

The Idealism of Web2.0 Technologies in Higher Education Landscape a doubtful issue: a review of the literature

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Abstract: The phenomenon of web2.0 technologies and its connective, interactive, and collaborative features in a networked way has created a doubtful issue on higher educational landscape about its educational usability. There is rich body of the literature with contradictory perspectives regarding such phenomenon. This paper will discuss the idealism of web2.0 technologies in higher educational landscape based on the international literature ground from two main angles (1) Educational affordances of Web2.0 Technologies (2) Educational concerns of such technologies. Thus, this paper concentrates on answering the following questions;

- What are the associated educational affordances of web2.0 technologies?
- What are the consequence concerns of its educational usability?
- What is the critical view of the future about such technologies?

This paper structured into four sections; brief definition of web2.0 technologies; Educational Benefits of Web2.0 Technologies; Educational Concerns of Web2.0 Technologies; Discussion and conclusion.

Keywords: Web2.0 Technologies, Higher Education, educational affordances, educational concerns.

1 INTRODUCTION

1.1 Definition of Web2.0 technologies

Web 2.0 technologies, social media, or social software have changed users from being recipients and passive to active, interactive, creative and more self-motivated subjects (Hamid, Chang, & Kurnia, 2009). These technologies allow students to build their own online community, such a neighborhood community without the necessity of being familiar with HTML or web-server protocol, (Alexander, 2006). This stands in contrast with web 1.0 when they could only receive the information as one way learning. Since 2004 when the term web2.0 has been first introduced by O'Reilly's (2004) RF, there has been explosion number of applications under web2.0 umbrae; social networking sites (Facebook), social bookmarking (Delicious), blogs (Blogger), wikis (Wikipedia), 3D environments (Second Life), Created-Shared document (Google Docs)

Podcasting (Voicethread) Presentation (Prezi) and others (Bower, Hedberg, & Kuswara, 2009), (Franklin & Van Harmelen, 2007). These various and growing technologies shared unique features which are according to Burden and Atkinson (2008);

- Connectivity and social rapport
- Collaborative information discovery and sharing
- Content creation
- Knowledge and information aggregation
- Content modification (Burden & Atkinson, 2008).

2 EDUCATIONAL BENEFITS OF WEB2.0 TECHNOLOGIES

From the latest stream of Web2.0 educational technology studies, much research has agreed that the adaptation of such technologies is educationally valuable weather. Through implementing Web2.0 technologies the sourcing and aggregation of knowledge and information can be effectively maintained (Kelly, 2008; Maloney, 2007). The educational Benefits of Web2.0 Technologies can be discussed from its benefits to formal and informal education.

2.1 Formal Education

Such technology faces the common education problem as these applications have **met the educational requirements** (Maloney, 2007). Web2.0 tools could bring many desirable features such as the active participation and modification, interactive and collaboration, media sharing and user-generated content and Knowledge (Prinz, 2010). This points out that the current pedagogical approach of 21st century in universities may interfere with the qualities of Web2.0 tools.

Web 2.0 in learning environment is **opining and creating opportunities** “emergent new Web 2.0... concepts and technologies are opening doors for more effective learning and have the potential to support lifelong competence development” (Klamma et al., 2007), p. 72). **Educational Issues** such as research, information fluency, problem-solving, and technology fluency are shaped by integrated Web2.0 technologies pedagogically in the student's daily life (C. Greenhow & Robelia, 2009; Christine Greenhow, 2009). Providing **Stimulation of authentic learning**, such technologies provide rich opportunities to re-engage students with the learning process, promoting learners’ critical thinking about their learning which is the most traditional educational objectives (Huang, Wang, & Yang, 2011). (Huijser, 2008) agreed with that the existence of Web2.0 technologies in the classroom, can bring about more learning opportunity specifically by providing authentic engagement. For example, using podcasting technology brings great advantages for English learners

experiences (Crook, 2008). These technologies enables students to be more active and the learning more participatory, the interaction and the exchange between student-student information makes the class topics more understandable, the assignment can be shared, and the study groups are easily organized (Park & Son, 2011) Web2.0 technologies platforms can be used as a collaborative space for the course context as it can expand the knowledge and learning activities among students (Ismail, 2010b). Moreover, as result of its great affordances in providing collaboration and connectivism, the **learning reflective processes** can be effectively obtained through utilising Web2.0 technologies in the learning environments (Park & Son, 2011). Web2.0 tools could be use in formal university courses as it provides communicative and connective environment in the university. Moreover, these tools have given the student their space of freedom to express themselves and bring about many benefits for course instruction (Velasquez, Graham, & McCollum, 2009).

