

# Technology Integrated Education – Shaping the Personality and Social Development of the Young

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**Abstract**—There has been a strong link between computer-mediated education and constructivism learning and teaching theory.. Acknowledging how well the constructivism doctrine would work online, it has been established that constructivist views of learning would agreeably correlate with the philosophy of open and distance learning. Asynchronous and synchronous communications have placed online learning on the right track of a constructive learning path.

This paper is written based on the social constructivist framework, where knowledge is constructed from social communication and interaction. The study explores the possibility of practicing this theory through incorporating online discussion in the syllabus and the ways it can be implemented to contribute to young people's personality and social development by addressing some aspects that may contribute to the social problem such as prejudice, ignorance and intolerance.

**Keywords**—Educational Technology, Internet, Personal Development, Student Exchange

## I. INTRODUCTION

**T**HOUGH people today are believed to be more open-minded and accepting of the differences between their fellow citizens, blatant acts of prejudice and racism still exist everywhere. In the current international climate, hatred and angers are often expressed candidly frequently through the electronic media which has resulted in animosity between races. Out-spoken people express their anger openly, the less vocal people feel suppressed and frustrated by their limitations in self-confidence or maybe in their command of language. This naturally leads to outrageous retaliation.

There is an obvious need for communication between the different communities, to discover and understand what is outside their immediate circle, as Lesser [1] has observed:

“Much of the Muslim world regards the West with barely concealed contempt. Too much freedom. Licentious women, soaring suicide rates, mental illness and divorce. A culture of greed and decadence. Equally, many in the West see Islam as barbaric medieval faith, one which sanctions death by stoning and the complete subjugation and brutalisation of women. On both sides, there is massive ignorance and prejudice. On both sides, a need for urgent dialogue”

Being physically separated can makes it harder for people to get to know one another, “Men often hate each other because they fear each other; they fear each other because they do not know each other; they do not know each other because they cannot communicate; they cannot communicate because they are separated.” [2]

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At school level, students exchange program is seen as one way to nurture the young on understanding and accepting people from different walk of lives and believes. And in the light of the current political climate, the program can be one of the means to overcome racial differences.

## II. STUDENT EXCHANGE PROGRAM – THE BACKGROUND

Student exchange as a collaboration between schools from different countries is not new in education environment. It has been decades since this program has been practiced by schools. In Malaysia, one of the criteria for schools to make it to the list of High Performance School is to demonstrate strong network with local and international schools. Many schools are actively involved in advocating the international student exchange program with the support of the Malaysia Ministry of Education [3]. One of the identified functions of New Zealand's Ministry of Education is to approve and monitor the school to school exchange program in New Zealand. Information, guidelines and application forms are made available on the ministry's website for the organizers to refer to[4]. The Japanese Ministry of Education, Culture, Sports, Science and Technology has also acknowledged student exchange as a way of cultivating “an intellectual international contribution through the education and training of human resources and related projects”. The program is seen to be important in developing a nation which is opened to the international community [5]. It is apparent that the student exchange program has long been established as part of the educational activities in schools worldwide.

Studies have shown that an internationalization program such as students exchange program promotes awareness to the different cultures in society and enriches the young's learning experience.[6],[7] However the limitation from the perspectives of budget and logistics often result in not every student will have the chance to experience the student exchange program. [8]

## III. ONLINE STUDENT EXCHANGE PROGRAM – A DIFFERENT APPROACH

As Information Technology continues to have enormous influence across the world, schools can take advantage of the technology such as the Internet to inject a new approach in bridging the cultural differences. This paper discusses one way schools can achieve social nurturing goal through online learning strategy, which is by integrating an 'online student exchange' program as part of the teaching and learning activities. This program encourages young students to access the other side of the world and communicate with their peers who come from different walks of life, cultures and beliefs.

The idea of this program is very similar to the traditional students exchange program, where students are sent to spend some time with foster families overseas and learn about their newly adopted culture.

The conventional way of running the program can be expensive and limited to only a certain number of students. By converting this program into an online-mode, more students will have the chance to embark on this interesting learning journey.

This approach fits the concept of Internationalization at Home which recognizes the fact that majority of students may not have the opportunity to experience studying abroad and with the support of educational institution, educators can offer internationalization as part of the education approach for the benefits of the student [8]

From the perspective of learning theory, the social constructivist paradigm is the most appropriate theory to illustrate this methodology; it encourages active participation in which the students can construct their own idea based on their past knowledge and their new ones obtained from the online discussions in this program.

This approach matches Neo and Neo's [9] observation of constructivism where learners must construct and participate actively in their learning process based on what they have learned before as well as on their current findings. While the learning and teaching approach revolves around the theory of constructing knowledge from experiences, it is still important to enforce assessments into the learning strategy in order to identify students' levels of understanding and to ensure that the program meets the objective.

