

Use and the Impact of Information Technology in the Teacher Training

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Abstract

Technology ought to be harnessed to enhance a lesson rather than be essential for teaching. It can assist students, especially those learning Tamil as a second language, to realize the beauty and joy of speaking the language. The media and IT based unique technological devices that have been used for second language teaching and learning proved as potential and effective tools (Rafael Salaberry M., 2001 & Zongyi Deng et al., 1999). This paper highlights the IT and pedagogical based research initiatives carried on at the National Institute of Education (NIE) on Teaching and Learning of Tamil Language in Singapore.

National Institute of Education and its Parent organization Ministry of Education in Singapore are enhancing and harnessing new ways of using IT to improve the quality of Education in Singapore. The convergence of interest shown by researchers in implementing new methods of teaching Tamil using IT has been welcomed by educationists here.

By adapting and encompassing IT resources and software, the National Institute of Education is constantly improving the quality of IT teaching in Tamil. IT has been used widely in Teaching Pedagogical, Literature Modules and in a module on the Use of Language in Singapore. For example, Web quest, Video conferencing, Multimodal resources creation, Learner based curriculum production, Group investigation, Digital Story telling and Corpus data bank is in use. By looking at some of the good practices developed in the field of this technology, the institute is creating new materials which will help students learn Tamil in a fun and interesting manner.

NIE also focuses in the design and development of new methods through research and monitors the problems that arise. By conducting pre and inservice courses for Tamil teachers, the feedback from their set of practices also help to set a new strategic position for improvement in the system of teaching which will help in the progress of the Tamil Language worldwide.

Since IT has boomed into many aspects of our lives and education, it is necessary that it covers the vast areas of our teaching in Tamil as well. Thus all this research initiatives and journals will help us in keeping Tamil abreast with IT.

Introduction:

It is no doubt that technology is a communication tool in our lives today. What is amazingly most amazing is that this type of technology is not only modernized but also provides us with information that we do not know, and hence, benefits us.

Amongst the communication tools created by Man, IT related tools rightly accomplish the network goals such as announcing, knowledge feeding and inner happiness. In countries like Singapore, not only is the dominance of technology significant but also the impact. In

Singapore's education system, IT has been playing an important role in various levels. Definitely, Tamil language is no exception.

In Singapore, students take English language as their first language and take Mandarin, Malay or Tamil as their second language. How is this technology used in Tamil then?

After the stage of memorization and teaching through class representative or leader, blackboard and chalk pieces came about. After which, teaching tools; such as keyboard, computer, smart board, and Tablet PC that consist of computer and mobile phone provide students with the language benefits in class. Tamil letters, Tamil songs, Tamil vegetables, Grandmother stories, are all being sold in the form of CDs/DVDs even in today's commercialized level, and all these have; Tamil's nuances, the beauty of pronouncing in Tamil, vocabulary building in Tamil, India's nature as well as the beautiful Tamil spoken by qualified hosts in their native language that provides a feast for students who hear and view them. Here, the beauty of the language and the benefits of its nativity are displayed in a manner that students can know about. In this stage, we shall see how information technology is used in teaching and learning, at National Institute of Education that trains teachers, who teach Tamil.

Tamil Language Division at the National Institute of Education

NIE, the only training college that provides training for teachers' of Ministry of Education, has 13 academic groups in which Asian Languages and Cultures is one such division. Here, there are Mandarin, Malay and Tamil divisions that teach the respective languages. In the Tamil section, there is a two year training programme for Tamil teachers, who are under the Diploma in Education classes, and also a ten-month post-graduate Degree in Education is being conducted for them. Other than these, there are Foundation Programmes for students, who excel in their Mother Tongue, teachers taking four years training also have special training curriculum for the first two years. This is where students will spend their two years in in-depth knowledge enhancement and in the next two years, they will join the students in the Tamil section taking Diploma in Education.

Under the program that encourages a specific percentage of teachers of the Ministry of Education to study Masters, teachers join in the evening classes and even attend classes during their holidays. Masters and PhD classes are also being conducted. To further enhance the talent of current teachers in pedagogy, trainings are also conducted in between work. We shall now view the significance played by IT in all these programmes.