Web2.0 technologies in university life valuable for both students and staff can be (Smith, Salaway, Caruso, & Research, 2009). (Velasquez et al., 2009) The benefits of Web2.0 technologies in formal learning are:

- Provides a familiar communication tool for students
- Provides non-threatening space for students to present their ideas
- Provides non-threatening space for students to be presented their thoughts and interests and provides them the accessibility to other members' interests and thoughts.
- Provides the accessibility to the network's members whether they are peers or instructors
- Provides the students individuality space
- Provides student-student and student-teacher continuous dialogue
- Motivates group-work collaboratively
- Localizes all course information in an accessible "central place"
- Assists in recognition of student-student and student-teacher through the feature of viewing students pictures and names (Velasquez et al., 2009).

The instructor advantages of utilizing Web2.0 technologies according to Velasquez, Graham & McCollum (2009) are:

- Facilitates the grading process as the history of posting is provided within the network
- Personalizes the student-teacher relationship
- Allows educators to meet and discuss their learning and teaching matters by providing a place for them
- Provides teachers opportunity to exchange their personal interests and ideas
- Allows easy accessibility to students (Velasquez et al., 2009).

The importance of Web2.0 technologies in the educational context is comes from the **comparison between learning management system (LMS) (e.g. BlackBoard) and web2.0 technologies** educational affordance (Ryan, Magro, & Sharp, 2011). Web2.0 technologies provide “**long-term**” relationships between students in contrast with LMS which usage is limited for the course period. Furthermore, the **mobility feature of Web2.0 technologies** in particular (SNS) is a significant difference as Facebook applications is free in all functions, while, for Model mobile services universities have to paid for services that only available for iPhones (Ryan et al., 2011). This is limited in LMAS. Another comparison is that (Monge, Ovelar, Azpeitia, & Creaney, 2009) assets that web2.0 technologies hold a promise to **brings sustainability in e-learning** due to its ability to build communities, share and reuse of content more that LMAS can offers. Web2.0 technologies assist universities **preparing students to their career life** more than other used methods (LMS) as its appropriateness to encourage student’s participation and communication collaboratively in the “knowledge based society” (Vivian & Barnes, 2010). **Students are the main users** of such technologies as they extensively adopted them in their daily live (Collis & Moonen, 2008). Therefore, there is no requirement that universities should provide extensive supports in contrast with LMS. (Conole, de Laat, Dillon, & Darby, 2006) study shows that students in UK are disappointed about the use of e-learning in a survey of 427 across different e-learning delivery modes and across different subjects. Web2.0 technologies provides **innovation in higher education** where instructors could enhance and develop the students’ performance of content in a pedagogic innovative manner that could not otherwise be simply obtained (Collis & Moonen, 2008) Web2.0 technologies enabling more **effective learning design** that creates diverse resources of creative pedagogies and effective teaching and assessments tools (Bower et al., 2009). (Grover & Stewart, 2010) asserts that Web2.0 technologies can be effectively used to **accommodate students’ different learning styles** which reflect on their succuss. This brings a clear picture that the existence of Web2.0 technologies drives such benefits that could not obtained with learning management system (LMS). Therefore, some researchers call for the need to find way to adapt web2.0 technologies within learning management system (LMS).

