A Management Framework for
Implementing Social Media in Higher Education

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Abstract: Currently, social media is very popular in young society both in developed countries and developing countries. Not only among students, among faculty members also always use social media in their daily lives, especially to communicate with others. Social media has also been proven to have a positive impact in supporting the improvement of the quality of activities in higher education, especially those related to learning activities, social research, and human resource development. In order to successfully use social media, higher education needs to build a management framework systematically through the stages of understanding, preparation, implementation, and evaluation. These steps need to be undertaken integrally by higher education leaders to support this framework with their policies and facilities. In addition, the participation of all elements of the system is also needed to realize the program use of social media to achieve the planned goals in each program optimally. Furthermore, these stages were described in this paper.

Keywords: Social media; higher education; preparation; implementation; evaluation

1. Introduction

The whole community of the world almost cannot be separated from the use of social media in the life of their days (Dunbar, 2016; Kuss & Griffiths, 2011; Sawyer & Chen, 2012). This media is not only used to communicate between one another but also used for media development in various fields of academic and science (Kümpel,

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Karnowski & Keyling, 2015; Moll & Nielsen, 2017; Raza, Soroya & Zia-Ur-Rehman, 2016; Sawyer & Chen, 2012; Tella, 2014). This is not only popular for business media (Dzyaloshinsky & Pilgun, 2015; Franses, 2015; Grizane & Jurgelane, 2017; Hansen & Levin, 2016; Humphreys & Wilken, 2015; Knoll, 2016; Meredith & O'Donnell, 2011), but it is also commonly used in the field of learning and research in higher education in the world (Clark, Fine & Scheuer, 2016; Kaplan & Haenlein, 2016; McNeill, 2012; Peruta & Shields, 2016; Smith, 2016; Rasiah, 2014; van Zoonen & van der Meer, 2016).

Much of the evidence of the successful use of social media was mentioned by many researchers in the world. Balakrishnan and Gan (2016) stated that social media can support independent learning from students. Lau (2017) mentioned that social media affect the increase of student's adjustment more quickly to study culture in the higher educational environment. Finally, this condition provides an increase in the achievement of student learning in there (Al-Rahmi & Zeki, 2017; Blaschke, 2014; Gan, Menkhoff & Smith, 2015; Khan, Kend, & Robertson, 2016; Kind & Evans, 2015; Megele, 2015). In addition, social media is also used for social research that is able to respond quickly (Chromey, Duchsherer, Pruett & Vareberg, 2016; Edwards,Housley, Williams, Sloan & Williams, 2013; Kümpel, Karnowski & Keyling, 2015; Rauniar, Rawski, Johnson & Yang, 2013). Faculty members of the social field in the higher education will be able to do development in the field of social in accordance with the needs of the community. All this will have an impact on improving the innovative culture of college society up to date.

For the higher educational community that has understood the use of social media in college is easy. However, higher education societies who do not yet understand the application of social media in their college, this becomes a difficult thing. If this is only understood by individuals, then its implementation will not be maximized. Here needs a commitment of the whole community of colleges from the leadership level to the administrative staff. They need to understand management to implement social media systematically and integrated into higher education. Here is not only the commitment of leaders in the form of motivation but the support of policies and funding to realize and develop the use of social media is very important necessary.

Furthermore, for the purpose of maximizing the social media application on higher education, the author creates a management framework to implement social media in a systematic and integrated. The stages of this framework explain about understanding, planning, implementation, and evaluation to use social media in higher education. The definitions and benefits of social media will also be described

in this paper. This insight understanding is expected to provide a deeper discourse for the college community who have a desire to use social media to enhance learning, improve social research, and develop human resources more quickly and up to date according to national, international, and global education needs.

2. Definition of Social Media

Social media is defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content" (Kaplan & Hainlein, 2010). In social presence theory, Lee (2016) defined the concept of social media as audial, visual and physical contact between two related and communicated actors through which they can mutually influence and impact. In other words, social media depends on a group of internet-based applications such as Web 2.0, but it should be developed and managed with respect to its social dimensions.

Ozkan-Canbolat and Beraha (2016) explained that social media is related to mobile and web-based technologies that individuals and communities use to share, co-create, discuss, and modify user-generated content. They introduce common, substantial and widespread changes to communication between groups of organizations as well as organizations and individuals (Kietzmann, Hermkens, McCarthy & Silvestre, 2011). Social media activities occur in a dialogic transmission system (i.e., many sources to many receivers). This is in contrast to traditional media that operates under a monologic transmission model (one source for many receivers) (Pavlik & MacIntoch, 2015).