The overall objective of this educational approach mainly targets the personality and social development of the students by learning and experiencing other cultures and ways of life, consequently developing a better understanding and respect for others. With the amount of information available online, learning about other cultures or other nations is no longer a 'mission impossible'. The Internet makes it possible for people to discover what is outside their immediate circle. In this online exchange program, students connect with their peers around the world, sharing knowledge and experiences in ways that are both fun and educational. This would have been geographically impossible and expensive if not for the Internet.

This program is also aimed to provide an English language-learning platform for speakers from non-English background. Through the online communication, the students get to gain first hand experiences and the feel of conversation styles from native English speakers, hence will assist "the development of self-confidence and 'style' for communicating in a second language".[10]

Another objective is to assist the 'shy and withdrawn' students in developing their personalities through social interactions. The way the world portrays outspoken and easy-going traits in a person as a winning attribute has made it a challenge for the quieter ones not to feel left out or inadequate. [11]. The online forum and online chat are the examples of activities in which students can practise their interaction and socialization skills, overcoming the barrier of speaking out in public and slowly developing confidence. It can help to give the students the confidence that they actually have the ability to think of great ideas and to express themselves. Once they have spoken online, hopefully they will not be as shy offline.

With the help of information technology in education, it is hoped that schools can play an active role in targeting this social issue by encouraging the young at schools to be:

- more exposed to the diversity of world's cultures and beliefs, in order not to be ignorant about their fellow citizens and to be able to accommodate and understand the differences between human races.
- taught to believe in themselves, not afraid to express their opinion and not ashamed to admit when they are wrong and learn from their mistakes.
- well informed about others in order to be more tolerant and able to make informed and unbiased decisions.

#### IV. SIMILAR PROJECTS

Some Internet sites have already implemented this idea, for example ePALs Global Community ([www.epals.com](http://www.epals.com)) [12] and Country Reports ([www.countryreports.org](http://www.countryreports.org)) [13]. Even though they are promoting the concept of online collaboration and communication among students all over the world, they may not be the most suitable platforms for this particular learning strategy. Among the identified reasons for that are:

##### *A. Can be too social rather than educational*

Most of the online pal projects found on the Internet run as a public system where the discussions and activities are open for everybody. Though the activities are well moderated and practically safe, they are not set to focus on a particular aspect of learning and can sometimes be too social rather than educational.

##### *B. Not suitable for a tailor-made curriculum.*

The program cannot be tailored to suit a syllabus. Teachers have to work based on the readily designed and structured program and they do not have their own space to put their own course/subject outline. They also do not get to choose their own theme for the program structure and have to settle down with the defaults set up.

Though some of these ready online-pal projects promote good online debates and online discussions, the educators do not have control over the choice of topics. It can also be difficult to identify and assess the postings put by the students, as many other people all over the world will be joining in the discussions at the same time. Though there is a facility for a private discussion rooms where only a group of registered people can join in, the system is still not exclusively built as a true learning and teaching platform.

While the topics discussed can be thought provoking and educational, management wise, it can be a challenge for the teachers to the syllabus on track.

##### *C. Lack of facility for online assessment /marking*

These Internet projects do not come with the facilities for online assessment. It can be difficult for teachers to assess their students' performance and to determine that the objectives have been met.

#### *D. Custodianship and stability factor*

The teachers have no control over the system used and cannot be sure that the system will always be there. Being a public site, it can be taken out of the Internet at any time.

Such online projects are more suitable for extracurricular activities or as an external activity taken up by students at their own free time and not for a well-structured program as part of the main syllabus, complete with teaching materials and assessments. For that purpose it is best that the teachers run the program on a dedicated online learning management system. By doing so, teachers can have controls over planning, writing and running the program.”

#### V. MODEL FOR PUTTING ONLINE STUDENT EXCHANGE INTO PRACTICE AT SCHOOL

After identifying the objective and the idea of the function of online program, an investigation is to be carried out to identify the requirement and task lists that must be fulfilled in order to put this program into practice online. The following is the list of requirement/task identified:

##### *A. Identifying the twin class*

As a start, educators or school's management can make a proposition to their pre-selected overseas schools to set up 'twin-classes'. This can be a one-off task, because once the relationship has been established, the schools can continue the partnership in the future. There are sites where teachers can go and find their potential partners for the program, such as the online Internet projects discussed earlier. There are also places in the Internet that offers the schools list in a country for example, the Australian School Directory ([www.australianschoolsdirectory.com.au](http://www.australianschoolsdirectory.com.au)) [14].

