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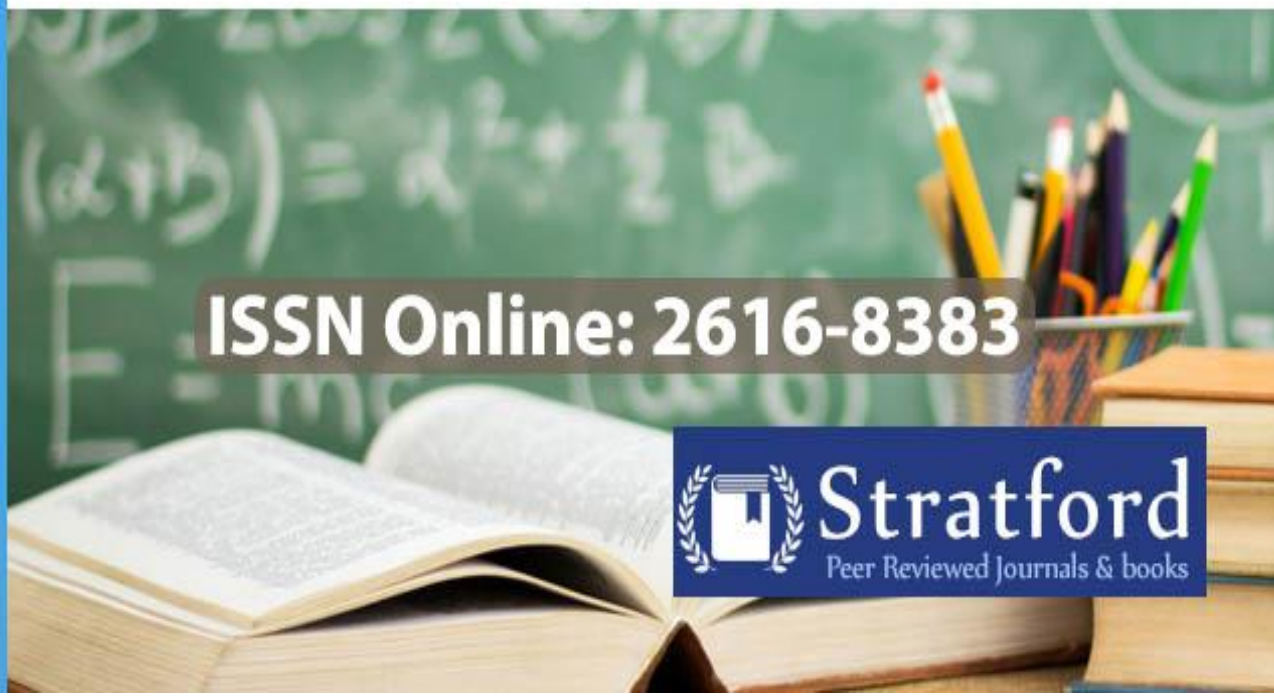

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Abstract

The application of ICT in classroom has taken learning instructions in storm. ICT is being used to teach languages, math and sciences. This study was literature based relying on past studies to know the application of ICT in learning. Generally, technology is vital in many sectors of society and its application into the education practices has great impact for children studies. Through it, there is increased effective and efficiency to both learners and parents. It can as well prompt pedagogical change and solve problems which are hindering studying and learning. It can therefore be viewed as both a tool and a motivator for reforms. Learners should love it for them to gain and teachers ought to be willing to launch technology into the classes create and enhance their teaching activity. Teachers must have enough access to computers that are working and enough support that is technical.

