

Enhancing Teaching – Learning Professional Courses via M- Learning

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Abstract- Professional courses impose restrictions on teaching methodologies. Though not very theoretical in nature, following ICT techniques for teaching-learning professional courses will only cater to better presentation to the audience but not with the objectives being understood. Assessment techniques have to be evolved for ensuring the reach of such courses. And teaching-learning-assessing becomes less interesting when the traditional techniques are to be followed during online learning. It might be expected in the near future that learning will take place in versatile environments that are smoothly integrated into everyday life. This paper proposes a course management system for m-learning. This paper also discusses and shares the experiences in using mobile learning and innovative assessment methodologies followed for teaching-learning professional course, say Social and Professional Ethics of Information Technology, Pokhara University, Pokhara, Nepal.

Keywords – Professional Courses, m-learning, Ethics in Professional learning courses, teaching methodologies

I. INTRODUCTION

Learning environments will be motivating, social and connected to nature and to the local community and global society. To reach the goals of personalized, collaborative and informalised learning, holistic changes need to be made and mechanisms need to be put in place which makes flexible and targeted lifelong learning a reality. Educational Systems has grown exponentially to meet the demands of quality education towards possibilities to embed learning into everyday workflow. Predicting the evolution of emerging technology is, of course, a best guess scenario, in the digital world where learning goes mobile in the near future.

The advances in the sophistication of mobile technologies have catalysed the way in which mobile learning is being adopted and used in educational contexts. So-called smart phones offer myriad new capabilities and access to educational software thus eliminating wired computers and laptops from the field. The time is approaching when these tiny devices will be as much a part of education as a book bag which studies emerging technologies likely to have an impact on teaching and provides lifelong learning. As a virtual educational visit, this paper hosts the necessity of the technological advancements to teaching-learning professional courses via the design of course-management systems which can deploy educational resources. The use of mobile devices is here to stay and we can progressively accommodate this new platform to enhance our teaching and learning.

As a brand new trend emerging from E-learning, Mobile Learning technology is seen as a dynamic tool in facilitating the teaching, learning and research efforts among the lecturers and their students. Mobile Learning is a very timely and is in line with the aspiration of the Higher Education to further strengthen the move in creating alternative and dynamic instructional approaches, strategies, and techniques. Mobile technologies are usually associated with portable devices, which can be used in learning as the following: (1) intelligent tutor system, (2) simulators and learning tools as well as a pedagogy agent, (3) system device and resources, (4) communication device, and (5) simulation classrooms [20],[21]. In addition, there are two dimensions of mobile technologies [15]: (1) personal and shared and (2) portable and static. It also point out that there are six learning theories related to the use of mobile technologies: behaviorism, constructivism, situated, collaboration, informal learning and lifelong learning, and support in teaching and learning. Today's generation of students live in a world dominated by high tech devices, and they are eager to access information through technology. This use of technology enables them to engage in global networking [17].

A.1 Learning Paradigm shifts

The traditional “spoon-feeding” approach of teaching and learning is outdated. Education should change from the one-way knowledge transfer to interactive knowledge dissemination and generation. This plan focuses on fostering a paradigm shift in education through the adoption of a M-Learning platform so classrooms of today and tomorrow needs to get beyond the filtering mentality and set learning free

M-Learning brings a paradigm shift towards new generation of learners, where learning happens around them without their knowledge. It explores as a new field of pedagogical activity. Never in the history of the use of technology in education has there been a technology that was as available as mobile telephony for citizens in an information centric world [9]. Compatibility in learning with mobile devices is not much familiar with the current generation. In near future, hotspots have to be provided for ease access ubiquitously everywhere in the campus thus framing a virtual university. M-Learning provides more mobility, flexibility and convenience than online learning. But use of mobile technologies lead to a new quality of teaching and learning in terms of interaction, independence ,access, flexibility and cost.

A.2 M-CMS framework

The use of technology has been identified as an important element in educational systems. The CMS framework proposed in this work essentially addresses several important design aspects through a modular design approach and we have mapped the framework with the cognitive domain aspect of the bloom's taxonomy.

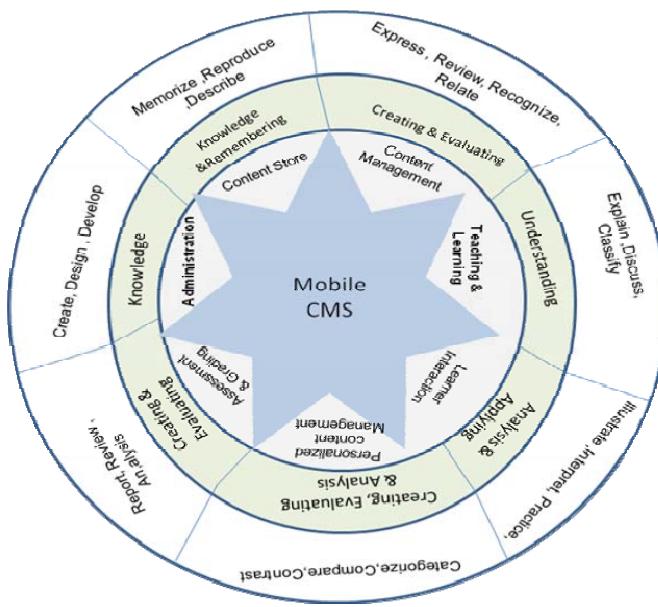


Figure 1. M-CMS Framework

The proposed framework (figure 1) will create, store, assemble and deliver personalized e-learning content. I have taken a sample course Social and Professional Issues in Information Technology, which comes under curriculum of VIII Semester Computer Science Engineering students at Pokhara University, Pokhara, Nepal (figure 2) and provide a case study on how the same can be conducted via mobile devices and social media. The outcome of the course will be the knowledge level of the learner gained through the course and also to fulfil learning objectives of the course.



