

Web 2.0 technology in Pre-service teacher education Programme: An Exploration of Usability

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Abstract: Integration of teaching tools and technology in the field of Education is increasing day by day. For making education system better, teachers should be competent in using the tools like Web 2.0 and these tools should be implemented more and more in teacher education programs. This study majorly focus on usability of web 2.0 in Pre-service teacher education programme. The present study is conceptual and informative in nature. This present paper is based on secondary data and collected from print and online repositories. Secondary data collected from relevant sources was used for the exploration of usability of Web 2.0 technology in pre-service teacher education programme. Qualitative analysis is carried out on the basis of previous theoretical and empirical evidences and findings were drawn.

Keywords: Web 2.0 technology, Pre-service teacher education Programme, usability, web 2.0 tools, Web 2.0

1. Introduction

Nowadays teacher technology preparation is an important aspect for making teacher education system more effective. As most of the teachers are somewhat aware of the preponderance of technology to address the students but this awareness is not repercussion in practice. There is lot of theoretical and empirical evidences that most teachers do not use technology when they teach with the exceptions of using PowerPoint presentations and email exchanges. Then, Pre-service teacher education program are indulged with recent innovations that enhance the competencies of pre-service teachers to use the technological tools in future classroom situations. Recently web 2.0 tools has been used in most classrooms for supplementing learning and effective teaching from primary level to higher level. Web 2.0 tools like YouTube, Podcast are playing a significant role in teaching learning process and making effective learning environment. Student teachers are using these tools for course work as well as for school internship in the pre-service teacher training that boost their technological knowledge, content knowledge and pedagogical knowledge. This way it is

expected that pre-service teachers are likely to utilize web 2.0 tools in their own future classrooms to cater for increasing needs of 21st century students.

Web 2.0 has been defined by some scholars. Grosseck (2009) defines it as “the social use of the Web which allows people to collaborate, to get actively involved in creating content, to generate knowledge and to share information online.” Web 2.0 is a modern types of tools to communicate, create and share content and search for information more efficiently and very useful in educational environments.

Web 2.0 embodies a more synergetic and implicitly paradigm-changing environment for sharing and building knowledge. Educators in pre-service teacher education courses have begun to apply Web 2.0 tools in their classrooms. We know as use of web 2.0 tools in society expands, so there will be expectations for its broader application in teacher education institutions. Teacher education faces the major two challenges of applying web 2.0 technologies to prepare teachers for future classroom situations. First challenge is to prepare teachers to use web 2.0 tools that enhance teacher preparation and second is encouraged the use of web 2.0 tools in teacher education for making professional teachers. Therefore Teacher education will need to approach web 2.0 on two applications that are application to enhance learning in the process of teacher preparation and application to classrooms where teacher educators will be expected to use web 2.0 tools with student teachers.

2. Research Objective:To overview the usability of Web 2.0 technology in Pre-service teacher education programme.

3. Research methodology: This present paper is based on secondary sources including print and online repositories. The present study is conceptual and informative in nature. Secondary data has been collected from relevant sources through systematic search and findings have been drawn on the basis of previous theoretical and empirical evidences through thorough qualitative analysis.

4. Literature Review

Lei (2009) found that pre-service teachers enrolled in an undergraduate program were proficient at utilizing technologies to socialize and for basic tasks, but reported that they were much less comfortable employing more sophisticated Web 2.0 activities such as wikis, blogs, podcasts, and classroom ready technologies. Lei’s findings were reinforced by Kumar and

Vigil (2011) who reported that while most of their participants had used message boards and were used to obtaining information from the web, very few had actually created content using emerging social media tools like wikis, blogs, or online videos.

In addition to this finding also revealed that pre-service teachers intend to use blogs, wikis, and social networking tools in their future classrooms. Similar studies (Myers & Halpin, 2002; Yushau, 2006) also concluded that pre-service teachers' positive intentions toward using technology are a major predictor for future use and successful integration of technology in their classrooms.