Key words: *Information Technology, teaching, Singapore*

1.1 Introduction

Information Communication Technology (ICT) is revolutionizing the way teaching and learning has conducted (United Nations, 2012). For that reason, the prosperity of a nation is depended on the quality of education it offers. Countries have realized the need in investing in ICT literacy programme to improve educational delivery to school going children (Chen, Tan, & Lim, 2012). Policy makers widely accept that incorporating ICT in education improve educational delivery by promoting new techniques of teaching and learning in schools (Sánchez, Salinas & Harris, 2011). Educational stakeholders are emphasizing the need for ICT literacy programme in education to enhance learning while equipping pupils' with essential skills (Lim, 2017). ICT literacy programme promotes collaborative learning while equipping pupils' with problem solving skills (Almalki & Williams, 2012).

This is the research and use of type of communications and computers that keep, retrieve, study, transmit, manipulate data and send information (Wantulok,2018). It involves a linkage of hardware and software that is applied in doing the important roles that persons want and apply in the day-to-day basis. many IT experts together a firm and technically understand what they want in order to meet their wants, showing them what modern technology is that is available to do their respective roles, then their current working on technology in the setup, or making a whole new set up.

Information technology in current world understates the scope of the critical career field. There is many unexpected importance of Information Technology (Ratheeswari.,2018) Due to technology, education is now more accessible and flexible. There has been an increase in popularity of online degrees and this has led to the reduction of physical boundaries, and most executives have loved technology to support their employees studying further. As teachers, there and promote participation among learners (Wood.,2016) Many organizations have IT sections to run networks and computer of their commercials. IT jobs include, technical support, administration of network, computer programming, development of web and close professions (Lee, 2008).

1.1.1 Use of ICT in Singapore

In Singapore, ICT has largely been employed to teach English, Mathematics, Science and other technical subjects (Tay, Lim & Lim, 2015). According Tay, Lim, Lim, and Koh (2012) ICT has been instrumental in teaching Mathematics and English. ICT is used as simulator in teaching Singaporeans leaners on how to pronounce English words. In addition, ICT has been used to help learners understand technical math concept.

Nanyang Technological University (NTU) came up with a technique to support information literacy programme for Singapore schools (Mokhtar *et al.*, 2010). The system was developed based on international information literacy standards as a guide, and based was based on the information and technology literacy system called Big6 (Foo *et al.*, 2014), and driven by educational initiatives developed by Ministry of Education in Singapore. To improve English language delivery, the government encourages literacy skills that are visual in reading and listening (Majid, Chang & Foo, 2016). The National Institute of Education (NIE) report advocates for learning and innovation skills. The report emphasized ICT literacy programme, critical thinking, numeracy skills, and technology literacy skills (MOE, 2010a).

Singapore has been ranking top in Science performance since 2018 (Tan, 2018). In Singapore, every student from primary school will learn science starting from grade three and in secondary schools; students will do general science at grades seven and eight (Ministry of Education, Singapore (2017). Students from Singapore have consistently shown performance that are average in science at international benchmarking studies such as Trends in Mathematics and Science Studies (TIMSS) (Martin et al., 2016) and Programme for International Students Assessment (PISA) (Organization for Economic Co-operation and Development (OECD, 2016). Good performance in sciences in Singapore has been attributed to use of ICT teaching methods (Kong, Looi, Chan & Huang, 2017).

2.0 Literature Review

2.1 Significance of Information Technology in education

Education software is improving. It is hyperlinked, dynamic, interactive and multimedia in nature. ICT has enabled studying to happen in different: collaborative, self-paced, online or personal (Valtonen, et al., 2015). Most famous software applied in educational products have received a huge acceptance. An edutainment approach is always applied in ensuring that lessons are fun and livelier especially for young leaners more lively and fun, especially for young children.

ICT is also applied in education are also made for management of classroom, planning o activities, timetabling, personnel administration, and communications with parents. In Singapore, the Ministry of Education keeps a repository of teaching and learning resources for sharing among schools. E-learning encompasses learning enhanced and delivered by ICT. ICT used for learning is related to ICT for e-business or e-commerce. E-learning may mean instructor-led, self-study events or small group work.