There has been number of research with interest on studying the relationship between **learning theories and web2.0**. (King, Greidanus, Carbonaro, Drummond, & Patterson, 2009) web 2.0 technologies hold promise for make great educational benefits by enhancing the students’ belonging sense to the classroom community which contributes in their learning experience positively whether in or out the class. In addition, **Web-2.0-based Community of practice COPs** is the most valuable learning-support environments amongst “professionals, organizations and educational institutions” (Huang et al., 2011). **Connectivism learning environment**, **Web-2.0** facilitated the information-sharing and its

functionality to enhance the interaction and connection levels amongst students in a self-organized way (Hung & Yuen, 2010). This central-networked environment where the sense of connectedness amongst higher education students is largely operates reflects what (Siemens 2005) means by Connectivism learning (Bitter-Rijkema & Verjans, 2010). For example, Facebook encourages the students to structure their identities online and building their college community, aids students to communicate with their old, new and possible friends and this powerful connection sense of belonging is an important factor in their retention (Cain, 2008). there are three elements of **Peer-Assisted Learning (PAL)** strategy that students require; “engage learning experiences, practical, and timely support” which are all involved on Web2.0 tools (Huijser, Kimmins, & Evans, 2008). Web2.o tools provide a **student-cantered learning** environment which builds a sense of ownership and responsibility. This positively contribute on shaping their own way of learning (McLoughlin & Lee, 2007). For example, Web2.0 tools allow students to be writers on a personal conceptualize manner as the way they create their personal profile within SNS is a self-presentation task that need to think skills such as selection, appropriation and manipulation (Vie, 2008). From these views, it can be argued that web2.0 technologies have a great idealism in higher education environment.

2.2 Informal Education

Within Web2.0 technologies Students are “engage in informal learning, and creative, expressive forms of behavior and identity seeking, while developing range of digital literacies” (McLoughlin & Lee, 2007, P. 667). Web2.0 technologies have been extensively used amongst university students as systems of **announcements, notification and a discussion platform for class related matters** such as academic requirements of their courses, and assessment tasks(Kelly, 2008) The absentee students read their classmates’ “feeds” and use them in questioning forums to understand the missed lecture or for an upcoming absence (Selwyn, 2009). The assessment and examination and related matters are increasing communication for the students. For instance, Facebook is an effective way to remember and keep what the students have learnt in the class which makes such technologies more appropriate method in “informal” learning (Kelly, 2008). (Smith et al., 2009) are in agreement with this. They conducted a study in Michigan State University that showed 53% of the university students used Facebook to discuss class related matters. While, 49% of students used Facebook to make the class meeting and the study groups more organised, the majority of them (69%) used Facebook for the purpose of asking their classmates about class procedures or class related matters. Additionally, Web2.0 technologies has contributed to facilitate **the orientation for first-year students** (Stutzman, 2006) the Facebook among other SNS sites is more attractive for these students and helpful in investigating their new life in the university, the students

actively use Facebook to prepare themselves for university life (Stutzman, 2006).

Motivate students to overcome isolation. Ali and Kohun (2009) asserts that PhD students, who are socially-opened more likely to succeeded on their degree than those are not. In correspondence to this Ali and Kohun (2009) and Ryan et al. (2011) argue that web2.0 technologies offer social mechanisms to increase the connection between students and the faculty will enhance their opportunity to promote their educational and cultural adaptations. In addition these technologies provides assistance for International student's to better adjustment to new cultural and educational environment that enable them consequently make better education (Ismail, 2010a). Giving that it can be emphasized the strength of web2.0 technologies especially Facebook in informal education matters.

3 EDUCATIONAL CONCERNS OF WEB2.0 TECHNOLOGIES

There is increasing debate in the educational community regarding the utilization of Web2.0 technologies in education (Selwyn, 2009). The integration of Web2.0 technologies in higher education is an issue that involves concerns such as privacy, "intellectual property, copyrights and disclosure" (Henderson, de Zwart, Lindsay, & Phillips, 2010). This is agreed by Franklin and Van Harmelen (2007) and Swain (2008) that intellectual property, rights and security are major issues associated with Web2.0 technologies. Collis and Moonen (2008) demonstrates that "The line between appropriate reuse of another's contribution and plagiarism will require an organization-wide policy as well as models for practice" (p. 102) .