| | | | | | | |
|------|--------|------------------------------------|---|---|---|---|
| VIII | CS9071 | High Speed Networks | 3 | 0 | 0 | 3 |
| | CS9072 | Semantic Web | 3 | 0 | 0 | 3 |
| | CS9073 | Scientific Computing | 3 | 0 | 0 | 3 |
| | CS9074 | Software Agents | 3 | 0 | 0 | 3 |
| | CS9075 | Network Analysis & Management | 3 | 0 | 0 | 3 |
| | CS9076 | Nano Computing | 3 | 0 | 0 | 3 |
| | GE9021 | Professional Ethics in Engineering | 3 | 0 | 0 | 3 |
| | GE9022 | Total Quality Management | 3 | 0 | 0 | 3 |
| | CS9077 | Real Time Systems | 3 | 0 | 0 | 3 |
| | GE9023 | Fundamentals of Nanoscience | 3 | 0 | 0 | 3 |

Figure 2. List of Electives

II. LITERATURE

PROFESSIONAL ETHICS COURSE USING M-LEARNING – A CASE STUDY

The aim of Professional Ethics course is to foster in students the competence of applying integrated knowledge with mobile technologies. Therefore, it is important to develop an integrated curriculum for teaching standard operating procedures in physical assessment courses through mobile devices. During the learning activities, each student is equipped with a mobile device; the learning system not only guides individual students to perform each operation of the physical assessment procedure but also provides instant feedback and supplementary materials to them if the operating sequence is incorrect. Students were given a wide array of choice for the type of group activities they should be a part of. Apart from group activities, some marks were set aside in each assessment for evaluating students individually for their creativity in bringing out issues related to ethics. While these activities promised the students a fun learning process, a good effort was taken to ensure that these activities also covered the syllabus as prescribed by the University from an examination point of view. In future, sensing devices can also be used to detect whether the student has conducted the activities correctly for assessing the current status of the student.

B.I. Student Perspective

Students, however, do not understand the extent to which their career as an engineer will be determined by the ethical and moral choices they make along the way. These choices would in-fact have more to do with their progress in the profession than their technical prowess. Majority of students mainly prefer taking up this course as their elective in the final semester as it is non-technical and would require them to devote less time as compared to core subjects. Their focus lies more towards finishing the final year project they are expected to complete, which occupies the majority of credits in the final semester. This course is unfortunately seen as a ‘relatively light’ course that would make their life easier during the remaining days at college.

This being the case, a textbook-based approach to ‘Professional Ethics in Engineering’ would scarcely appeal to students. An activity-based approach was, therefore, adopted to not only sustain students’ interest, but also ensure and encourage their active participation in class; at the same time achieving the University’s course objectives by giving them a thorough understanding of the various types of ethical challenges they may be confronted with and the factors that they should keep in mind while taking decisions.

B.2. Mobile Course Management System

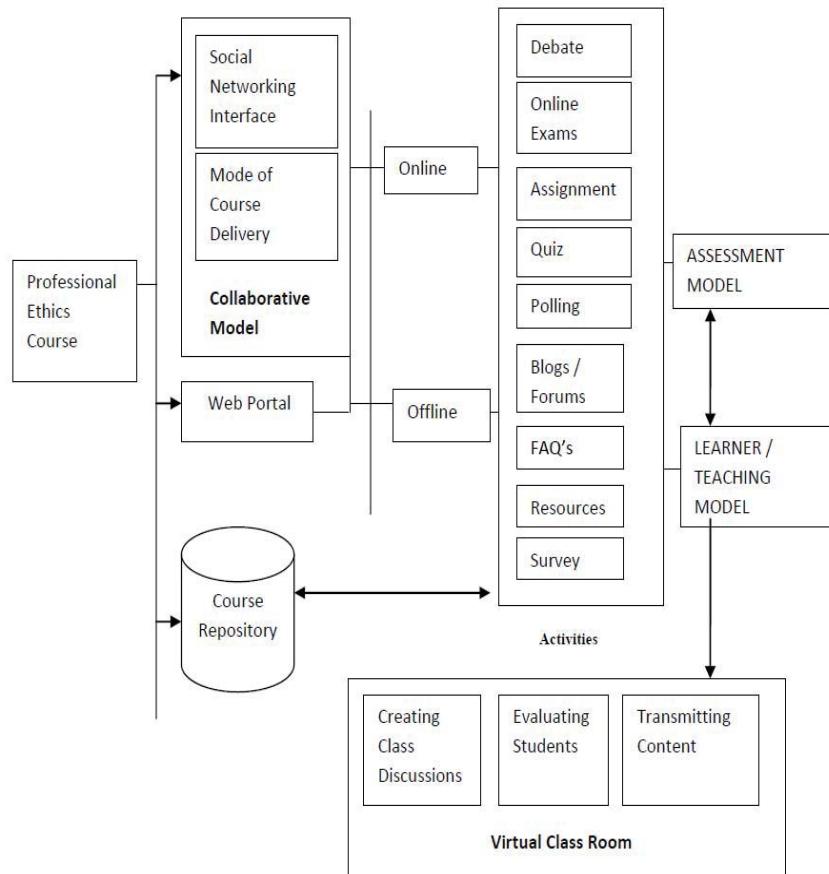


Figure 3. Mobile Course Management systems

The design of the Course Management Systems (figure 3) gives a pictorial representation of the course to accomplish the activities using mobile phones. The various features of mobile phones allow us to perform the activities both online and offline. The social networking interface plays a vital role for conducting the entire sessions collaboratively with the help of blogs / forums etc.