Pre-service courses and Information Technology

Student teachers who study for two years have their content-filled lessons saved in the computer and used during curriculum. Also, computer related fundamental training, lesson related internet searches, those festivals celebrated there, are recorded and saved, and all these are used during discussions in classes. Speeches by both foreign and local speakers, as well as Literature, education and culture related presentations that are available in the market are used as additional lesson materials.

Through the means of computer, students are able to produce their studies related assignments. A good example would be creation of their own websites. Student teachers under the Tamil section, learn their content-based subjects such as Literature and Language, in a manner to also receive related explanations. The lecturers also use computer and IT in

order to help the student teachers to enhance their talents as a teacher. Tamil Language, Civics and Moral Education, and Tamil literature- the related teaching and learning of subjects allow Tamil to be known, understood and criticized by the usage of textbooks along with IT. Here, IT has attained a vital state in teaching and learning. Besides, IT is greatly used by teachers to realize how teachers can enhance Tamil in their career, through the four stages – listening, speaking, reading and writing. Below are some examples:

*Web quest	*Action research approach	*Student package for students' self paced learning
*Multiple Intelligence	*Task based approach	*Learning package to learn with teachers' guidance
*Multimedia functional approach	*Group investigation	*Assignments produced and submitted via computer
*Multimodal approach	*Digital storytelling	

In order to capture the students' attention in the best way, at the start, middle and end of the lesson, and to channel their thinking, so as to attract them to the lesson, both old and new movies are segmented and compiled into small clips so as to be saved. The use of IT can be seen here too.

Currently, NIE's blackboard that is a computer tool, allows students to download their lectures along with; blogging, podcasting, webbing and chatting. The week before the student teachers start to teach, other than students discussing lesson related issues, the Safe Assignment method in use, also helps to keep track of the commitment of the students, and how they will produce and submit their assignments according to the guidelines provided. However, the worrying issue here is that Tamil does not have Safe Assignment method. When comparing Tamil with other Mother Tongue Languages in Singapore, for international human language, there are facilities; such as OCR and voice recognizer. It is needless to say for Malay language as their font provides them with a great opportunity. For Tamil, it has the newly provided and introduced Unicode font, Murasu Anjal Version that is now either showing numerous new faces or dimensions. Amongst the few is that in Singapore, either each individual or each department used to have one computer input system. However, it has now changed to everyone using T99 keyboard and Unicode fonts to type. It allows to be used in various ways; previously used insertion of typed documents to be viewed through Unicode fonts, downloading of data in Tamil from the internet, and to know the impact of Tamil. It also has a dictionary feature that allows one to find the meaning of Tamil words in either Tamil or English. So far, in this small island, Tamil teachers who have been separated in various ways in Tamil typing will now have the Tamil society using one computer language to converse and to socialize. Moreover, the newly standardized software will allow students to use Tamil conveniently. This invention that came about after three years of hard work is now used for training in NIE.

For students to excel in their second language, it is essential that they build their vocabulary list and use language in the motive of using it. In that way, software containing vocabulary games can be created and demonstrated in a manner that is suitable for students. This software can be also used to enhance students' enjoyment in listening to spoken Tamil. The students can listen at home to an edited passage that is recorded in spoken Tamil and make use of

known and unknown words from that passage to replace the words they use every day in their speech, composition, and other assignments. They can also use it for writing for various levels of daily life, by sharing it with many through the computer; and presenting Tamil assignments through computer. Receiving assessment by recording views on a particular occasion, through podcasting, use and view numerous creations through YouTube, accessing them, thinking of how they can be partly or fully be used, how to create one that is better off, which all shows computer's use.