The **privacy concern** is identified by two main threats. Firstly, there are the concerns related to the disclosure of the students' personal information that is provided by the students themselves. The second concerns regarding the posting of students' personal information by others (Henderson et al., 2010). These two negative features are not limited only to the present time, but could reappear in future life. The reasons behind this issue include peer pressure, which highly influences the disclosure of personal information. Secondary, "signaling", a term that refers to the user's desire to describe him/herself, which leads to disclosing their information. Thirdly, there is often an "over trust" in Web2.0 technologies or among their members, which causes members to freely disclose personal information. Fourthly, a "myopic view of privacy" drives users to overly disclose their personal information. The fifth reason concerns the "design" and interface of the website. For example, the privacy setting encourages or limits the option of information control and accessibility. Finally, "relaxed attitude to privacy" refers to the users' attitude toward the privacy issue; the less concern there is, the more likely the member is to disclose personal information (Henderson et al., 2010).

Students negative view of using Web2.0 in their formal education, in Szwelnik (2008) study, Facebook was integrated in her teaching practices. Although, the findings of her study determine some positive ways of using Facebook, some concerns arose from this study. Students prefer to keep their educational life apart from their social one; they consider the usage of Facebook for educational purposes an invasion into their social lives. The peer-to-tutor interaction is less likely to appeal in these websites comparing with peer-to-peer interaction, which stress the limited potential educational use of such technology. Szwelnik (2008) emphasizes the importance a careful plan before using them in course design. Smith et al. (2009) Madge, Meek, Wellens, and Hooley (2009) are in agreement, and they have determined that students do not use Facebook to communicate with the university member or for checking the university profile; they prefer using it to communicate with other students only. Moreover, one important result from this study survey indicates that when asking students about the idea of utilizing Facebook to enhance teaching in the university, 43% held a negative view as they believed that Facebook had no place in an educational content. Madge et al. (2009) argue that Facebook is an educationally useful mechanism, as it can promoting academic practices effectively and provide ease of educational interaction, but it is not appropriate for formal teaching purposes. This can draw out a point that, even those who disagree about the idealism of these technologies in formal education, they do agree about its importance in informal education.

4 DISCUSSION AND CONCLUSION

Due to the fact that Web 2.0 is a quite new technology, there has been numerous doubtful concerns and problems related to its use in universities (Franklin & Van Harmelen, 2007). Henderson et al. (2010) and Cain (2008) argued that **concerns regards Web2.0 technologies are “misunderstood” issues** and risks that students are facing as the consequences of using such technologies are related to the “ill-considered” use of these technologies. This is corresponding to Stepanyan, Littlejohn, and Margaryan (2009) who asserts that the “key concern” is Higher education institution have to understand how to gain benefits of using Web2.0 technologies by emerging these technologies in educational practice” to sustain e-learning. Obviously, this draw out that there has been lack of gaining benefits from such technologies in higher education there due to the lack of understating its affordances

Taking a generalised view about web2.0 technologies idealism in higher education is not justified attitude as the natural of these technologies is different (e.g. Facebook is not similar with Wiki). There has been a successful implantation of such technologies in many universities. In The university of Plymouth in UK a range of web2.0 technologies (Wiki, Blog, and podcast) are employed to enhance learning and teaching, provide fixable learning, community of practice and self-regulated environment (Boulos, Maramba, & Wheeler, 2006). This is

similar with university of Michigan in USA, where the use of Blog platform has created a community of learning among all stakeholders within the university (Yew, Gibson, & Teasley, 2002). Lai and Ng (2011) and McLoughlin and Lee (2007) indicate that there have not been sufficient empirical studies with aim to assess the learning effectiveness for students within Web2.0 environment. Therefore, more research is needed to support building understanding about these technologies use and affordances within higher education community and providing and developing strategies to support the use of such technologies.

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Appendix (1) criteria of reviewing the literature

	Inclusion	Exclusion
Period of review	No date	NA

The scope of the literature	English language only	Non-English language
Type of Data	Empirical	Personal view Unpublished papers Incoherent Unsystematic
Educational sector	Higher education	Pre-school and compulsory school
Type of technology	Web2.0 applications	Any other sorts of technologies