Coutinho suggested that Web 2.0 tools like blogs, wiki, Google Page Creator, Google Docs were explored by pre-service teachers with different pedagogical goals. These pedagogical goals are to build individual or group e-portfolios, to intensify cooperation and collaboration, to promote interaction and communication competencies. Results of the study also revealed that Web 2.0 technologies had so much to offer to educators, enhancing learning environments and encouraging knowledge deepening and knowledge creation.

According to Albion the use of Web 2.0 tools for teacher preparation, increased professional engagement by teachers and providing experiences will assist use of Web 2.0 tools in the classroom as authentic practice.

Smith & Greene (2013) study titled "Pre-service teachers use E learning technologies to enhance their learning" investigated two objectives. First one was to make better pre service teacher education by using technology to help pre-service teachers and bridge the gap between academic preparation and practice. Second objective was to familiarize pre service teachers in the use of technology to support their future pedagogical activities. Pre-service teachers of the study reported boost lesson planning, enhance lesson implementation, visual interpretations of best practices, modeling, and peer and university instructor feedback as successes of the use of e-learning technologies.

Crocco and Cramer (2005) investigated teacher education programs in terms of technology use. Researchers recommended that using technology was added value in presenting content by pre-service teachers. Integration of true technology is more than using a Power Point as an overhead projector or a Smartboard as a Power Point. In a study of teacher trainees using technology, Dawson (2006) found that "technology use did not bring about fundamental

changes in instruction but instead either replaced, improved, or extended traditional instruction”

Monaco (2008) stated that “in education, a dichotomous perspective on technology exists. It is both praised and ignored in schools and in teacher education”. Although Web 2.0 technology tools flourish, too often teachers and professors in the field elect not to use the technological tools in their real classroom situations.

Various studies stated that pre-service teachers gain insights into planning and organization, pedagogical strategies, delivery, content knowledge, and classroom management by analyzing and reflecting on video during their field experience (Alger & Kopcha, 2009; Downey, 2008; Shepherd & Hannafin, 2008; Snoeyink, 2010; Yeh, 2007).

Weller (2013) explored the use of Web 2.0 in preservice teachers’ professional learning. Results of the study confirmed the advantages of using web 2.0 technology for preservice teachers. Pre-service teachers were able to see uses and benefits for it in a classroom setting as well as how web 2.0 could implement a range of learning tasks. Lankshear et al. (2000) also explained the need of web 2.0 for pre-service teachers to get real-world experience in order to design classroom activities. (Albion, 2008). It also agreed with conclusion of Albion, so, the best approach to helping teachers learn about Web 2.0 may well be to have them learn with Web 2.0’ (Albion 2008).

All students stated that not only use of Web 2.0 was beneficial to the task but it was fun to use as well. Research study also concluded that Web 2.0 technologies improve teaching and learning (Okoro et al. 2012).

Grant and Mims (2009) emphasized on the use of Web 2.0 technologies in contemporary constructivist and cognitivist learning environments and presented the characteristics of Web 2.0 tools to support teaching and learning.

Nielsen, Moll, Farrell, McDaid & Hoban (2013) concluded that majority of preservice teachers were limited in their ability to use social media tools to support their science learning. They suggested that there is a window of opportunity within teacher education to develop the learning potential of social media tools in teacher education programs. This could readily take the form of designing tasks and assignments that require students to work with the affordances of various tools. This could help trainee teachers to develop the technical and

pedagogical proficiency and utilize more of the potential offered by the variety and ubiquity of social media tools for learning.

Young adults use social media for basic communications in a social sense, we see great potential in building a bridge between social use of social media applications and deliberate attention to learning science. Later, these young adults will be teaching the next generation of children, whose digital proficiencies are likely to be even greater, thus attention at the program level in teacher education will have far-reaching consequences.

Hramiak and Boulton (2013) focused on how Web 2.0 technology, specifically web logs (blogs), are developed as a learning and teaching tool within secondary teacher education, and how this is cascaded into secondary schools. They also identified the enablers and barriers to trainee teachers with respect to their use of Web 2.0 technology in their transition into full-time employment as newly qualified teachers.

