Web 2.0 in the Classroom: Some Observations on Learning Platforms Used for Teaching English to the Students of Engineering in Arunachal Pradesh, India

Raju Barthakur

Assistant Professor,

Department of Humanities and Social Sciences,

North Eastern Regional Institute of Science and Technology (NERIST),

Nirjuli, Arunachal Pradesh, INDIA

Abstract: The advent of internet and emergence of social, professional and academic networking sites has propped up new opportunities to connect and communicate. The Web 2.0 provides enormous opportunities for teaching in an entertaining, informative and participative manner. But at the same time, it opens us to a number of concomitant issues ranging from privacy to systemizing the same in tune with the institutional (infra)structure. It also poses quite a few questions pertaining to appropriating these platforms for imparting classroom based learning to the students of the north east and utilizing it in a balanced manner to make learning effective and voluntary.

The paper presents an overview of some of these platforms used and some others appropriated in an experimental manner for teaching English to the students of engineering at different levels in Arunachal Pradesh. Being part of a current research, the observations in the paper are based on responses of the target group who have a fairly better access to internet and online portals in both web and mobile modes.

KEYWORDS: English teaching, Moodle, MOOCs, Piazza, Flipped classroom, Participatory learning.

1. Introduction

1.1 The advent of internet and emergence of social, professional and academic networking sites has propped up new opportunities to connect and communicate. The Web 2.0 and 3.0 provides enormous opportunities for teaching in an entertaining, informative and participative manner. But at the same time, it opens us to a number of concomitant issues ranging from privacy to systemizing the same in tune with the academic structure and institutional infrastructure. It also poses quite a few questions pertaining to appropriating these platforms for imparting classroom based learning to the students of the north east and utilizing it in a balanced manner to make learning effective and voluntary.

1.2 The classroom in any institution provides a heterogeneous mix of sequential/global, visual/verbal, and active/reflective learners. In order to make the understanding of the content maximal, 'one-style-fits-all' mode of teaching seldom helps. The onus is on the teacher to adopt a student centric pedagogical method to maintain the classroom attention span at a balanced rate and to minimize attention lapses. This has become a particularly challenging task given the fact that a student may undergo short multiple attention lapses with each span hitting at the 10th minute of a lecture. (Bunce, et al. 2010) The said study further estimates the normal attention span of a student lasts between 10-15 minutes, punctuated by lapses every second minute towards the end of the lecture. The result that we often encounter in the class ranges from blank and confusing looks to plain shock and surprise!

1.3 One of the possible solutions is to make the classroom dynamic and accessible anywhere, anytime. In the recent times, we have witnessed many successful projects taking off towards collaborative learning.Two prominent examples are Project edveNTUre launched by the Nanyang Technological University, Singapore and the game based e-learning portal Hi5 Cloud of the Hong Kong University. Another notable initiative is the corporate-academia collaboration of Apple Inc. through iTunesU which provides academic lectures, videos and other learning materials through Apple iTunes Store. The current pedagogic practices have embraced these technologies and platforms as an inevitable complement to the conventional teaching-learning method.

1.4 Synchronizing the pedagogic process with the adaptable and customizable technologies currently available provides innumerable possibilities to 'design' the classroom in a manner which is appealing to the learners. The reason for the adoption and huge popularity lies in a number of factors. The foremost of these reasons is the creation of a 'digital habitat' (Pohjola 2011) providing an ever expanding scope of 'ubiquitous computing' (Mark, 1999) through mobile communication and user friendly apps. Secondly, unlike the written medium, the electronic medium is dynamic enough as it facilitates framing, hypertexting, creation of instant threads in discussion groups and forums, multimedia incorporation, etc. thereby making it an instant 'medium of bonding' (Crystal) with its 'artistic and innovative dimensions'(Crystal). A gradual decline in the use of concatenated texting and multimedia messaging owing primarily to the emergence of Whatsapp, Line, WeChat and other platforms has further imparted vibrancy and openness on one hand and a calibrated de-hierarchization of the pedagogic process on the other.

2. Scope and Methodology

2.1 The scope of the paper is to provide an overview of the modus operandi as well as some of the common problems faced in the classroom while using these platforms. The paper is a part of an ongoing research involving the undergraduate students of engineering at NERIST, located in the state of Arunachal Pradesh. The students of the institute are required to study selections from

English literature along with Professional Communication as compulsory courses. Even with the use of AV slides and video clips, it was observed that the participation of the students in the classroom ranged from being minimal to low. Their written assignments too are dull and lacked in coherence of expression and arrangement of ideas. Lack of interest, understanding and effort were visible during their oral presentations as well.

