Research Article

Faculty @ Facebook - Students' Perspective for Educational Scaffold

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Abstract

Social media is an integral part of the lives of students. Inspite of its popularity amongst the student community, not many studies have been conducted to investigate its use as an educational scaffold. This sequential explanatory mixed method research, which is a part of a larger study, explores students' perceptions of the usability of Facebook group as a scaffold to face-to-face Chemistry education. The data of the study was collected from 75 students who were a part of specific Facebook group. These students were appearing for higher secondary (HSC-Maharashtra State Board) and competitive exams at National level. The study communicates students' perceptions of how the interactions on the Facebook group enhance their learning of subject Chemistry. Regular educational posts, including videos, quizzes, discussion scaffolding to the classroom teaching of Chemistry and the interactions in the group were a regular feature of the group for 6 months. An online survey of the members of the Facebook group using Google forms was conducted to examine the student perceptions about the usefulness of such a group. The results indicate positive student reactions for such a scaffold and points out the need for better utilisation of Facebook in learning situations.
Keywords: Social media, Educational Scaffold, Connected Learning, Facebook

Introduction

Today's students have grown up in a technology-saturated environment. They have never known the world without personal computers, mobile phones, internet, videos on demand and now, the Web 2.0 tools. Prensky (2001b, pp.1-3) introduced two terms "Digital Natives" and "Digital Immigrants". He expounds that these people, are 'native speakers' of the language of the internet and the digital world. It is only natural for them to utilize it to solve

their immediate problems. These range from exchange of interesting information, notes, exam schedules, important notifications to seeking doubt-solving for an assignment.

As educators, it is necessary to recognize that digital natives do not necessarily learn in a linear manner but by processing random, hyperlinked resources available. It is also prudent to remind ourselves that their learning is neither confined to classroom nor to textbooks. The participatory media often known as Web 2.0 tools is a prime source of communication for constructing knowledge for digital natives. The theory of Connectivism (Siemens & Downes, 2008) elucidates the human and non-human components which could be 'system', 'field', 'nodes' in learning in a digital era and marks the connections between them as a vital link for learning . Siemens underlines the ever changing landscape of knowledge and thus recognizes the skill of decision making itself as a step of learning.

The Web 2.0 tools have promoted a culture of social learning. The social media seems to provide a platform for increasing collaboration, initiating interaction and enabling resource sharing and critical thinking. As noted by Maloney (2007), interactions of students on social media lead to building relationships around shared interests and building knowledge communities. Bugeja (2006) suggests that this informal channel of communication offers the opportunity to re-engage learners actively and promote critical thinking, a goal of education.

Social media has become an embedded aspect in a student's life to a great extent. Studies (Selwyn, 2009) on Facebook have shown that it helped students settle in University life and be socially accepted thus also impacting their academic performance. At the same time, studies also point out that despite the popularity of Facebook amongst students, there has been not enough thought out effort by the stakeholders to harness the characteristics of social media platform into teaching learning process, thus may be losing out on a cost effective, learning platform.

Though there are many social media platforms, Facebook and lately Whatsapp in particular has been found to be the most used social media by the students. This study tries to investigate the perception of students of social media in general and Facebook in particular as a supplementary tool for communication and a scaffold for enhancing collaborative learning.

Theoretical framework

The digital and social tools incorporated in the learning process provide opportunities to view the social learning with a lens of Connectivism. The Social Constructivism Theory put forth by Lev Vygotsky, a Russian developmental psychologist underlines that the cognitive processes often occur on the social level before they are internalized and transformed at individual level. Thus, learning is embedded in social interaction with parents, teachers, peers and anybody else who has more knowledge than the learner- the more knowledgeable other(MKO). Vygotsky emphatically states that actual learning takes place in this interaction whereby the learner traverses the spectrum from inability to achieve the task to achieving the task independently with timely help from MKO. This mid area of the learning spectrum was named as Zone of Proximal development (ZPD).