At NIE, under the method of resource development, students and teachers produce many new creations that are in effect by working in conjunction with schools. Here, we can see this occurring in the background of Singapore kids, for them. At the same time, this is of much help for students living in countries like Singapore that is multi-racial, multi-cultural and multi-language. This is due to us having known more of others rather than ourselves, in many instances. That is not wrong. However, it is greatly wrong of us not knowing ourselves. That too, in a country like Singapore, when children think that their previous generation has prepared everything for them and has laid the path for them too, and when they grow into teenagers, if the facilities they require are not there, then the fault is ours. Hence, in order for us not to face a similar state, it is true that IT does help. Lee K Y (2004) states that "English was necessary, given Singapore's multiracial makeup and given the access it provided to international trade and technical know-how. The mother tongues on the other hand, anchored Singaporeans in their Asian roots and values"(Laurel Teo, 2004: 1). This is the emphasis, our Tamil teachers would like to stress among the students. At the same time, the students who are the netizens of 21st century compare their Tamil class with their English class and the same goes to the teaching materials. Although English has many innovative IT resources, it is time to build in Tamil too with the limited financial, manpower and professional support. Based on this, currently our trainees are producing the resource bank and add on with the existing resources. When using IT, it is vital to know which, is effective in it. Instead of transferring a word document into PowerPoint and make it as a powerless point, teachers can use it with pure effective engagement. Here, the September 11th World Trade Centre Crash is a good example for using media / IT to its highest stage. That particular strength is compatible for TV and computer than the newspaper or radio (Mahizhnan Arun, 2002). Hence using it in an innovative and influencing way is very impactful and useful.

In second language learning, corpus data plays a critical role. Recording the native, first and second language learners' voices or conversations and use it to teach or give it to the student as a homework and listen to it at home, will provide tangible benefits.

For building up the vocabulary, to understand the culture, identity and grammar, digital story telling is a suitable form of teaching materials. This has multimodes for the senses of the learner and to capture his attention towards it. Bringing the cultural artifacts, discuss about it and use to build their digital story telling, the Dip Ed II trainees are currently involved in it. It is because; teachers have to capitalize the digital tools to capture themselves and their students' prior and current knowledge to develop themselves as global elites.

Due to video conferencing, teaching of lessons in the class has changed; lessons are now in a manner whereby individuals can sit at a preferred corner and study. At NIE, two lessons were conducted in this method, in a manner of studying during a lesson, where the lecturer sat in one corner as the student teachers sat at their homes. Later, changing from the usual accessing method, alternative assessment is adopted or is in a producing manner, where educational tour

related assessment tools are in the process of being created. These are all some of the examples. The explanations of photos related to these will take place after photo shoot.

In times of nationwide health threats such as SARS and H1N1, students can learn from home, through the means of IT. This method also took place in Tamil, along with the school education system, several computer companies provide students with education tools that allow them to learn Tamil through the computer. For this, money is deducted from students' Edusave for education to take place.

Conclusion:

Tremendous amount of literature (Gopinathan S., 1999; MOE, 2005; Seetha Lakshmi et al., 2005; Klein, R.R. Rogers, P.C. and Zhang Yong 2006.) has argued for the pivotal role of IT in second language education. As Gopinathan S and Saravanan V., pointed out, Globalisation has changed the economic activity forms and provided new opportunities. Especially countries like India showcased its IT talents and created new wave in the job market and in the other domains with their talents in biotechnology, banking and biomedical (2000). This goes true with the Tamil trainee teachers who are IT savvy. With their bilingual talents, I have used them to create digital story telling which are very essential for the learning of Mother Tongue in a multicultural and multilingual society. These trainees will be using their language and IT based talents to make the school students adapted to the language learning. Ministry of Education has invested heavily in Information Technology through its Three Master Plans for ICT in Education (1997-2002, 2003-2008, and 2009-2014) and we could witness the impact of it even among the Primary one students. Schools provided the IT support to the students with blogs and face book facilities and it is true that these kids are conversing through IT than anything else.

Due to the above stated various reasons or initiatives; from those who now study pre-school till to those studying Masters, and PhD, they have received many contacts by themselves in Singapore – blog, website, YouTube picture and face book. At the same time, there is no day that the heart yearns to know when will the day come, when there will be a way to install Tamil into our mobile phones and use it carefree.

These are a few, and it is important to understand that creating and using IT will not produce a better second language learner unless the teacher has the passion, background knowledge of IT and the customers i.e. students. No matter what happens, though it is acceptable for one student to use either one computer or one machine in their individual life, when it comes to a class, one machine is used by many, who jointly speak, work and use it to learn knowledge, discussion and engagement that has to do with enhancing education, human progress, social understanding, and multi-understanding. It can be said that positive interdependence based lifestyle is strengthened.

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