However, none of the existing CMS systems support the entire work flow associated with managing a course. For example, the widely used mobile apps supports online file submissions, but does not support assigning grading responsibilities, tracking re - grade requests, or group assignments. Thus it becomes very tedious at the faculty end to track the student performance. Hence with the current technology it is not possible to implement all the activities such as generating summary, preparing presentations, diagrammatic representations and also sharing of contents. CMS provide systems for recording assessment and providing feedback to learners. Moreover, it is worth investigating a better way of developing a user interface for better results such as options are provided for discussion forums, file sharing, management of assignments, lesson plans, syllabus, chat, etc. Research findings has to be shown for integration of the mobile application into CMS which can improve students' results and increases satisfaction and motivation for using mobile devices in their learning process.

III. PROFESSIONAL ETHICS, COURSE & ACTIVITIES INVOLVED

Students were given a wide array of choice for the type of activities they should be a part of (figure 4). The overall findings of the activities indicated that the students generally viewed Mobile Learning as beneficial and useful. This indicated a satisfactory level of perception of the use of mobile devices in learning. In terms of time management, the respondents held the opinion that Mobile Learning will better assist them in managing their time as well as paying much more attention to learning percent). This was because Mobile Learning provides great flexibility for students to manage their learning time .The various activities have been listed below with the examples. The summary of all the activities carried out is shown in table 1.

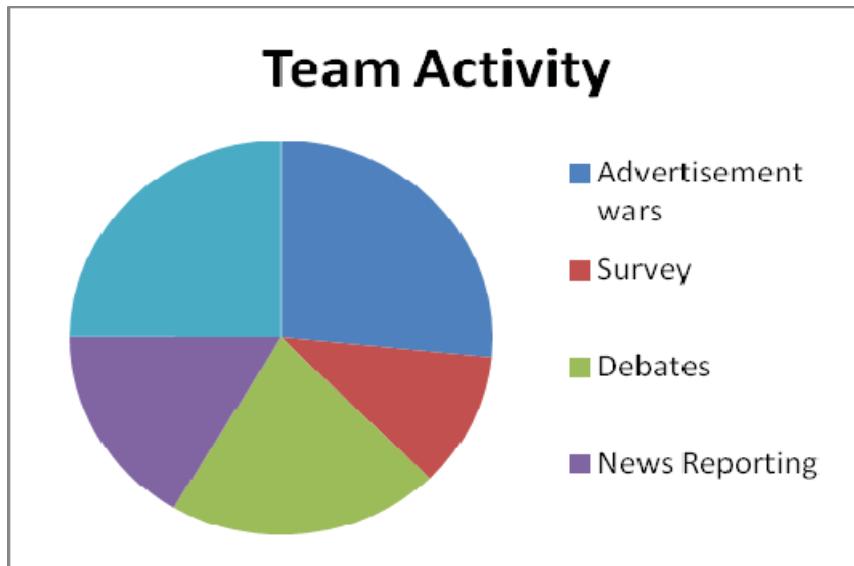


Figure 4. Participation of group activities among students

C.1. Advertisement Wars (Presentations) (Number of Team Members: 2)

There is a thin line that separates ethical and unethical advertising. For example, comparing two products in an advertisement could be ethical if the name of the rival product is blurred but the same ad could be unethical when the name of the rival product is in full public view. The Pepsi vs. Coke war is a classic example. At several points of their career, engineers will be expected to endorse and promote the product they develop and it is of paramount importance that they clearly understand the Do's and Don'ts of ethical advertising. The presentations were evaluated on the basis of the content, clarity of facts, supplemental evidence shown such as video clippings and pictures of unethical ads, quality of research on the events that unfolded and the repercussions of breaching the Code of Advertising Ethics.

C.2. Survey (Number of team members: 2)

When we see news reports of people being charged with criminal offenses, we tend to agree with the court of law most of the times. But when ethical charges are pressed against people, each one of us has our own opinion on the correctness of the verdict. Surveys were used to analyse the opinion of the students in the class on such issues. They were also asked to justify their stance and the best justifications were presented in class. For example, politicians of opposing parties have varied takes on certain issues, a recent example being the debate over the construction of a hospital instead of a library in a key urban location. While some students felt the proposal was justified, others stood up for the preservation of the library. Quoted below are two different viewpoints on the same issue by two students:

For the hospital: "Anything that melts down to someone's good without compromise of anyone's good... is good; even if it means for the compromise for library."

For the library: "Why the "specific" library? I am pretty sure there are lots of acres of land available which can very well put to this use."

"A hospital in such a busy locality is a bad idea. During emergencies, ambulances may find it difficult to overcome the traffic. The location of the library perfect as it is... close to the major universities and lots of schools in the area."

Students found it interesting to both give their opinions on matters of ethical conflict as well as understand the thought process of others who were for and against their ideas (figure 5). Surveys were conducted on ethical issues in several fields such as medicine (abortion, euthanasia etc.), education (uniforms, entrance exams etc.), television (reality shows) and so on.