##### *B. Identifying the tools (software and hardware)*

There is a need to study the requirement of an online education management system, as the cost to purchase such a system can be expensive for schools. Schools have different budget capacity compared to bigger educational institutions such as universities. Unlike universities, schools may not be able to afford hosting their online education materials locally and employ a number of staff to dedicatedly manage and support the system.

With the budget limitations for system purchase and also skill limitations on technical support and maintenance, it is advisable that schools settle for a 'ready' system to run this program online. However, it is important for both schools to evaluate these systems to see which one fits most in terms of pricing, performance and ease of use, management and support. Schools can opt for open sourced or free online learning management system to run this program.

Alternatively, the two schools involved in this program can form a joint venture in purchasing a proprietary system for a continuation of use if the price is affordable for both parties.

There is also a need to ensure sufficient number of computers with Internet access for the students. Schools cannot assume that all their students have computers and Internet facilities at home; therefore it is the responsibility of the school to provide the correct infrastructure and tools for the students to undertake this program.

#### *C. Identifying the skills*

Students and teachers will need to have basic computer and Internet skills to be able to work on the program. Assuming that the management system purchased to host the cost is inclusive of course development service, it is not really necessary for teachers to possess high skills in web development, however it would be a plus if teachers do have some knowledge with web authoring tools to be more creative in developing and producing the course materials online. For example some skills with web programming and graphics multimedia can help the teachers put up their materials in more presentable and interesting ways.

#### *D. Collaboration to formulate syllabus*

After identifying a twin class, the teachers from both classes have to work together to formulate the syllabus and performance objectives for the subject. To suit the social objective of this subject, the syllabus should include information about their countries, cultures, languages and beliefs in order to establish a ground for the students' discussions. World issues can also be an interesting addition to the subject.

Teachers from the two classes can put their teaching materials/lecture notes in a common database accessible by everybody enrolled for the subject. Following the normal teaching pattern, the materials can be distributed over a number of lessons. Next to the materials, teachers can put up quizzes and hold online discussions based on each subject matter.

Teachers can also include multimedia objects in their teaching materials for example the national anthem of the country, short video about the country and its people as well as voice/video of the students.

To suit the constructivist paradigm, students are encouraged to construct their own knowledge by communicating with their peers online. Teachers will set activities where students will be using appropriate learning/information resources to build their knowledge, for examples:

- collaboration work through online debate – students are to form groups based on the total numbers of students in the two classes and adopt a perspective on one of the topics from the subject's sessions.
- collaboration work through online seminar – students are to self select both their topic and team and conduct an online seminar over a period of time
- one-to-one and one-to-many discussions with their overseas peers – students are to be involved in the discussions in the debate and the seminar, marks will be allocated based on their contributions to the discussions. Students can also use a chat facility to have a synchronous communication with their peers

#### *E. Identifying the assessment*

Assessment can be the driving force for students to be actively involved in the discussions and activities as demonstrated by O'Reilly and Newton [15], " ...there is a necessity to assess online students in order to achieve engagement and participation..." Assessment can be based on

the students' construction of postings and messaging as well as their online project presentation. The teachers evaluate the creativity levels as well as the students' ability to interact and grade them accordingly.

There can also be online quizzes and the questions can be based on what the students have learned from each module. To ensure active participation in the online discussion, teachers can also include questions based from what the students have learned from their online discussions.

Most online learning management system like allows teachers to mark their students' works online. This system also allow teachers to monitor the length of time their students spent in each section of the program site to determine their commitment level to the subject. Also provided is the facility of running online quizzes. Teachers can develop the questions and students can sit for the quizzes online. The markings are done automatically by the system based on the points allocated by the teachers for each question.

#### *F. Identifying teachers' roles*

Other than preparing the materials, the most important role for the teachers in this program is be the moderators for the class activities, by facilitating learning rather than going through the entire content of the subject.

Their roles are as a resource, a guide and the provider of accurate, timely feedback. They also have the responsibility to supervise and minimize the unconstructive interactions that could arise such as derogatory postings and major off-track in the students' discussions. [16]

#### VI. CHALLENGES

Among the main challenges in making this learning methodology happen are:

- incorporating this program as part of syllabus. Many schools run based on the curriculum program develop by the country's education unit/ministry. To include a new subject such as this may not be a possible thing however, schools can see existing subject can be used as a platform to run this program on. For example general subjects that may have the elements of personal development and general information.
- not every school can afford to have enough computers and Internet facilities. Though this may be the biggest challenge, the idea is still feasible as education systems all over the world are rapidly integrating the technology into their curriculum. The numbers of computers in schools are increasing. Students can also take turn using the computers by composing their draft participation locally (off line or on paper).
- students and teachers need to have some computer and Internet skills. These skills can be taught as part of this program if the school has not already integrated any formal IT classes into the syllabus. A brief introduction to computers and the Internet will be a good start.
- finding a suitable partnership. Teachers will have to do some research for suitable partners and later on will have to collaborate to setup the course.