Learners of this era are seen as technological learners. They study better by interacting with others, and technology is what enhances them to do it (Button, 2014). Leaners always strive to be engaged in, togrther with the resources to help enable the teacher, they stay improved and study better (Habibi, Yusop & Razak, 2020). In the time IT, there are many tools to enhance the teaching methods and study skills. through IT, it is convenient to provide audio visual education. Now with this vast method and vivid as part of the IT curriculum,learners are advised to treat computers as equipment to be applied in all sectors of learning (Nikolić, et al., 2019). Specifically, they want to take advantage of the new multimedia technologies to pass information, order information in their work and describe projects.

IT has always been applied into patterns that are well established for working and living without directly affecting them. (Cakici, 2016). For instance, offices that are traditional secretaries working at keyboards and notes being written on paper and manually exchanged, has remained significantly stable, even if typewriters have replaced by personal computers. The current web networks with computers have enhanced the speed giving information quickly and one can learn (Aminullah, Loeneto & Vianty, 2019). Anybody can learn when he wants regardless of the time and of being and place globally. IT has made it better to learn and teach in categories. Learners can work together online in groups to finish a given work. connection and its Web sites are now popular to many children from countries that are developed and among educational elites elsewhere, but it is of little importance to most, who don't have important needs in their lives.

Internet, a collection of computer networks that operate to common standards and allow the computers and the programs they operate to communicate directly give right and correct data. Technology helps many different types of and practical operation services and operational one of which are libraries that are accessed online (Cakici, 2016). Enough data can be obtaining from IT is part of the curriculum; students are advised to treat computers as equipment to be applied in any area during learning (Bindu, 2016). Specifically, they should take advantage of the new multimedia technologies to express idea, order information in their task and describe projects. This needs them to choose the method that is better for them to pass the message, to form data in an orderly way, as well as link data to make a multi-component file.

Teachers can grow into roles of coaches, content expert, and advisors due to effectively integration of technology into learning. Technology enhances learning and teaching activities to be more meaningful (Atabek, 2019). Through technological applications learners are also able to work effectively with their own classmates. The convergence of increased need for approaching innovative communications and facilities related to education has really been used despite of critics that distance learning is not adequate option for studying apart from other in normal learning institutions (Syvänen, et al., 2016).

Full access to other knowledge apart from the class work allows many various means to know new ideas. Teachers introduce innovative means to take their learners that keeps them busy. Learning is more hands-on due to the new technology that has changed the learning

environment (Bindu, 2016). Throughout the world schools are diverse in revenue, and often children always obtain the resources they want. The application of this allows learning institutions to fill this niche. Use of IT like artificial intelligence, for example, teachers can introduce more innovative and creative capture their student's attention (Aminullah, Loeneto & Vianty, 2019). This is a method that enhances understanding, for both students and learners. Through the use of IT in education students can learn using their own speed depending on their individual understanding abilities.it also allows teachers to attend to individual students at personal level thus more understanding.

Though ICT has tremendously impacted teaching and learning, the cost of new technology is so high and many stakeholders of education cannot afford it. Many teachers are opposing application ICTs, especially internet and computers (Atabek.,2019). Some of the reasons for this reluctance are: studies on the effectiveness of computers in enhancing learning results, poor software design, poor support from administration, enough effort and time required to understand the new technology and how to apply it in classes, the fear of not having command while teaching as a menace (Mbodila.,2013). There also lack of alignments between technology and curriculum.

2.2 Theoretical support

This paper is supported by Technology Acceptance Model (TAM). TAM was started by Davis (1989) states that the application of technology is affected by the advantages to be attained and ease of application (Surendran, 2012). In TAM framework perceived usefulness and perceived ease estimates the application of technology. The ease of use and perceived usefulness are the important variables of actual system application. The TAM indicates that intention to adopt technology is control by usefulness, attitude, and ease of use (Venkatesh *et al.*, 2012).