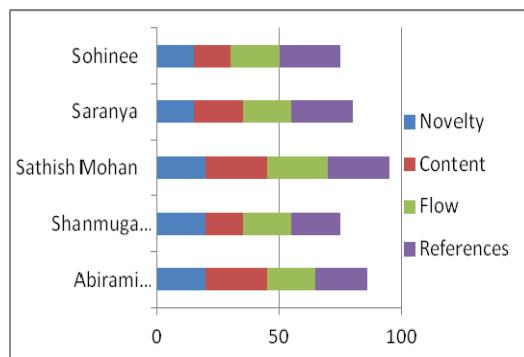


Figure 5. Student contribution to survey activity

C.3. Debates (No of team members: 4)

This activity was an on-the-spot activity conducted in class with no prior preparations. There were certain issues which made students feel strongly convicted about their stand. When presented with a topic, a team of 4 who were strongly supportive of the issue openly debated and countered another team that went against it. Some of the debates conducted were on Child modelling, Ethics in paper evaluation, Necessity of moral science classes, Ethics in social networking and Ethics in giving freebies. This activity was evaluated based on the strength of the points each team came up with to present their case and their ability to counter each point given by their opponents.

C.4. News reporting (Number of team members: 2)

News reporting involved the presentation of the timeline of a little known or unknown news event as it unfolded in history. The news event addressed several ethical issues and its future impact on the society was carefully analysed. The consequences that the perpetrators had to face were also put forth to the class. A very informative news reporting session was on proceedings of the Leveson Enquiry which was a two-part inquiry investigating the role of the press and police in the phone-hacking scandal, on 13 July 2011. Lord Justice Leveson was appointed as Chairman of the Inquiry. The Inquiry examined the culture, practices and ethics of the press and, in particular, the relationship of the press with the public, police and politicians.

The evaluation of this activity was based on the news event selected (the lesser known and more important the better), the use of aids such as mind maps and clippings to sensationalize the issue and a clarity of the timeline used to describe the flow of events.

C.5. Corporate Ethics (Number of team members: 2)

As a part of this activity, students analyze the ethical principles and moral dilemmas that come up in a business environment. Each team presents a case study about a Multinational company, the policies they use to handle various scenarios and the way they used these policies to manage scandals or controversies they were involved in in the past. The seminars conducted on corporate ethics also examine the ethical weight of the policies

of corporate in general, the way they implement them in business transactions, how much they are giving back to society and so on. Companies like Tata are known for their integrity and ethics and this has in turn contributed to the consumer's preference for the brand name "Tata". On the other hand, individuals like Rajat Gupta who was involved in the Insider Trading scandal has had his erstwhile unblemished reputation tarnished forever for violating the code of ethics to suit his personal gains.

| Task | Description | Social tool to achieve the task |
|----------|--|---------------------------------|
| Task I | Students were asked to write a survey paper on any ethical issue | Twitter |
| Task II | Students were asked to prepare a case study report on Corporate Ethics | Face book |
| Task III | Students were involved in a debate | Quora |
| Task IV | Students prepared presentations on Ethical awareness | Slideshare |
| Task V | Students presented seminars on ethical responsibilities and rights | YouTube |

Table 1. Summary of tasks that can be performed by students

C.6. Activities for individual assessment

Apart from group activities, some marks were set aside in each assessment for evaluating students individually for their creativity in bringing out issues related to ethics:

- i. News Bulletin: Students were asked to draft a News Bulletin in the format of an actual newspaper issue with articles on recent events closely related to ethics. The news bulletins were then circulated among students and greatly helped in increasing their awareness. Other than articles the news bulletins submitted also included advertisements, Letters to the Editor Columns, comics and crosswords centred on the theme of Professional Ethics.
- ii. Movie Review: Students were asked to analyse and give their criticism on various aspects of movies that had controversial content (for example, Dirty Picture, Vaanam, Fashion, Evano Oruvan).

| Learner Level | Corporate Ethics Presentation Activity | Learning outcome |
|-------------------------|---|---|
| Level 0 : Extraordinary | Terrorism. | Through social learning platforms, there are no cultural restrictions. Interaction surpass national borders, politics etc. When it comes to ethics, there is a lot of discussion about how a person's cultural background impacts his decision. For instance, someone from a liberal nation such as the USA may have a different opinion about enforcing death penalties as compared to someone from Saudi Arabia. Through such a platform, one learns a lot about the cultural diversity across the world, views of different kinds of people and their responses to ethical dilemmas. |
| Level 1 : Good | Need to ban Internet pornography in Nepal | Some technologies that one can use to promote this kind of activity based learning (ABL) via social media and effectively replace text books are: Blogging, Collaborative calendaring, Podcasting, Collaborative mind mapping, Micro-blogging/Micro-sharing, Photo sharing, Screen cast sharing, Presentation sharing, Video sharing, Collaborative editing and Collaborative presentations. Thus this kind of study creates responsibility among ethical activities |
| Level 2: Average | Need to abolish capital punishments | During the course of this activity there were a lot of online interactions that enhanced knowledge not just by reading theoretical explanations but also using informal learning material such as others' experiences. |
| Level 3: Below Average | Drug addiction | Due to the professional image the experts possess, a lot of credibility is associated with the knowledge gained that students find little need to question or verify the accuracy of what they've learnt. Any wrong information is immediately opposed by others in full view of everyone on the online interface. |
| Level 4: Poor | Reasons why Nepalese youth don't prefer entering into politics. | The real discussion and learning often occurs in the form of dialogue between peers in the form of comments that follow the post which creates a live environment |

Table 2. Enhancing Technology with learner feedback

Table 2 lists the learner outcome and feedback with respect to the various activities conducted throughout the semester which may help further to improvise the course to a greater extend.

Social network based learning is a long term process. So one must keep himself motivated throughout and must not give up in the middle. One may not get a solution immediately like in the case of classroom discussions. But it is an “out of the box” methodology and will help harvest more and innovative ideas. One must get accustomed to accepting different views and work on understanding how to draw the right conclusions. The behavioural pattern of the different level of learners is depicted below.