Furthermore, Robbins and Singer (2014) described that social media refers to any technology that facilitates the dissemination and sharing of information over the Internet. Social media can be used for sharing long-form writing or blogging, such as WordPress, Tumblr, or Blogger; short-form writing or microblogging, such as texting, Facebook, Twitter, and Google Plus; images, such as Snapchat, Pinterest, and Instagram; videos, such as Vine and YouTube; and audio programs or podcasts, such as iTunes and Stitcher. Social media also includes synchronous communication tools, such as Skype, Google Hangouts, and Second Life. A growing number of social network platforms target academic professionals, such as LinkedIn, ResearchGate, Academia.edu, and Vitae.

Based on the above explanation, the definition of social media is a technology that facilitates the dissemination and sharing of information through the internet. This media can be accessed wherever and whenever place by using the computer and or mobile phone. The forms of social media commonly used among faculty members and students are Facebook, Twitter, WordPress, Blogger, Instagram, YouTube, Skype, or LinkedIn.

3. Benefits of Social Media in Higher Education

Social media consists of computer-mediated tools that people make to create, share or exchange information, ideas, social survey, and pictures and videos easily and quickly (Ozkan-Canbolat & Beraha, 2016). People not only reach these virtual communities and networks without difficulty and effort, but they can also reach them whenever they want. Social media enables higher educational leaders to talk to their faculty members or students and enables faculty members or students to talk directly to one another. Although social media is accepted as a hybrid element of the promotion mix, the content, timing, and frequency of the social media-based conversations between users are beyond leaders' direct control. Thus, leaders should use methods such as providing users with networking platforms and using blogs, social media tools, and learning tools to engage faculty members and students (Mangold & Faulds, 2009).

The advancement of social media over the past decade has also changed the way people search for and share education information. The amount of information available on the Internet has increased tremendously since social media enables faculty users to have more control over the information they seek and how they view it (Booth & Matic, 2011; Campbell, Pitt, Parent & Berthon, 2011; Mirchevska & Markova, 2011). In previous times, education relied heavily on traditional approaches to the teaching and learning in the classroom. Today, the faculty members can directly communicate with their students in real time through various social media platforms to facilitate teaching and learning at the same time they can evaluate and improve the effectiveness of their teaching and learning strategies more efficiently as students actively provide feedback (Ozuem, Howell & Lancaster, 2008).

In recent years, Agozzino (2014) explained that social media tools such as Facebook, Twitter, YouTube, and blogs have rocked the higher education world. No longer is just being present on these mediums enough. Integration of social media tools into

daily practices through monitoring, teaching, and collaboration allows those in higher education to build and maintain relationships with key publics. From devising social media goals and objectives to monitoring channels and evaluating efforts, social media can be integrated into the higher education arena.

According to Reid and Prudchenko (2014), the relevance social media in society is an environment where communication is instant, connectivity is expected, and digital identities and relationships mimic real world actualizations. As an impact result, more and more faculty members and higher educational institutions are integrating social media with academics in the hopes that doing so will relate to students and keep them engaged in learning.

Altomonte, Logan, Feisst, Rutherford and Wilson (2016) mentioned that social media implementation can contribute to enhance information and communication technology pedagogies substantially to the agenda of sustainability in higher education, primarily due to their affordance of interactive communication and contextualization of knowledge while guaranteeing flexible time and pace of learning. Social media is fast becoming the most effective approach to boost learning awareness, understand their students, receive feedback, as well as direct traffic to a university's website (Mirchevska & Markova, 2011).

In summary, benefits of social media in higher education are to create, share or exchange information, ideas, and social survey quickly through various social media platforms to facilitate teaching and learning, social research, and manpower development. It also gives data related to evaluate and improve the effectiveness of activities' strategies in higher education more efficiently from its users' feedback.