Divintini et al reported limited use of blogs by teacher trainees (Divintini et al. 2005) but Some researchers (Martindale &wiley, 2005; Beldarrain 2006) quoted millions of people using blogs all over the world but indicated limited success when using blogs for educational purposes.

However some researchers Hramiak et al (2009) reported success with the use of Web 2.0 technologies and trainee teachers. Some concluded that practices observed by trainees during training might optimise the chances of these future teachers using technology in their own classrooms. (Larose et al. 2009). Attwood, 2009 concluded that there may be some positive resistance to the use of e-learning and associated technology with teacher trainees by academics, the latter being reluctant to adopt technology in their sessions with trainees.

Hammond et al (2009) revealed that a pedagogical rationale was an important success factor when trainee teachers used new technologies and could result in an inclination to use ICT, or a disposition to see its value in the classroom. Similarly Granberg (2009) found that where teachers share a pedagogical vision, then the difficulties of integrating information technology into courses can be overcome. So there was a need to use information technology as part of their teaching and then to cascade this use.

Cirit & Savas (2017) investigated ELT pre-service teachers' perceptions on the use of web 2.0 tools in the methodology courses for alternative assessment purposes. The findings of the

study showed a positive attitude of the pre-service teachers toward the use of web 2.0 tools for alternative assessment purposes both before and after the tasks were implemented. Study also revealed that the participants approached more positively after the use of web 2.0 tools in methodology courses. Pre-service teachers have also suggested several advantages and disadvantages in relation to the integration of Web 2.0 tools to their courses as a means of alternative assessment.

Altıok&Yükseltürk (2016) conducted online survey on 493 pre-service teachers of education department from 52 universities to know the perceptions and use of Web 2.0 technologies in teaching and learning. Perceptions of participants was found positive and most of the pre-service teachers stated that web 2.0 technologies could be used effectively in education due to the several advantages. This study also revealed that social media was the most often category.

Sendag, Erol, Sezgin&Dulkadir (2015) investigated the associations between preservice teachers' Web 2.0 competencies and their critical thinking disposition (CTD), revealed that participants had a medium level of internet use, Web 2.0 use and Web 2.0 skills and Web 2.0 awareness. Apart from that pre-service teachers' Web 2.0 use level was low in Education. Competencies on Web 2.0 tools, their blog, wiki and podcast were at a very low level, but the social networking and YouTube competency levels were high. Results of the study showed that there were significant relationships between pre-service teachers' Web 2.0 competencies and their critical thinking disposition.

Moshahid & Abdunnazar (2017) compared the awareness of web 2.0 resources in education among B.Ed students of government and private institutions of teacher education and revealed that the B.Ed students from government colleges possess higher level of awareness of web 2.0 resources than the students from private colleges. Findings revealed that male students from government and private teacher education colleges have higher level of awareness of web 2.0 resources in education than female students. The findings showed that there was no significant difference between the awareness of web 2.0 resources in education among female students from government and private B.Ed colleges.

Alhassan(2017) explored the relation between web 2.0 tools self-efficacy beliefs and teachers' use of web 2.0 tools in their teaching and concluded a strong positive relationship

between teachers' Web 2.0 self-efficacy beliefs and teachers' use of Web 2.0 tools in classroom teaching.

Padmavathi(2016) analyzed attitude towards the use of computers of pre-service teachers for classroom teaching. The findings of the study showed a significant difference in computer attitude by subject areas such as Languages, Science, Mathematics and Social Studies.

5. Findings of the study: After thorough analysis of existing literature the probable findings of the present paper are:

1-Digital literacy is an important aspect and essential foreffective teaching learning process in pre-service teacher training.

2-Awareness and Use of Web 2.0 technologies enhances collaborative learning in Pre-service teacher education for trainee teachers.

3- Provideopportunities to utilize Web 2.0 technologies for pre-service teachers enhances lesson plans in an actual classroom situation with real learners might be a step in the progression of effective future teacher.

4- Web 2.0 tools encourages knowledge generation and social interaction among teachers in pre service teacher education programme.

5-Web 2.0 applications have tremendous potential to enhance teaching effectiveness and supplementing learning in science, mathematics and language subjects of pre-service teachers.

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