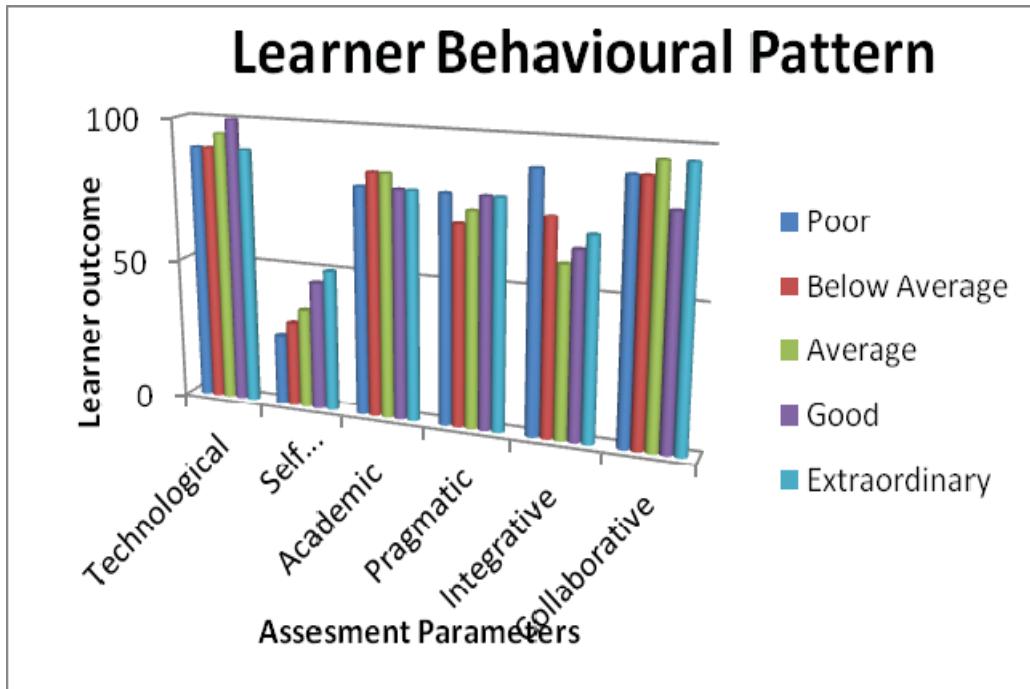


Figure 6. Behavioral Pattern of Different Levels of Learners

The various parameters taken into consideration are technological, self development; academic, pragmatic, integrative and collaborative (figure 6). Engineers must perform under a standard of professional behaviour that requires adherence to the highest principles of ethical conduct. In conformance to this, this course is directed at helping students:

- Identify the core values that shape the ethical behaviour of an engineer
- Utilize opportunities to explore one's own values in ethical issues
- Become aware of ethical concerns and conflicts
- Enhance familiarity with codes of conduct
- Increase the ability to recognize and resolve ethical dilemmas

Irrespective of the different levels of the learner, the activity based approach for teaching and learning professional courses serves to an equal extend which meets the requirements of the learners. A below average student could also perform extremely well in an activity compared to a bright student. Thus the technology enhanced learning has got the benefit of retaining any kind of learner for a long time.

IV. COVERING THE SYLLABUS

While these activities promised the students a fun learning process, a good effort was taken to ensure that these activities also covered the syllabus as prescribed by the University from an examination Point of View. The syllabus of the Professional Ethics course is given below for the reference (figure 7).

- During the course of this activity there were a lot of online interactions that enhanced knowledge not just by reading theoretical explanations but also using informal learning material such as others' experiences.
- The real discussion and learning often occurs in the form of dialogue between peers in the form of comments that follow the post.
- Due to the professional image the experts possess, a lot of credibility is associated with the knowledge gained that students find little need to question or verify the accuracy of what they've learnt. Any wrong information is immediately opposed by others in full view of everyone on the online interface.
- The posts can be viewed any number of times and this helps other students read, refer, re-read and understand the topic clearly and also give them time to form their own opinions.
- The physical presence of students at the same time is not a must as in the case of formal learning and this imposes fewer restrictions on the participants' schedules.

| | | |
|---|---|----------------|
| GE9021 | PROFESSIONAL ETHICS IN ENGINEERING | L T P C |
| | | 3 0 0 3 |
| UNIT – I ENGINEERING ETHICS | | 9 |
| Senses of 'Engineering Ethics' – Variety of moral issues – Types of inquiry – Moral dilemmas – Moral Autonomy – Kohlberg's theory – Gilligan's theory – Consensus and Controversy – Professions and Professionalism – Professional Ideals and Virtues – Uses of Ethical Theories | | |
| UNIT – II ENGINEERING AS SOCIAL EXPERIMENTATION | | 9 |
| Engineering as Experimentation – Engineers as responsible Experimenters – Research Ethics - Codes of Ethics – Industrial Standards - A Balanced Outlook on Law – The Challenger Case Study | | |
| UNIT – III ENGINEER'S RESPONSIBILITY FOR SAFETY | | 9 |
| Safety and Risk – Assessment of Safety and Risk – Risijs – Reducing Risk – The Government Regulator's Approach to Risk - Chernobyl Case Studies and Bhopal | | |
| UNIT – IV RESPONSIBILITIES AND RIGHTS | | 9 |
| Collegiality and Loyalty – Respect for Authority – Collective Bargaining – Confidentiality – Conflicts of Interest – Occupational Crime – Professional Rights – Employee Rights – Intellectual Property Rights (IPR) - Discrimination | | |
| UNIT – V GLOBAL ISSUES | | 9 |
| Multinational Corporations – Business Ethics - Environmental Ethics – Computer Ethics - Role in Technological Development – Weapons Development – Engineers as Managers – Consulting Engineers – Engineers as Expert Witnesses and Advisors – Honesty – Moral Leadership – Sample Code of Conduct | | |
| TOTAL : 45 PERIODS | | |

Figure 7. Professional Ethics Syllabus

People are increasingly engaged in informal learning via social networks. The traditional formal method of learning is the classroom setup with blackboards and books, which everyone is aware of. Technological advancements have shifted the scenario of learning to an informal one.