4. The Management Framework for Implementing Social Media in Higher Education

Higher educational institutions that have a desire to implement social media in college society activities need to understand the management of the application of social media as a whole. From the beginning of the program, all higher education society needs to be involved in the process of adopting social media in each department activities. In this paper, the management framework for implementing social media in higher education consists of four stages of the process. They are the process of understanding social media by the whole community of higher education, preparation for the implementation of social media to facilitate learning and learning

activities, social research, and human resource development, implementation of social media implementation, and evaluation of social media usage by higher education leaders (See Figure 1).
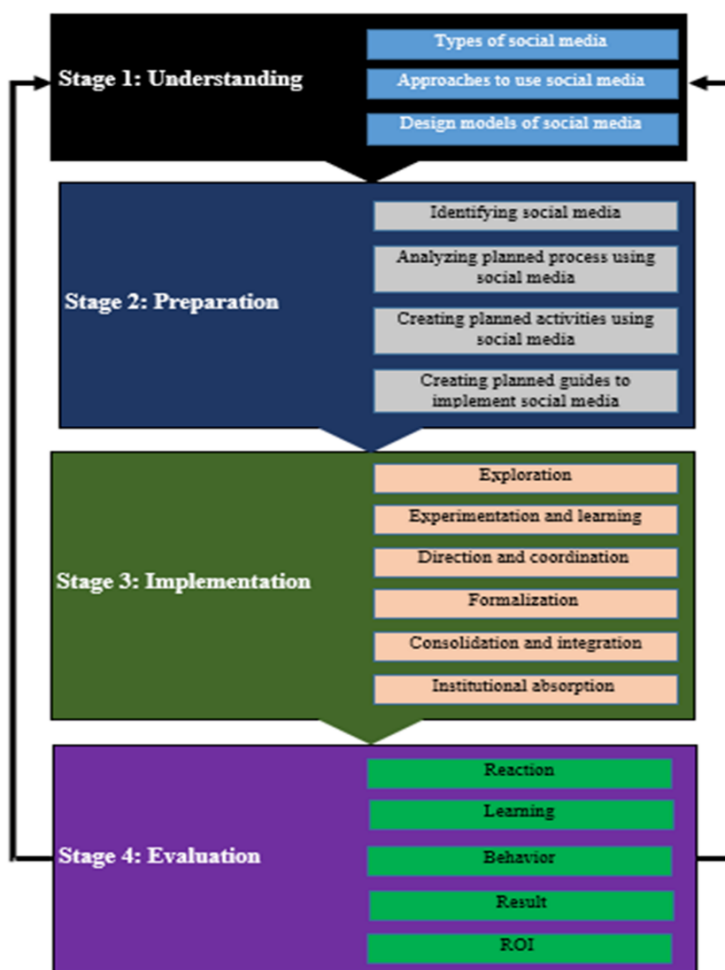
Figure 1. The Management framework for implementing social media in higher education

In Figure 1 shows a management system for the application of social media in circulation ranging from understanding, preparation, implementation, and evaluation. Evaluation will be used to understand social media use in first stage, second stage, third stage, and the last stage. These four stages should work in a

hierarchical cycle. Furthermore, the explanation of cyclical stages for implementing social media in higher education is as below.

4.1. Stage 1: Understanding Social Media

The first stage that needs to be done to implement social media in college is the understanding of social media itself. This understanding includes an understanding of the types of social media, approaches to using social media, and models of social media design. The explanation is as follows.

Types of social media

Social media types that can be used focused on the needs of faculty members and students. According to Cann, Dimitriou, and Hooley (2011) and Ozkan-Canbolat and Beraha (2016), they mentioned that social media types to fulfill their learning needs are social networking services (e.g. Facebook, LinkedIn, and Friendfeed), researcher-specific social networking services (e.g. ResearchGate, Graduate Junction, and Nature Network), social bookmarking (e.g. delicious, diigo, and BibSonomy), social citation-sharing (e.g. CiteULike, Mendeley, EndNote, and Zotero), blogging (e.g. Blogger, Wordpress, and Posterous), and microblogging (e.g. Twitter, Tumblr, and Plurk). While Tadros (2015) explained that concrete examples of using social media tools that might be more engaging to students are Wikipedia, Twitter, Mapping and Data Visualization, Digital Storytelling, and Second Life.

Approaches to use social media

Social media networking sites have profoundly changed not only methods of learning and accessing information but also have had far-reaching impacts on both culture and society. If one is to make any student progress in higher education, leaders and faculty members have to take those changes into consideration. Several social media approaches that can be considered are faculty members must not only react to new trends and their social impacts but must also develop new ways of teaching and construct new pedagogies. Tadros (2015) stated that to meet the challenges the next generation pose and the changing nature of the educational and learning landscape, higher education leaders and faculty members should imperative to critical shifts in thinking about education methods and pedagogy. Adaptability is key to this process. Beside it, there also need to embrace the new technology and channel it into a constructive pedagogy in higher education (Anderson, 2010).