In today's era, with the boundaries of real and virtual world being, the physical proximity of belonging to the same educational institute can no longer define the ZPD. In fact, the social media can be leveraged to expand this ZPD to create more avenues of collaboration for effective learning and creation of knowledge in a global context, a need of knowledge based society.

The popularity of Facebook as a social media can be adjudged from the number of users which seem to be constantly rising. The students as well as teachers are adept to using this social media platform with more and more educational institutes having Facebook pages in a bid to reach out to the students and teachers and stay connected and pass information. Though research studies have been conducted in the West about the use of social media tools in education- both as a part of classroom activities or for out of the class activity, it seems that this potential of social media has largely remained unexplored in India. This study aims at exploring this very potential of Facebook being an informal, collaborative, cost-effective platform for learning and tries to investigate students' perception to use social media, particularly Facebook as a pedagogical scaffold.

Review of literature

The evolution of ICT is taking place at an unprecedented pace and educators are trying very earnestly to incorporate them. There is some evidence that internet and social media applications play an important role in education (Guzm_an-Sim_on, García-Jim_enez, & L_opez-Cobo, 2017). The emergence of social media and the way people connect and interact on social media have provided an avenue to educators to figure out and utilize the interaction towards fostering collaboration and contribution in learning. (Gunwardena, et. al., 2009). Students communicate in their Facebook teaching groups not only about social events, but also about courses and experiences. Facebook as a means of social communication can affect the motivation of students. The otherwise shy students could often be seen part in 'heated discussions and arguments' which they would avoid in a face to face interaction. This meant that social media could be more inclusive in nature-- open and democratic making it more participatory across a wider spectrum. (Stacey &Gerbie, 2007). The motivation of students to use Facebook for purposes other than just social networking, directing towards formal learning, is reported to have increased (Aydin, 2014; Erdem&Kibar, 2014).

An investigative study on the use of social media by learners reported the need of support and pedagogical interventions for optimal use of social media as a learning tool. (Cigognini, Pettenati and Edirisingha, 2011). Literature suggests that the use of Facebook extends from the realm of social communication into work. About half of the students in that study indicated that they use Facebook for formal learning purposes like assignments and exams (Towner& Mu~noz, 2011). Similar findings were reported for high school students in the USA (Mao, 2014). A few examples of the beneficial attributes of Facebook groups as a formal learning tool can be derived from recent studies. Yunus and Salehi (2012) deduced that university students perceived Facebook groups to be helpful in promoting their writing skills. Similar research findings of social media has been successfully utilised for professional collaboration have been reported (Lampe, et. al., 2012).

Social media can successfully used to extend the period of learning other than the classroom or face-face to interaction and provide a platform for self paced learning. Greenhow (2011) summarized that the use of social media for learning promotes a more student centered approach to learning. Overall, research suggests that social media is used increasingly as a

tool for developing formal and informal learning. Social media platforms evolve into socially mediated knowledge systems that empower learners with a sense of constructive ownership of knowledge in the learning process. (Dabbagh & Reo, 2011a;).

Hamid,Waycott, Kurnia, and Chang (2015) surmised that students perceived the use of online social networks as beneficiary to engagement, improvement of skills and mastery of course content, enriching knowledge development of critical thinking and analytical skills, among others . Similar findings for Serbian, Egyptian and American students, respectively are reported (Milo_sevi_c, _Zivkovi_c, Arsi_c, and Manasijevi_c (2015), Sobaih, Moustafa, Ghandforoush, and Khan (2016) and Gikas and Grant (2013)).

The flexibility and the reach of social media is of great value that educators can make the most use of. The ubiquitous nature and informational function has led to acceptance of social media in educational settings. (Barness& Jacobsen, 2012). Social media show the attributes of being convergent needed for collaboration and hence can be used effectively in educational settings. (Freidman & Freidman, 2013). Such interactive scaffold enables egalitarian and participatory practices that set the basis of self motivated learning opportunities. (Selwyn, 2011). Flexibility, convenience and accessibility are the positives of using social media in education. (Zaidieh, 2012). One of the crucial aspects, which makes Facebook an appealing tool for students, is the immediate feedback, instant communication, and interaction that it provides (Erdem & Kibar, 2014).