D.1. UNIT 1 – ENGINEERING ETHICS (figure 8)

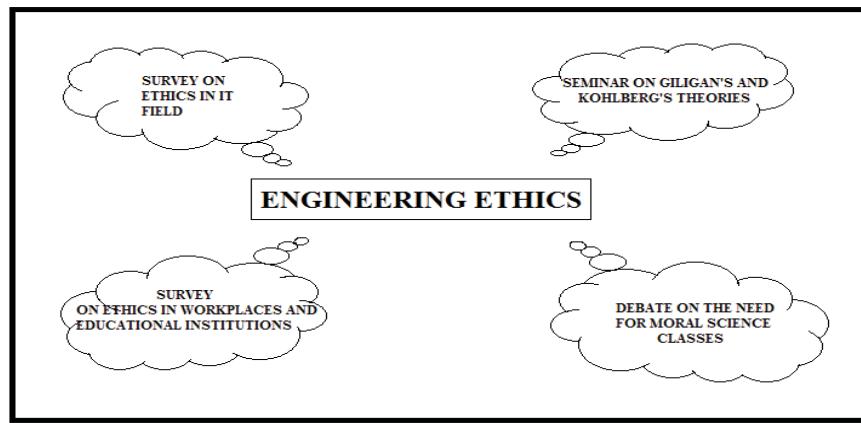


Figure 8 Engineering Ethics

In a well known scholarly debate that began nearly twenty years ago, Carol Gilligan challenged Lawrence Kohlberg's stage theory of moral development. Gilligan argued that by building his model on a sample of men, Kohlberg had failed to include the perspectives of women, and further, had relegated women to the status of deviants from the norm. A seminar was conducted in class to compare and contrast the views of both these scholars in resolving moral dilemmas. The surveys on 'Ethics in IT field' and 'Ethics in workplaces and educational institutions' helped students understand several moral issues that may be put forth to them in their career as an engineer and present their viewpoints on how to take decisions at these junctures. The 'Debate on the need for moral science classes' discussed whether imparting knowledge on the RIGHT thing to do should/should not be a part of formal education and whether such values can be 'taught'.

D.2. UNIT 2 - ENGINEERING AS A SOCIAL EXPERIMENTATION (figure 9)

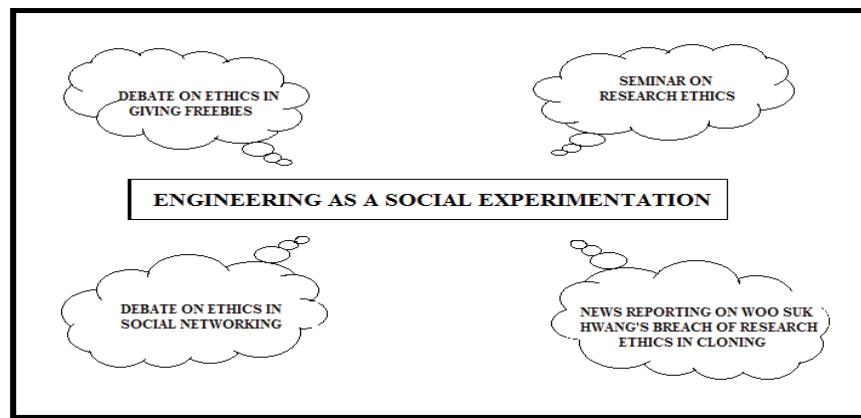


Figure 9. Engineering as social Experimentation

It is of utmost importance that engineers uphold Research Ethics. A seminar was conducted to discuss issues like plagiarism, gift and ghost authorship, fraud publication, data manipulation etc. A real life example to demonstrate the severe consequences of breaching research ethics was presented as a news report on the events that unfolded in the life of Dr. Woo Suk Hwang during his research involving human stem cells and cloning. An engineer's responsibility during experimentation was discussed during the 'Debate on ethics in social networking'. The loss of privacy that comes alongside social networking was discussed in detail. 'A Balanced Outlook on Law' - a topic prescribed by the University syllabus - was effectively covered during the debate on 'Ethics in the use of Freebies to attract voters'.

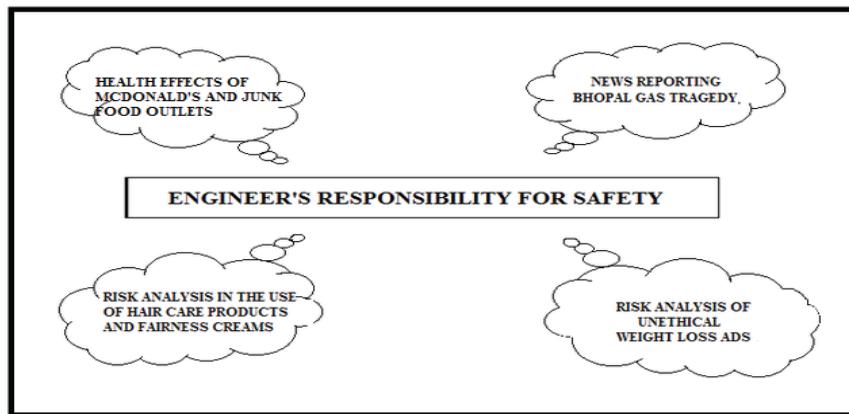
D.3. UNIT 3 - ENGINEER'S RESPONSIBILITY FOR SAFETY (figure 10)

Figure 10 Engineer's responsibility for safety

An engineer's main task is to develop. While he develops (whether it is a product, a program or a structure) he is responsible for the safety of the society and protecting people from risk. The news reporting session on the Bhopal Gas Tragedy focused on the horrors faced by people residing close to the factory and the several engineering mistakes that lead to a huge death toll. The various side-effects of products developed to promise fairness, hair care and weight loss and effects on health by junk food outlets such as McDonald's were discussed in detail. Engineers who played a part in such development had a heavy price to pay when the down-side of the products were proved in court with evidence.