Design models of social media

Design models of social media can be classified becoming three groups. They are personal behavior, social behavior, and mass communication (Ngai, Moon, Lam, Chin & Tao, 2015). Personal behavior focuses on explaining the behavior of individuals displayed in response to certain internal and external stimuli. The personal factors that can be utilized to evaluate, motivate, and manage user behavior in social media. Social behavior is the frameworks of empirical evidence used to study and interpret social phenomena. The social factors can be used in developing strategies to foster the necessary environments for building and maintaining social communities. Meanwhile, mass communication is concerned with the effects of mass communication on the activities of individuals in social communities. This can assist in the use of social media for communication and information sharing.

4.2. Stage 2: Preparation of Social Media in Higher education

The second stage to implement social media in higher education is preparation. This stage is very important because social media readiness has a positive, indirect effect on attitudes toward interaction in social media (Ada, Stansfield, & Baxter, 2017). Moreover, the effect is mediated through ease of use and usefulness (Olsen & Andreassen, 2014). This activity should be support by higher education leaders in the form of motivation and funds. Stages in this stage includes identifying social media, analyzing planned process using social media, creating planned activities and planned guides using media social. The explanation is as below.

Identifying social media

Major social media sites are popular venues for publishing rich and diverse information about a variety of real-world events. Unfortunately, this meaningful user-contributed information is sometimes not readily available in the structured form and unclear what social media content refers to which references. Social media planner should identify how they can exploit rich features of the social media documents, as well as reveal temporal patterns of the relevant content, to identify event content effectively (Psallidas, Becker, Naaman & Gravano, 2013).

Analyzing planned process using social media

Social media applications enable the collective creation and sharing of digital artifacts. The use of these tools inherently creates network data. These networks

represent the connections between content creators as they view, reply, annotate or explicitly link to one another's content. All social media tools create digital records of social relationships. Almost all actions in a social media system leave a trace between users and other users or users and objects. So the analysis of social media planning should include process on a document content, content storage, content analysis, content visualization, and content publication.

Creating planned activities using media social

Higher education leaders can plan activities in their institution by using social media for learning activities between lecturers and students, improving social research with survey methods, and developing the quality of college services with networking technology. This planning needs to be designed by each department and division in higher education. The goal is to give information and data more quickly to higher education communities in accordance with the development of science and technology in the global market.

Planned guides using media social

The steps to planning systematically guides using media social are determining objectives, instructional strategy, social media selection, and evaluation. Objectives are undertaken with writing measurable learning objectives that describe the expected skill, knowledge or attitude and the context for assessing the skill, knowledge or attitude (Conley & Sabo, 2015). Instructional strategy is planned through instructional strategies and activities that provide opportunities for content creation and social interaction. Providing opportunities for creating and interaction are supported by constructionism and constructivism, respectively. Social media selection is carried out with a social media tool with affordances that align with the objectives and instructional strategy. While evaluation is conducted by the planner on the outcomes of the content creation and social interaction as defined by the objectives.

4.3. Stage 3: Implementing Social Media in Higher education

Currently, social media implementation for educational purposes in higher education is rapidly expanding. Aymerich-Franch and Fedele (2014) indicated that media social supports classroom work and video calling or online chats to meet for work discussion. Two-hundred-forty-four undergraduate students completed a survey and four focus groups were carried out. The results reveal that although students

generally accept using social media in the instructional arena, privacy concerns can easily emerge. Educational institutions are encouraged to take these concerns seriously. Using applications specifically created for learning purposes and developing some guidelines for a correct implementation of these resources for the faculty to follow might contribute to alleviate these concerns.

According to Peres and Mesquita (2015), stages of social media adoption consist of six processes including exploration, experimentation and learning, direction and coordination, formalization, consolidation and integration, and institutional absorption. The detail explanation is as follows.

Step 1: Exploration

Strategy to explore social media can be carried out through individuals experiment with social media application for use teaching and learning, social research, and human resources in higher education. Clarity of Return on Investment (ROI) may be required prior to the adoption of social media. Beside it, dominant problem can happened in this step including lack of time, lack of skills and expertise, lack of clear metrics for ROI, lack of budget, lack of understanding, and lack of staff. In this step, managers and users need to focus on personal use initially, and later on researching use in a business context.