Objectives of the study

The major objectives of this study were:

1) To explore the utilization of Facebook Group for academic interactions with peers

2) To explore the utilization of Facebook Group for academic interactions with mentors

3) To examine the extent of use of Facebook Group for assignments and other related activities.

4) To investigate the perception of students towards the use of Facebook as a scaffold to face-to-face Chemistry education.

Research methodology

This sequential explanatory mixed method study uses a survey for quantitative data collection followed by individual unstructured interview with few student members of the sample for qualitative data and analysis. This method is chosen because the responses obtained by the survey mandate digging deeper in a bid to explain the perceptions. The interview was conducted of male and female students chosen according to activity range of least active (lurkers) to the most active in the Facebook Group.

Sample

A purposive sampling was carried out. The sample comprised of 75 students appearing for class XII Science from Mumbai who were a part of a specifically created Facebook group. These students were a part of a larger classroom environment and hence the Facebook group was the scaffold of the face-to-face or classroom teaching-learning for these students. The membership to the group was voluntary and the members were oriented regarding the duration and purpose of the group No attempt was made to make 'friends' with the members though a few students were already 'friends' of the researcher.

Data collection

A questionnaire of 23 items was constructed as a tool to collect the responses using Google Forms. The questionnaire was adapted from the online tools like NSSE and Blended Learning Toolkit was validated by three experts of education. The tool was reviewed by the feedback obtained from the pre-survey of 10 selected students. The questionnaire broadly deals with major aspects: a) personal information with their social media behaviour and prior academic achievements b) Use of Facebook Group for academic interaction with peers and mentors c) Use of Facebook Group for collaborative academic work like assignments d) perception regarding Facebook group as a scaffold to classroom teaching. The survey was followed by individual unstructured interview with members of the group. The participants were suitably coded to ensure confidentiality.

Findings and discussions

*Use of Facebook***:**

The survey indicated most participants were members of 1-3 social media networks and 18.5% having more than 5 social media networks. The survey revealed multiple access on daily basis (Figure 1). The responses indicate that WhatsApp is the most popular followed by Facebook, Instagram and then Twitter. Almost all the students have reported to access social media through their mobile phones giving us an insight that this hand held device holds a huge potential for anytime access to learning, acing on the parameters of cost-effectiveness and ease of use.
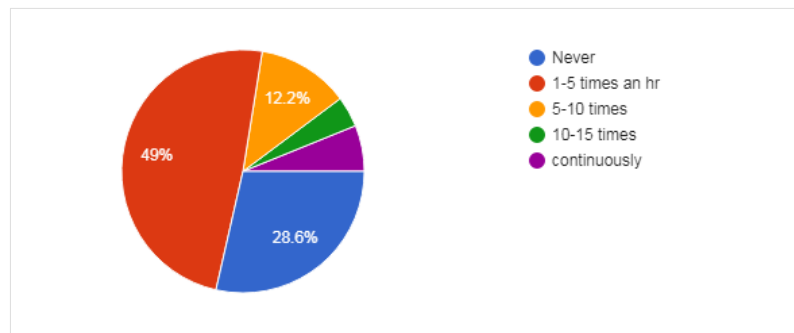

Figure 1: Access of social media while doing homework or studying

The fact that almost 50% of students acknowledged that they accessed social media at least once every hour while doing their homework substantiates the embedded position of social media in their lives. Nevertheless, 42.3% students attested having never accessed social media in the classroom while around 38.8% admitted accessing social media occasionally (1 to 3 times) during the class. This could be attributed to various factors that could be another research area and definitely out of the scope of this paper.