- due to time differences, it may be hard for the students to engage in synchronous communication. Nevertheless, asynchronous communication would be sufficient for this learning experience.
- students may be uncertain and shy to express their ideas online. This is where teachers should play their roles as moderators by encouraging the students' participations.
- plagiarism, with the help of the Internet, some students take an easy way and simply implement a 'cut, paste and excel' method in their studies. Teachers can conduct one to one interviews online with the students they feel have not genuinely produce their work. Teachers can use these interviews to identify the students' levels of understanding and knowledge of the work, which can suggest whether or not they have worked on it.

#### VII. DETERMINING SUCCESS

As the objective of this program is to enhance students' personalities and social development through online knowledge construction, the element of online communication/collaboration is identified to be playing a big role in determining the success of this program.

To evaluate the success rate of this element, teachers can come up with a set of checklist, which is to be based on the students' inputs in the discussion forum. Key points that can be considered for the evaluation are:

- the number of inputs put in by the students in the discussion, how popular is online communication in this subject.
- the strength/quality of the discussions, is it educational and beneficial for the learning group or is it just 'empty chats'
- the ability of students to collaborate with the use of only online communication technology, not a face-to-face interaction.(provided the instructions are clearly given from the start of the course by the teachers)
- students' performance on the quizzes. As most questions will be derived from their online discussions, teachers will be able to tell if the students are really involved in the activities.
- the ability of students to make use of the technology to do more research on the subject discussed – e.g. the inclusion of website references to support their arguments in the discussion
- the frequency of teachers' intervention in the discussion to keep it on the right track.

This element depends heavily on whether or not the communication and the collaboration are being moderated properly. It is also important to see that the activities involved are within the scope of what the teachers have outlined in the syllabus. To ensure a smooth running process for this element, it is very important the teachers:

- play a very active role in seeing and handling the possibility of offensive comments and remarks in the conversation.
- Play an active role to encourage participations from students by being alert of idle postings and try to add comments to prompt for others to participate.
- be specific in the assessment guidelines provided for their students on how they expect them to perform. This is to avoid confusion/scenario where students go overboard in posting their messages because they are not sure how much is enough. The teachers could start by putting some good examples of threaded messaging from their previous class, or probably made up their own examples. This would give their students some ideas on what and how to write their messages in the discussion forum.
- be in control of their students timeliness such as managing and arranging students' choice of presentation dates and presentation topics in a timetable. Though the learning theory promotes a freedom of thinking and working, it is important at this stage that the teachers manage the choice of topics and presentation time. By leaving everything up to the students, many problems could occur. For example, overlapping of topics, too many presentations at one time, groups not working together etcetera. Students can still choose their topics and dates of presentations, however it is best that the teachers monitor and manage the choices and see if there is any possibility of serious overlapping of times and topics.
- include the summary of how to use the systems that is hosting this program. Students need to learn their way around the software well to be able to contribute to the discussions more effectively. For example, they need to study the method to put in attachments of files in their discussions, add links to support their arguments and make use of the help function to assist with their problems if there is any.

The element of online communication/collaboration is definitely meeting the learning objective of this program. Through it, a link can be established between two groups of students who are geographically and culturally separated. Its ability of connecting these two groups, promoting collaboration of work and thoughts/information sharing has lead to the spirit of togetherness among the students. Through this program, students will establish lifelong friendships with people who would have been total strangers. Through this program students get to discover about other people's cultures, language and way of lives, developing better understanding about each other and learning to accept the differences.

Geographically, a normal face-to-face classroom cannot offer this learning experience therefore online learning provides a good platform for this strategy.

Another reason that supports the suitability of this strategy as an online learning is the fact that the Internet provides a platform by which students can air their opinions without fear of being snubbed in person, which provides more equal opportunities for everyone involved in a discussion to contribute their ideas. Also, an asynchronous internet

environment will allow participants time to process and reflect on information thus enable them to give more insightful, reflective and in depth input than would a spontaneous face to face verbal discussion. [17]

#### VIII.CONCLUSION

Schools should make the most out of the technology in producing a different yet interesting learning methodology. This online exchange program introduced here is one example of what schools can come up with. The learning and teaching methodology for this program is in line with the constructivist standard that promotes a rich learning environment where students should be able to independently explore an information space to obtain content, higher-level concepts and learn how to learn. [18]

The innovative uses of Information Technology have made learning and teaching more interesting, educational and efficient. As demonstrated here, the Internet proves to play a good role by providing a platform to help shape well informed, more compassionate and tolerant future generations.

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