2.2 In order to make them participative and generate interest on the course, we started experimenting with a number of platforms to share multiple perspectives on a given text. Branch based closed user-group communities were formed for one platform, use of mobiles and access to the internet in the classroom during the course of the lecture was encouraged. The students were asked to post real time updates which were later analyzed to check their levels of understanding and feedback was posted in the community page. Peer review in the synchronous and *open*mode and correction was allowed along with the posting of tweets and video links on the said text. Secondly, for the students having problems with grammar and vocabulary, they were asked to subscribe to VOA Learning English's Facebook page. Online quizzes on grammar and vocabulary were conducted at various levels and remedial measures were suggested.'Integration' in this context did not replace the conventional teaching-learning process, but it was added as a complement to it; the black or white boards were not thrown out of the rooms, rather these were boosted with the use of electronic boards.

2.3 The objective of the whole exercise was to make the power structure that exists in a classroom insignificant and also to make the students interactive and present their views in an unrestrictive manner.

3. Experimenting with Social Media

3.1 The first experiment towards making the classroom more interactive was to make Facebook integral to the teaching-learning process. It was observed that the average time a student spends on Facebook in a single login is 18 minutes with the global percentage of Facebook users in the age group of 18-24 is a whopping 98% (Statistic Brain, 2014).Further, scrolling through their timelines, it was found that the students upload anything that catches their attention on Facebook. Tagging too was (it still is!!) rampant among their peers. It provided them with the option to pass on information and share messages to their friends and peers. The content of information ranged from the quizzes to assignments, from exams to the mass bunking of classes. The content is shared in the form of images, texts, emoticons, meeps, pusheens and at times, in the form of unpronounceable gibberish as well. It provided them with a medium which is easier to access, informal and instant. Facebook has gained popularity in the recent times owing primarily to a greater user-control, voluntary participation and involvement, and a reach beyond the confines of the classroom.

3.2 We formed six Closed User Group Communities (CUGs) conforming to six respective branches of engineering. The administrative privileges of the group was vested on a student as well as the Course Co-ordinator. Supporting study material, texts, video representation of the texts (if available), audio and video lectures, podcasts, etc. are preloaded so that the students can access the same and prepare themselves prior to the actual lecture. They were also motivated to air their views on the material provided, ranging from the content to any other related material which they think could properly substantiate and justify the text or the topic that was taught. In order to make the participation uniform and compulsory, we made it evaluative initially with no insistence on grammatical or lexical correctness. The evaluator or the teacher plays the role of a passive observer usually giving input only when the discussion veers away from the proposed topic. The filtering of the data was done generally towards the end of the topic or text being taught and the relevant updates were discussed in the class itself.

3.3 The experiment has generated a few positive results. Firstly, students' inhibitions to participate in the classroom discussion have decreased resulting in an active two way communication. Secondly, new information and perspectives on any given topic started generating among students, drawing references and allusions to literature, movies, etc. thereby making the class dynamic and vibrant, instead of being a monotonous and dull one. This has also created a platform for both synchronous and asynchronous modes of peer correction, learning and communication. Thirdly, the filtered data has helped in creation of a customized and curated content which may be used and discussed for the subsequent batches.

3.3.1 However, we faced a few problems too. Firstly, Facebook provides more ways than one for a user to get deviated from the targeted course of action. The apps, games, sponsored ads, news feed, page and friend suggestions make the timeline cluttered and presents too many distractions for a student. Secondly, the mobile mode of Facebook (m.facebook) doesn't always help in opening the multimedia files resulting in the students missing out on the relevant materials. Thirdly, with a large number of online friends, the data flow too increases every second and thus, it becomes difficult to keep a track of the entire information flowing in, the changes and development. The result is an information loss and content gap amidst the huge gigabytes of data. Fourthly, lack of proper content management and open editability of the information results in getting the timeline clogged with many unwanted information, spams and ads. Further, there is no option to categorize the uploaded content into text and reference materials. Fifthly, with a huge amount of data, it is difficult to instantly locate information on the timeline as Facebook architecture doesn't support timeline search and finding information through activity log is cumbersome. Lastly, there remains the issue of privacy. The material we post online becomes freely available for anyone in the network and the same may be used in an unauthorized manner resulting in a compromise of personal information as well as intellectual property.

4. Experimenting with Piazza

4.1 In the current semester, for the course on Comprehensive Communication Skills, we are using Piazza, a course management platform which is marked for simplicity and non-distracting pages. Unlike Facebook, the course coordinator is required to *create* a class on Piazza by providing the course outline, the texts to be covered, the credit structure and the nature of the evaluations. The students have to be *enrolled* by having their email IDs added manually. However, if an institution provides the email IDs to the students with the institute's domain name, the students can *enroll* and *register* themselves and access the class page. The Course Coordinator uploads the material in the dedicated Resources page which provides an option to classify the content into 'Prescribed Texts' and 'Reference Materials.'