Qualitative data:

"I login to Facebook on my Mobile phone. Multiple times also."(M1)

This generation of digital natives seem to have considerable netiquettes as suggested by the responses where 46.9 % of students responding that they would never ping their mentors on social media after 10 pm. This refutes the apprehension – 'unnecessary disturbance' that mentors have while sharing the social media platform. The responses also show that students

do feel that the teacher is more approachable when he/she is on social media with 43% very strongly agreeing with this and the same percentage of students very strongly agreeing that they would prefer using social media to communicate and resolve their doubt with their mentor. This suggests that the shy or introvert students who might not be vocal in the class can be more communicative using social media, thus enhancing their learning. It could be posited that social media is a very effective communicative tool for educational purposes.
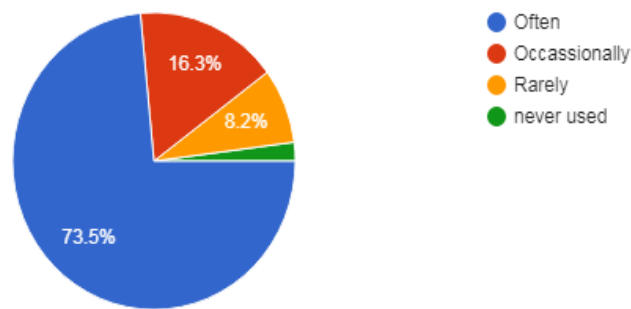

Figure 2: Use of social media to share notes and other academic work

Facebook as a scaffolding tool

Almost all students, good 73.9 % affirm using social media frequently to share notes and have discussions with peers on academic matters – clarifying, solving some doubt, being the major ones (Figure 2). All the members agreed that videos, quizzes and other resources shared on the Facebook group helped them clarify concepts, revise their learning and also generated discussion and deliberations. The group was their emergency solution provider for a wide range from sharing some notification to knowing a reference material and directed their learning. This is in agreement with the earlier research of 'ability to plug in resources when needed'(Siemens, 2005). The responses indicated that only 14.3% feel that sharing of such notes and discussion on social media defies attending class. This signals that the teachers need not feel insecure about being replaced or becoming redundant.

Though maximum of students affirm use of social media for notes-sharing, doubt solving and 62% agree that social media can be a good educational tool, around 53% expressed that use

of social media during work negatively affects the quality of work. This is somewhat in agreement with the findings that indicate negative impact on academic achievement (Junco, 2012)

Qualitative data:

- *'The videos uploaded help in clarifying the concepts' (M4, F3)*
- *'The videos help in reinforcing what I have learnt. I usually do it while travelling making better use of my time'(F5,44)*
- *'I could ask the doubts related to a topic. I could also ask some clarification. The mentor or sometimes the peers would answer. The mentor is also available on chat.'(F4,M3)*
- *'Sometimes, the post leads to discussion and these diverse discussions are then extended in our classroom. We then discuss it with our teachers and there is in depth discussion related to the topic.'(F5,M6,M5)*
- *'I was earlier very excited with the quizzes and tests. They were not particularly stressful. But I'd rather not use Facebook to take a test. That is not what I log in for.(M18, 21, 45, F34,52,58)*
- *'The quizzes were good. I wanted my name to feature there in the comment section as the top scorer.'(M25,64, F44, 47)*

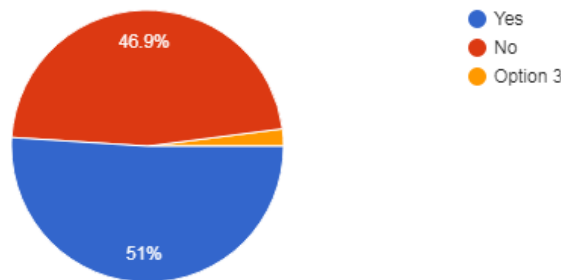***Facebook for educational communication***

Figure 3: Participation in social media groups made by mentors

Communication- asynchronous and synchronous enabled easy collaboration and gave them the needed control to design and develop their own pace. It is interesting to note that communication with mentors is more preferred on Whatsapp rather than Facebook chat (Figure 3).