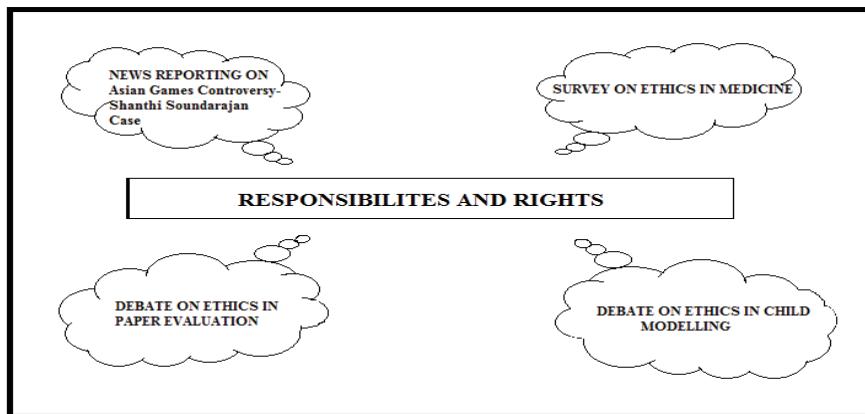
D.4. UNIT 4 - RESPONSIBILITIES AND RIGHTS (figure 11)

Figure 11 Responsibilities and Rights

Engineers have to be conscious of the need to pay heed to people's basic rights. There was an extensive debate whether children being asked to model for advertisements is a form of Child Labour. Students debated whether such an act was in open violation of the 'Right to Freedom against Exploitation' promised to every Citizen by the Constitution. Maintaining professionalism is an important aspect of professional ethics dissected carefully in the debate on Ethics in Paper Evaluation (for teachers) and the survey on Ethics in medicine (for doctors).

D.5. UNIT 5 - GLOBAL ISSUES (figure 12)

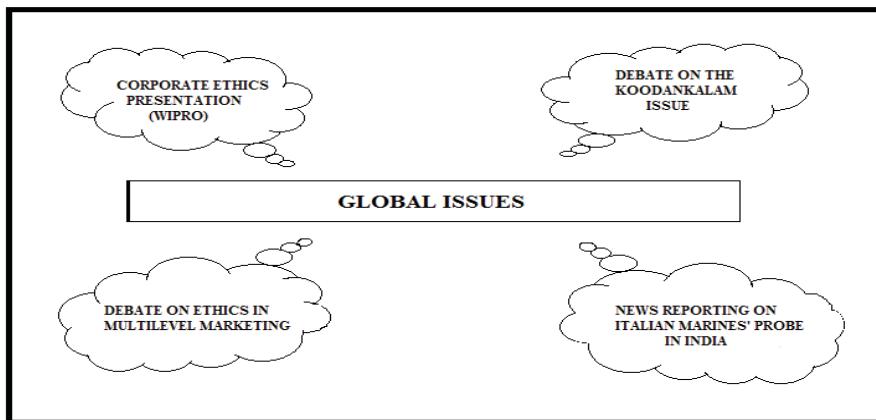


Figure 12 Global Issues

Very often, engineers aspire to set up their own businesses. Corporate ethics upheld by Multinational Companies and their corporate policies were discussed in class. A debate was held on 'Ethics in Multilevel Marketing' -an important aspect of promoting one's business- in which the sales force is compensated not only for sales they personally generate, but also for the sales of the other salespeople that they recruit. Recent news events such as the Koodankalam issue and the Italian Marines' probe that brought forward global issues were also debated presented in class. The debate on the Koodankalam Issue also emphasised on the need to uphold Environmental Ethics. The project, despite assuring increased electricity supply, receives opposition because of the number of people who will face health hazards for residing in the vicinity of the plant (more than 1 million people live within the 30 km radius).

| | |
|-------------------------|--|
| FOCUS AND UNITY | Comprehend and focus on a unified, controlling topic in a collaborative manner |
| APPROPRIATENESS | Select and use a strategy of expression that is appropriate for the intended audience and purpose. |
| REASON AND ORGANIZATION | Present a reasoned, organized argument or exposition. |
| SUPPORT AND DEVELOPMENT | Use support and evidence to develop and bolster one's own ideas and account for the views of others. |

Table 3 Performance Characteristics

The common characteristics observed among the students during the completion of the syllabus in the Professional Ethics course has gained a greater level of performance and has taken education a step further with technological advancements and could see the result of student involvement to a high retention rate compared to textbook approach in a typical classroom environmental set up (table 3).

