Section 2, 3, 4 and 5. This study also discuss about why social media is used in e-learning in higher education.

## 4. Discussion

The previous research has been conducted and successfully identifies factors on why higher education using social media to deliver learning contents on their e-learning implementation. Table 1 describes researchers that have been investigating the using of social media in e-learning.

Table 1 Studies on social media and e-learning

No	Authors	Topic of study
1	Gabriela Grosseck (2009)	How to integrated web 2.0 with education and the way teachers teach their students (new type of pedagogy)
2	Christian Safran, et al. (2004)	Developing of technology of web 2.0 and the impact of web 2.0 for education
3	Bruno Poelhuber, et al. (2011)	Social media is a tool to connect informal and formal education
4	Baiyun Chen, et al. (2012)	To investigate how distance learners know about social media as a tool for informal learning or collaboration peers.
5	Christine C. Cheston et al. (2013)	How social media gives good influences for physicians and physician in-training
6	Catherine McLoughlin, et al. (2007)	Web 2.0 as a choice for collaboration and discussion for pedagogical
7	D. Randy Garrison, et al. (2004)	Blended learning: combination of conventional learning and e-learning

The study of Grosseck found that the use of web 2.0 in e-learning could help students and teachers engage collaboration among participants. This finding along with the research by Poelhuber, et al. stated that social media helps students to enhance their collaboration [9-14]. Furthermore e-learning gives institution opportunity to reduce operation cost such as minimize face-to-face between students and teachers [9] and decrease marketing budget of the institution by using social media to promote their school to society [11]. Grosseck also informs us example of some applications developed under web 2.0 as such blogging, micro blogging, wikis, social bookmarking, and social networking [9].

Research related with social media and e-learning in the medical institution was conducted by Cheston, et al. They discussed how social media give positive impact and encourage interaction among doctors in-training and workshop session [11,12,15].

Another interesting research by Safran, et al. reveals that social media and e-learning also give impact on the blended learning. The use of social media as synchronous mechanism students could create community and develop intensive dialog and enhance their ability to exchange from various sources between their members [10].

Table 2 shows us why people decide to use social media in e-learning. Previous studies identify that collaboration feature is the most popular feature in why people choosing social media for e-learning. Another feature is interaction feature. These features are famous because people believe leverage the information.

Table 2 CSF factors that influence people using social media in e-learning

Authors	A	B	C	D	E	F	G	H	I
1	V	V	V	V	V				
2		V	V	V		V			
3	V	V	V			V	V		
4		V		V		V			
5								V	
6		V							V
7		V				V			V
<b>Number of factors</b>	2	6	3	3	1	4	1	1	2

CSF Factors

- A. Cost reducing
- B. Collaborative
- C. Sharing
- D. Easy to access information (knowledge)
- E. Efficient
- F. Interaction
- G. Transparency
- H. Interactivity
- I. Discussion

5. Conclusion

We found that Collaborative, Interaction, Sharing, easy access to information, Cost reducing, Discussion, Efficiency, Transparency, and interactivity as CSF impact the using of social media in e-learning. Further research can be conducted to validate our finding by developing an instrument and take a survey in Indonesia higher education.

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