



Virtual environment as a collaborative platform to enhance pupils' information literacy skills

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The Internet has erased international boundaries allowing our young charges the potential to develop as global citizens. Research studies have given good insights on the role of information literacy on the effectiveness of learning. However, very little studies demonstrate an effective implementation of programmes in virtual learning environments. The paper highlights how Beacon Primary School, one of the futuristic schools in Singapore, has implemented its Tamil Language programmes in a virtual learning environment thus providing a collaborative platform for pupils to meet and discuss issues. P4 Tamil curriculum and lesson packages are designed to infuse Information Communications Technology (ICT) meaningfully and make virtual learning a reality. Information literacy had been weaved into the P4 Tamil language curriculum with online Web 2.0 software, wikispace, PBworkspace, as the platform for collaborative virtual learning environment. This paper presents how the virtual environment acts as a collaborative platform to enhance the pupil's information literacy skills.

Keywords: Virtual Environment, Information Literacy Skills

Introduction & Purpose

Pupils are surrounded by a wealth of knowledge. Today, at the click of a button, students have access to events occurring anywhere on the globe within seconds of it happening. Given this scenario, it is critical that our pupils are equipped with the skill to connect, construct and relate the information presented. The virtual environment provides the space for collaboration amongst pupils. The virtual environment eases and enriches the process out of which meaning is derived from the multitude of information presented. The virtual environment also presents a knowledge-based forum for pupils to build on each other's contribution.

Today's educational system has to respond to two seemingly contradictory demands. On one hand, it has to effectively transmit constantly evolving knowledge and know-how to a knowledge-driven civilization. On the other hand, it has to enable learners with the right skills to select pertinent information out of the explosion of available information. It also has to ensure that the personal and social development of the young learner is catered for. Therefore "education must ... simultaneously provide maps of a complex world in constant turmoil

and the compass that will enable people to find their way in it” Delors (1996). This translates to a shift in focus for the amount and level of content taught in schools. It also calls for greater emphasis on equipping our pupils with relevant skills to pick out relevant information. This forms the basis of the nation-wide initiative of ‘Teaching Less, Learning More’¹. In today’s context, the ability to access, evaluate, organize and use information in order to learn, problem-solve, make decisions in a formal and informal learning contexts are an integral part of their learning. A key characteristic of the lifelong learner is strongly connected with critical and reflective thinking.

Information communication technological tools are constructive tools that provide a collaborative platform for pupils to come on board and build on each other’s knowledge. “Constructive tools are general-purpose tools that can be used for manipulating information; constructing one’s own knowledge or visualizing one’s understanding” Lim & Tay (2003). Jonassen, Carr & Lajoie (2000) purport the following constructivist approach - “ICT as mind tools for constructing evaluating, analysing, connecting, elaborating, synthesizing, imagining, designing, problem-solving, and decision-making.” The term “constructive” stems from the fact that these tools enable students to produce a certain tangible product for a given instructional purpose. This paper takes a reflective, narrative approach in documenting our attempts to integrate the virtual environment as a collaborative platform in enhancing pupils’ information literacy skills. This paper is my attempt to share possible strategies in integrating information literacy into our daily lessons. It is through such sharing and exchanges where ideas could build upon ideas to further push the boundaries of our pursuit for pedagogical break-through in this fast changing world. The paper examines how the integration of information literacy into Tamil lessons may improve the Tamil language competencies of the students.

My Reflections

One of the key themes in the Primary 4 curriculum revolves around the topic of ‘My Country’. The broad objectives include exposing students to the various issues that surround the country. The lesson design is tailored to educate on the various national issues, including the importance of tourism and consequently make logical connections to the implications and impact it poses to Singapore’s economic growth. The lesson was planned and carried out via the virtual learning platform as a collaborative platform for pupils to virtually meet discuss and develop their knowledge on the issue.

The discussion began from an article on Tourism from the Singapore local Tamil newspaper, Tamil Murasu. The teacher posted questions adopting the Blooms Taxonomy to scaffold pupils’ skills up to the different stages. Relevant links for extended learning was also provided. These links however, was in the English language. Pupils were instructed to explore these links independently and gather pertinent information. They were subsequently asked to present them coherently in the Tamil language.