As the final leg of the activity-based approach that was adopted for the class "Professional Ethics in Engineering", students were asked to analyse various ethical issues prevalent in the society using any form of social networking of their choice. We aimed to answer the following topics using their input:

V. ROLE OF SOCIAL MEDIA

E.1. Using social media platforms to support group collaboration

Community opinion is always invaluable. Crowd sourcing enables you to tap into the collective intelligence of others in a community and with social media this can be done at a scale never before possible. The avenues of social networking employed by students were: facebook, twitter and quora. Face book is often touted for its ability to create a community and Face book polls and surveys can be a great way to ask questions and provide you with valuable feedback. Lengthy feedback forms discourage frequent and immediate responses. Twitter, is limited to short responses and people have to think about their response because it is required to be concise. Quora is a

question-and-answer website, which works on group collaboration, created, edited and organized by its community of users. Unlike Wikipedia, Quora has questions answered by individuals. It places more emphasis on quality information and integration with social networks.

E.2. Using social media to monitor group members' individual contributions

Well-defined responsibilities helped in working asynchronously and putting together the combined efforts. The split-up proposed by most teams participating was of the form:
Team work to: a. deciding the social media platform(s) to be used; b. deciding the ethical issue to be analysed; c. Circulating/Promoting the page or post among people via social networking to harvest as many opinions as was possible.

Comparison and contrasting others' reasoning, opinions and conclusions helped endorse higher quality decision making, better problem solving and also increased creativity of each member. There was healthy competition to come up with the best conclusions and thereby contribute to a major portion of the analysis of the ethical issue. Since all the work was done online (Social Networking sites and Document Sharing platforms) and since the interdependence between the work done by each of the group members required constant data exchange, it was easy and necessary to ensure that there was constant progress in each individual contribution.

e.3. Using social media to facilitate assessment of students' contributions & learning outcomes



Figure 13 Social media

The activity of each student is effectively logged in social networking websites and teachers can be given access to this information for evaluating each student (figure 13). The same metrics mentioned for peer evaluation can also be used by teachers to assess the quality of individual posts. Besides this, the number of people following the thread or group or question is an excellent measure to identify the popularity and quality of the discussion as a whole. An example metric that can be devised by teachers for assessing the student can be the ratio of the number of people who followed the question to the number of people who viewed it. The higher the value of this ratio, the better is the quality of discussion.

The regulation of posts by the students should also be taken into account for their assessment. The scope of the activities can be diversified and the platform of presentation can also be changed with the encouragement of the use of social platforms like Face book/Twitter to express the views of students on a larger scale as well as soliciting the views of people who are connected to them in social networks. This can enable them to gather more opinions and create a healthy debate on topics pertaining to ethical values from different fields. Such a platform will present diverse views from like minded people in different fields from Medicine and Engineering to Law and Business hence resulting in interdisciplinary learning of ethical values through these exchanges.

Some technologies that one can use to promote this kind of activity based learning (ABL) via social media and effectively replace text books are: Blogging, Collaborative calendaring, Podcasting, Collaborative mind mapping, Micro-blogging/Micro-sharing, Photo sharing, Screen cast sharing, Presentation sharing, Video sharing,

Collaborative editing and Collaborative presentations. One can also bring in innovative ideas using a combination of these technologies to make the entire learning process effective and fun-filled.

VI. CHALLENGES IN SOCIAL MEDIA FOR LEARNING

The scope of the activities can be diversified and the platform of presentation can also be changed with the encouragement of the use of social platforms like Face book/Twitter to express the views of students on a larger scale as well as soliciting the views of people who are connected to them in social networks. This provides means of reaching out to people in a way like never imagined before. In order to have a more complete picture of any situation, we need different perspectives to debate and discuss the issue. Looking at each of the activities specifically:

F.1 Ad Wars:

The involvement of those closely involved in the ad industries and of the companies directly involved to explain the rationale behind their advertising methods would bring in an angle that is usually not heard by people. There could be online polls in different forums to gauge the reaction of people to each advertisement as well. There could be a follow up study done by the students to see the repercussions of unethical advertising and how it has affected consumer choices and how it has in turn harmed them. Students could also analyse if the sentiments of a particular section of people have been offended by certain ads.

F.2. Debate

So far, the debate activity was restricted to students of the class alone. While it has been very useful and informative for everyone involved, the voices of experts would lend more credibility to the debate. For instance, the debate about Ethics of Children participating in Reality Television could involve the participation of the producer(s) of those shows and also the parents of the children to explain why they made the decision to send their children to such shows.

F.3. Survey

The survey is always looked at and evaluated based on the size of the sample set of people who have participated. Here is where we can use online social networking sites to leverage the inter-connectivity of people to have a far wider response to the very same topics and present some of the most insightful comments in the classroom discussion period. What was sent as a Google Form by e-mail to the students of the class can be shared as a Face book poll to one's friends and by them, in turn, to their friends thereby reaching out to a large number of people.

F.4. News Reporting

The news reports presented as part of the classroom activity concentrated on past events. Another meaningful and proactive exercise would be to analyse day to day events as they occur and look at the current burning issues with an ethical viewpoint before the issue dies down. There is no shortage of news everyday pertaining to ethics in different fields but the problem is after the initial hype, most of the news are not followed up and are removed from public memory due to the torrent of news flowing every day. The news channels always broadcast what the hot news is for that present time from a business point of view. What students can do would be to not allow the issues which crop up to die down and look for answers and create awareness in class as well as college in the form of editorials to the college newspaper and by designing posters.

VII. CONCLUSION

This paper has presented a reflective overview of developments in mobile course management systems from the perspective of pedagogy. The challenge will be to discover how to use mobile technologies to transform learning into a seamless task where it is not recognized as learning at all. Integrated technology-enhanced courses seem to be more demanding for students and also for instructors.. In the future, the mobile CMS should cater for easy course administration, tracking facilities, targeted email facilities, reporting functions, assessments and statistics in a mobile friendly manner by hosting on cloud servers

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