KNOWLEDGE CONSTRUCTION AND SHARING IN A NETWORKED
COLLABORATIVE ENVIRONMENT

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Abstract
To stay informed, teachers would have to make a conscious effort to continue learning. In a networked environment, collaborative approach can be adopted for the purpose of knowledge sharing and knowledge construction. Web 2.0 and 3.0 technologies make possible peer interaction in a more systematic way. Teachers’ practical knowledge of the nature and know-how of interaction on social networks may give them ideas on how to apply the technologies in their classroom. The issue remains to what extent have these technologies been used to the best advantage of both students and teachers. This paper presents possibilities for collaborative works among teachers and students within and among different institutions. The paper emphasizes how the technologies can be used to conduct collaborative tasks outside the classroom, and in an authentic context. It demonstrates how facilities such as Second Life, Google Documents and Dropbox can be used to promote international collaboration. It also emphasizes the need to adopt the associated pedagogical practices when adopting the technologies in a classroom.

Keywords: collegial collaboration, networked environment, peer interaction, web technologies

1. INTRODUCTION
The last century has seen changes in teaching and learning approaches. There is a greater emphasis on student-centred learning particularly in situations where there is easy access to the technology. The advances in communication technology have influenced ways of accessing information, and hence learning. New platforms have emerged to complement knowledge transfer and provide learning environments [1]. There is a greater demand for anytime and anywhere learning approaches in this networked environment. Yet many teachers are ill-prepared to face the increased complexity of teaching and learning process.

One way of keeping abreast with the latest developments in teaching is by working collaboratively with peers in the same field. Teacher-teacher collaboration is essential to professional development. An effective collegial collaboration can help towards development of new skills and allows teachers to reflect on their practice, and co-construct knowledge ([2], [3]). It also increases their engagement in the project.

It has always been argued that students in various environments have different learning needs. The fact is, we, the teachers, do not stop learning, and we also have our learning needs. Learning does not have to take place in a formal setting. We may learn more from our colleague’s best practices. Colleague in this case is not limited to those working in the same office or the same institution. They could be working across the globe. Technology serves to provide the platform for collaboration among teachers from various geographical, political, social and economical backgrounds. It can be used to support communication among teachers from geographically dispersed learning and working environments.

2. COMMON SCENARIOS
Face-to-face (F2F) is not always easy to arrange even among those working in the same institution. They may resort to Facebook for socialization, and the institution’s Learning Management System (LMS) when teaching. Teaching materials can be shared on LMS. However, this is normally limited to those who are allowed access to the LMS. They would have to resort to other means when dealing with peers from other institutions.

Where teaching and learning are concerned, teachers can access the various Open Educational Resources (OER) to share their teaching and learning materials. MERLOT (Multimedia Educational Resource for Learning and Online Teaching) is one of the possible options. Teachers can upload learning materials that they created to be shared with others and download those produced by others.
In many circumstances, what is needed is a platform for discussion. Academics normally meet at conferences. A typical scenario is an exchange of business cards between them. An email will follow suit for those who have a common interest. Some may discuss ‘F2F’ using Skype. From here, they may start using Twitter to brainstorm each other on a particular topic. The two can read the messages on their mobile. However, the message that can be sent on Twitter is rather short. This limits the message that can be sent through this social network. They may opt to discuss more seriously on Linked-in which is a social networking website for people in professional occupations. Special interest groups can be created to discuss topics of interest.

Where research and publication are concerned, the academics would have to rely on other technologies. One of the possible collaborative writing technologies is Google Docs which allows its users to create, share and edit files. The system facilitates collaboration. Multiple users can work on the same file simultaneously. Users do
not have to worry about losing track of who has the most current version. The one file can be shared with all members of the group [4]. Users can always refer to previous files when the need arises.

Figure 3: A Snapshot of Google Docs

Google docs does not, however, cater to all the needs of an academic where writing is concerned. Users cannot write their comments on the text. Tables and figures do not appear as expected. To do in-text citations and bibliographies, the researchers/writers may decide to use Mendeley or Zotero. These are reference management applications to help the users save, organise and store their references.

Figure 4: A Snapshot of Mendeley
Dropbox is another popular option. Dropbox allows the users to share files. Figure 6 below shows files that are shared by the editors of a journal. Articles are deposited into dropbox. Members of the editorial board edited the articles together, and they can keep track on which article was edited based on the date and time stated on the webpage.

Figure 5: A Snapshot of Zotero

The presence of the technology also means that teachers in geographically dispersed environments can meet and discuss in virtual settings. One such setting is Second Life which is a graphically rich 3D environment [1] assert that the multiple communication channels and the 3D environment help in reducing barriers between students and instructors. It is a social space that allows both synchronous and asynchronous collaboration. Educators can ‘hang out’ and interact with multiple working groups. It can surpass the limits imposed by the physical world. The anonymous avatars encourage the owners to experiment in ways not possible offline [5].
Figure 7: A Snapshot of IIUM Island on Second Life

Figure 8: A Snapshot of Another Part of IIUM Island on Second Life
3. CONCLUSION

The technologies make it possible for educators to construct ideas collaboratively. As long as bandwidth is not a problem, users can work on a project simultaneously. Many collaborative tools allow academicians from different locations to co-create and change a document in real time. The experience in getting oneself engaged in knowledge construction can be extended to the students. The adoption of approaches such as project-based or problem-based learning may engage students in higher order thinking. Feedback from multiple peers can enrich their written assignment. Web technologies not only increase both teacher and student engagement, but also improve their writing and communication skills.

REFERENCES