Step 2: Experimentation and learning

In this step, the strategy of social media adoption is experimental with every department in higher education doing their own thing. There little management involvement. Several dominant problem there are lack of time, lack of skills and expertise, lack of understanding, lack of staff, lack of budget, and difficulty in growing the audience. Higher education leaders should focus on the uses at this step relate to teaching, learning, sharing, and communication.

Step 3: Direction and coordination

In this step, the strategy is conducted with management provides greater direction and coordination of efforts to increase social media adoption across all departments of higher education. A number of goals are established at this stage so that coordinated model at the department level needed. Meanwhile, dominant problems that will occur in this stage are lack of time, lack of skills and expertise, lack of understanding, lack of staff, lack of clear metrics for ROI, and lack of budget.

Step 4: Formalization

In this stage, social media become more formalized and a strategy should be developed. This needs further investment or deployment of resources based on establishing metrics for ROI. Higher education leaders should focus on user feedback analysis of social media comes to the fore as a drive to improve metrics for ROI prioritized. Several problems maybe happen lack of clear metrics for ROI, difficulty in growing the audience, lack of understanding, lack of time, difficulty managing user experience, and insufficient contributors.

Step 5: Consolidation and integration

In the fourth stage, social media becomes better integrated with key development processes and begins to drive a fundamental change to achieve department objectives expected in higher education institutions. This needs to focus on social media surpasses its use a communication tool through transforming to engage expect users in the co-creation of new services and update contents. Use is expanded to industrial partners, to support project management and engage in research and development. Crowd sourcing, crowd funding, and user generated content also emerge, while higher education leaders use social media to identify skilled individuals. Eventually, social media becomes embedded in the website. On the other hand, dominant problems that need to anticipate are difficulty in positively engaging the audience, lack of clear metrics for ROI, difficulty in growing the audience, lack of time, lack of management support, and lack of understanding.

Step 6: Institutional absorption

The last stage is institutional absorption in higher education. In this stage, higher education leaders need a long time to get evidence that their institution has absorbed use social media continually. Peres and Mesquita (2015) showed insufficient evidence on this stage regarding strategy, management, structure, dominant problems, and its focus.

4.4. Evaluation of Social Media in Higher Education

A program needs to be carefully evaluated (Phillips & Phillips, 2016; Rooney, Videto & Birch, 2015; Winston, Creamer & Miller, 2013). The objective is to obtain data results that have an optimum impact on the program being implemented to the user (Langbein, 2016; Ulum, 2015; Wall, 2014; White, Wells & Butterworth, 2014). Similarly evaluation of social media in college as a program, this needs to be

evaluated too. Social media in higher education should be evaluated, not only among the leaders but also among faculty members and students (Opgenhaffen & Claeys, 2017).

Many types of evaluation tools can be used to evaluate such as Kirkpatrick, CIPP (Context, Input, Process, Product), TVS (Training Validation System), and IPO (Inputs, Process, Output, Outcome) (Bradley, Kelly & Edward, 2013; Dahiya & Jha, 2011; Rehmat, Aaltio, Agha & Khan, 2015; Tiantong & Tongchin, 2013; Topno, 2012; Wang, 2010). In this social media evaluation, the author suggests using Kirk Patrick's evaluation type.

This evaluation consists of four components, reaction, learning, behaviour, result, and ROI. A reaction is defined as how well the users liked a particular social media. Learning is defined as an attitude change derived from the knowledge and skills learned by users. Behaviour is defined as the extent to which changes in the former users and in at the time after users use social media. The result is defined as the extent of the impact of social media implementation to the improved the quality of human resource in higher education. Meanwhile, ROI is the benefit to an investor resulting from an investment of some resource in social media implementation. As a performance measure, ROI is used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments from year to year to consider profits in relation to capital invested.

5. Conclusion

This framework can be implemented through the support of the whole community of higher education supported with consistent policies, funding, and commitment from leaders, faculty members, and students. All stages of the process should be done through a hierarchical process, understanding, preparation, execution, and evaluation. The hope, the optimal goal of this program will improve the reputation of human resource quality and higher educational services in accordance with competency needs in global markets.

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