4.1.1 One of the major benefits of using Piazza is that it is less hierarchical and provides a better interactive level. Unlike Facebook, the users can participate in the discussion by being anonymous. Secondly, students and teachers share a common access level which helps in de-hierarchizing the classroom environment. Thirdly, it promotes a healthy collaborative atmosphere in the virtual room and the same gets extended to the actual classroom as well. One of the many positives we found with Piazza is its ability to capture class statistics in terms of responses and respondents, which helps in evaluating both the class based and home based assignments.The uploaded assignments are then evaluated using SEO tools for plagiarism and grammatical correctness.

4.1.2 Unlike social media, Piazza doesn't have many disadvantages. However, three problems stand out prominently. First, as it doesn't have a mobile mode of access, the concept of a mobile classroom fails. It's too closed an architecture requiring either a PC or a tablet to gain access. Secondly, the interface with multiple tabs and menu items can be a bit frustrating in the beginning. This also impacts in the smooth navigation between different sections. Thirdly, although the folder-based arrangement of the comments, discussions and responses make the content appear neat and easier to locate, we have observed that it appears unsettling to the users. The problem gets further compounded if one has to find materials from different folders as the portal doesn't provide a seamless cross navigation.

5. Experimenting with Moodle, MOOCs and other apps

5.1 The credit structure of the courses on English that we offer require students to write assignments, show their communication skills in GDs and other simulated sessions apart from appearing in course based quizzes. So far we have been following the conventional format of conducting course based quizzes (by distributing printed question papers containing MCQs, fill in the blank questions, one word substitutions, etc.) which the students were required to answer within a stipulated time frame. However, with this semester we have started using Moodle, an open source platform for e-classrooms. We have specifically targeted the quiz module which

provides an option for the students to go for attempting quiz questions within a pre-defined time frame. Further its ability to select random questions from the database ensures that each student gets a different question thereby eliminating the chances of copying. The pre-given answer keys help in getting the responses evaluated instantly with minimum manual intervention. The students get their scores instantly and with a minor tweak in the software, the same gets entered against their names in the final result sheet. Working with Moodle has proven to be least time consuming and easier to conduct quizzes and other class assignments.

5.2 Recently, we have experimented with recommending MOOC courses to our students. As a part of practice component, we cover courses on communication skills and usually we provide them with a short history of communication science in about 4-5 hours. However, for a change, instead of delivering a lecture on the same, we asked our students to log in to the University of Amsterdam MOOC on 'Introduction to Communication Science' offered through the Coursera platform. The response as well as the performance of the students in the assignments was outstanding. When we asked the students and tried to find out the reasons for the same, we found that as the lectures were evenly distributed into short modules, which can be replayed and downloaded, the students found it easier to understand and learn. Secondly, with instant online quizzes and assignments, the students were in a better position to gauge their performance and understanding of their content. With tremendous positive response by the target group, we intend to curate further content from the MOOCs and make it an integral part of our course. The students are already using the lectures and additional material from NPTEL, the electronic and video portal for online courses in science, engineering and humanities started by the IITs. So, the partial cross over from NPTEL to other MOOC did not provide much of a hurdle for the students.

5.3 The inflow of data traffic increases substantially before the examinations in all the portals and mediums we use. The students need more than their allotted time with their course coordinators in order to clear their confusions and seek further explanations on many topics covered in the class. While tutorial classes are allocated for this purpose, but in case of common courses with a large student attendance, the concept of tutorial takes a beating. In order to address this problem, in March this year, just before their mid semester examinations, we have decided to deal with the tutorials using Google Hangout. The students were asked to list their problems and branch based batches were formed. A single batch usually comprised of ten students or less and each batch was allotted 30 -45 minutes, preferably after 10 p.m. The students were required to log in with a gmail account, a camera integrated communication device and the list of questions/areas they wanted to ask and discuss about. In the process, the time and space got bridged and the students could clear their doubts with the click of a mouse.

6. Conclusion

6.1 Web 2.0 offers many options which cater to the demands of different category of learners. This is bound to take a giant leap with Web 3.0 which is currently being used by many portals. However, to maximize its benefit, it must move parallel to the conventional mode of teaching instead of overlapping it. Integration of technology in a classroom depends on three factors: access to network, access to device and access to content. It is generally the content where one is expected to be incisive and observant. It requires calibrated curation, balance and management, failing which the whole project of technology integration in the classroom may fail.

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