It is heartening to see that more than 50% of the students were a part of social media groups formed exclusively for educational purposes by their teachers/professors/mentors. This surely can be seen as a signal of the change; the adaptation and integration of social media by educators is slowly taking place in teaching-learning process.
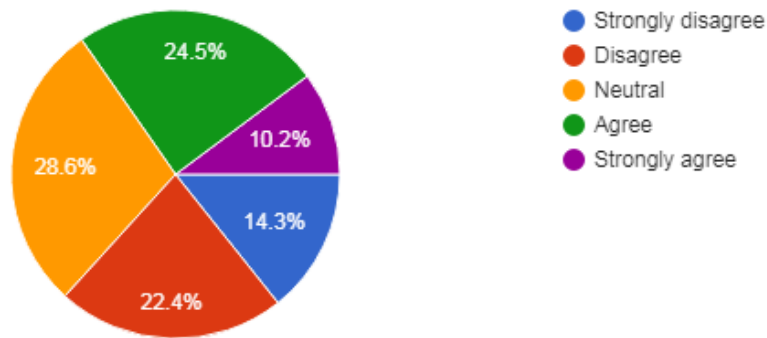

Figure 4: Students' opinion on use of social media by educators in classroom to increase student engagement

The responses (Figure 4) reveal that only 14.3% of the students strongly disagree on using Facebook to increase student engagement. Only 37.6% of the students indicate that teachers and mentors should not use social media in classroom giving us a sneak peek into what the current generation wants with respect to the delivery of instruction and thus provide us an insight to adapt our instruction and pedagogy.

Social media as an educational scaffold possesses the most important characteristic of being collaborative. Hence seeing some of the members remaining purposely non-responsive is contradictory in nature. Another contradiction springs up when the members have responded '*no interaction with peers from other schools*', while in fact they have had discussions in the comment section. This is in agreement that these are 'weak ties' explained in Connectivism.

This study reveals that students perceive social media as a scaffold to learning experiences, especially more as one out-of-class learning resource.

Implications /recommendations

Given the ease of use of social media and its entrenchment in daily life, stakeholders of education should take advantage to enhance learning experience and critically practice the same. The shared videos, podcasts, blogs etc, on Facebook and other social media suggest an enriched scaffold for learning.

The onus lies on the educators to design effective strategies to integrate social media as a scaffold while developing teaching-learning situations. The findings may be a useful insight to the educators on directing the interactions towards collaborative learning. The responsibility of curating content on social media increases manifold and would need requisite skills. The educator has to ensure proper content analysis of the varied resources to be shared and devise a proper schedule of scaffold. It should be ensured not to make it another online testing platform. The educator has to deftly arrange the resources in view of the students' responses so as to enable learning. The educator has to remember to maintain the fine balance of restricting the discussions and keeping the platform democratic and open for the students to voice their concerns. It should be recognized that educators might need training in this aspect to make effective case of social media scaffold in education. The social media scaffold can effectively expand the learning beyond the classrooms.

Additionally, like all social media, Facebook group is characterized by 'information overload'. Accessing older posts though, using the modified search option and use of strings in Facebook makes it easier compared to other social media.

Educators should acknowledge the fact that teachers and students still do not consider 'friend'ing each other, trying to keep their personal virtual lives private. Thus, assurance of non-invasion in their respective private lives is mandatory and clarity of 'privacy' can avoid discomfort to both.

Limitations

The most important limitation of this study is that it is restricted to students of Mumbai and its suburbs. It would be worthwhile to investigate students' perception of social media as an educational scaffold in different geographical areas and academic years.

Though the group consisted of more than 75 members, responses could be elicited from 50 members in the time period of 1 month. Thus the response rate is approximately 66.67%. This could be due to being 'off' social media due to approaching exams. It could also be attributed to the tendency of 'lurking' or remaining passive, a major drawback of social media communication.

To summarize, it can be concluded that social media, especially Facebook has the potential to promote collaborative learning. Appropriate use of the social media tools with a in-depth understanding of its social dimension can make them a 21st century educational scaffold to support educational goals and outcomes.

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