Pupils were taken through three main stages:

- 1) Connect – refers to the understanding of the article/ information presented.
- 2) Construct – refers to the pupils’ ability to comprehend the information, build on possible relationships and extend their knowledge and understanding from the information presented collectively in the platform.
- 3) Relate – relates to the presentation of collective information, analysis, synthesis, evaluation and creation of new perspectives from the issues presented. The following section details the activities conducted as part of each of the stages.

¹ ‘Teach Less; Learn More’ (TLLM) is a call for schools and teachers to focus more on the active learning of students and the construction of their own knowledge.

1) **Connect:**

- Pupils were asked to highlight the keywords and use the mind mapping technique to identify all the important points in the article.
- Each pupil is to contribute one finding from the article via online postings.
- Pupils also verified their friends' understanding of the article and their related thoughts.
- If there was a misunderstanding of aspects in the article, the responsibility lay on fellow mates in the team to post a more accurate interpretation of the information.
- The teacher acts as a facilitator to ensure that pupils connect with their ideas.

2) **Construct**

- Pupils paraphrase, translate or give a short summary to express their comprehension of the article and the related issues.
- In response to the questions raised, other members in the class contribute and build on one another's ideas via the platform.
- The pupils' understanding of the content matter becomes apparent when they are able to identify relationships amongst ideas posted.
- Pupils also tap on prior knowledge to build on these ideas.

3) **Relate**

- Pupils are challenged with questions that require them to analyse available information and find logical patterns.
- Pupils then evaluate the information and relate it to the current situation and seek new perspectives and understanding.

Pupils were observed to be very engaged and used the language appropriately. However, there were instances where pupils used English language to express their ideas, instead of Tamil. Although pupils were strongly encouraged to use Tamil language, weaker pupils who needed to resort to code-switching to express their thoughts, were not discouraged. The other pupils in the subsequent postings helped to translate these ideas. This created a win-win situation for pupils to tap on and maximise each other's strength and to learn collaboratively.

As part of the school ICT program, pupils were introduced to search engines and were guided in searching for the relevant information. Pupils were also taught principles of cyber-wellness and exercised civic respect in contributing ideas and in providing feedback and comments in the online platform. The contributions of students to the discussed topic and the postings of links leading to other related information was motivating. Even students who were less proficient in the language displayed interest in contributing to the discussion. Their posting displayed the collective understanding of the various points contributed in the platform. As all pupils had to work with their own personal learning, the learning was seamless.

The second extensive discussion took place after Japan's natural disaster. Pupils were exposed to this information during the morning assembly programme. As an extension an article from the newspaper was selected for online discussions. There was an intense discussion amongst pupils including the implications to the society and country. Pupils related the probable consequences. They were able to relate chain actions that would take place because of this disaster. Pupils used the Internet search engines to look up for latest update on the disaster such as on the British Broadcasting Corporation (BBC) news website. It was gratifying to note that the students took it upon themselves to update one another on the latest developments. In addition, they discussed and evaluated the situation and thought about the loss of those affected and the possible implications on their lives. It was heart-warming to note pupils expressed concern and empathy for those affected.

Discussion & Conclusion

Technology is used as a constructive tool to facilitate pupils' learning and making sense of their learning via a collaborative platform. Pupils' engagement was evident throughout the discussion. They were critical about their contributions and took great responsibility in actively using the net to search for information to enhance their learning. The project had benefited even pupils, less proficient in the Tamil language, who was observed to be actively contributing ideas. There was sincere commitment on the part of the students. They also showed initiative in providing additional links and support for others to make sense of the issue. This helped to bring out the best in each pupil. Pupils in addition, expressed positive feedback. Every pupil contributed and has equal share in collaboratively constructing the knowledge, thus the ownership was very strong amongst them. This was a demonstration that young age is not a barrier in understanding world issues if it is tailored to meet the needs of the young learners. What really matters is whether pupils are equipped with skill to understand the implication and impact of the issue discussed.

In terms of skills, all pupils were able to sieve out and decipher the main points from the information presented and build on this information. Through this communication, it was observed that pupils had tapped on prior knowledge and experience in developing their alternative perspectives. Pupils learned to use the information and ideas presented in a graphical organising format to organise ideas. Pupils exhibited strong bonding and collaboration during the various collaboration sessions. The usage of technology was pervasive and as Breivik (2000) puts it "Information literacy (is not)... teaching a set of skills but rather a process that should transform both learning and the culture of communities for the better."

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