According to TAM, ease of use and perceived usefulness are very significant of actual system use. The Technology Acceptance Model (TAM) figure out the user acceptance of any technology perceived usefulness (PU) and perceived ease of use (PEOU) factors. PU defines as the degree to which an person believes that using a particular system will enhance the task performance. PEOU defines as the degree to which an individual believes that using a particular system is free of physical and mental effort (Davis, 1993). The TAM suggests that intention to accept technology is determined directly by attitude, perceived usefulness and perceived ease of use (Venkatesh et al., 2012). The TAM is illustrated in Figure 1.

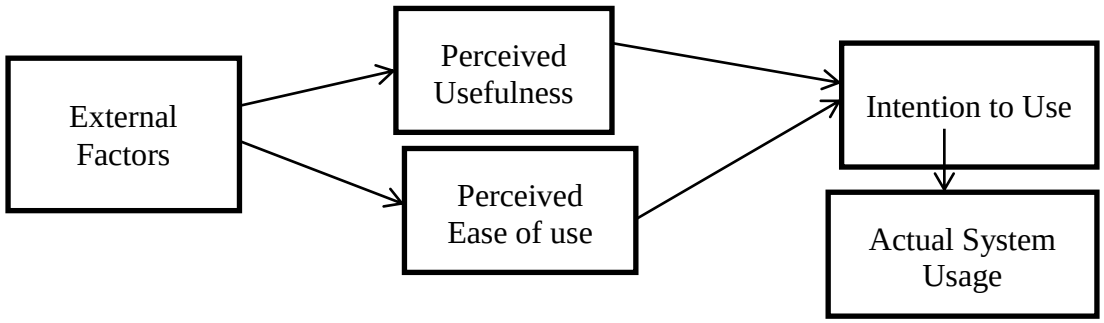

Figure 1 Technology Acceptance Model

(Source; Davis, 1989)

Tam model is relevant in understanding the application of ICT in teaching. Technology Acceptance Model states that the use technology acceptance is influenced by the benefits to be achieved and ease of use, perceived usefulness ease and usefulness. ICT has enabled the understanding of technical concepts in Math and Sciences.

Conclusion

Generally, technology is vital in many sectors of society and its application into the education practices has great impact for children studies. Through it, there is increased effective and efficiency to both learners and parents. It can as well prompt pedagogical change and solve problems which are hindering studying and learning. It can therefore be viewed as both a tool and a motivator for reforms.

Learners should love it for them to gain and teachers ought to be willing to launch technology into the classes create and enhance their teaching activity. Teachers must have enough access to working computers and sufficient technical support. Very few strong examples of integration of ICT into classroom teaching learning is visible, however some schools do apply the audio visual helps and integrate teaching of some lessons. Largely however, even where ICT is used in the classes, it is usually used alongside other traditional methods of teaching.

Recommendations

Learners should be taught conscious behavior and responsibilities. There should be an alternative to technology. In addition, it is important for proper proper support from the administration for teachers. Regular training of teachers for them to stay updated due to changing technology and the need for clear alignment between curriculum, technology and instructions.

with instructional materials, students can learn and perform better when they are taught with instructional materials since employing instructional materials enable learners to view, feel, listen and touch the material during teaching arousing the learner' attention and interest on the process of teaching and learning.

E-content fulfills this core function through different platforms including digital collaboration, virtual and digital classroom, computer and mobile-based learning, web-based learning. It is a linkage of audio, videos and images effects that are visual that is delivered through satellite, mobile technology or internet. During the learning process and teaching the application of e-content supports teachers by enriching their instructional materials.

Portfolio presents a wide perspective of studying activity for learners by facilitating continuous feedback. Furthermore, it allows students to have a self-test for their learning process and to review their progress by providing visual and dynamic proofs about students' interests, their skills, strong sides, successes and development. E-Portfolio enhances abilities including monitoring one's own learning, critical thinking, self-test.

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