

Goal of becoming a developed country education essay



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Malaysia is on the verge of reaching its goal of becoming a developed country by the year 2020 where the people may enjoy high living standards and more competitive in the era of globalization. Developing the potential of individuals which stand on the global platform is the main concern of the country in producing skillful citizens that would become the basis in the transformation of country towards high income economy. The 21st century implies the changes on the demand of skills in order to succeed in job realm as well as in daily life. Individuals need to master the blending of content knowledge, specific skills, expertise and literacy (Partnership for 21st Century Skills, 2007) in their daily life rather than mastering them in isolation. The application of skills is one crucial step for a student to obtain a job in the industrial domain (Pandian, 2005; Wagner, 2008).

The 21st Century Skills is a recent skill analogous to soft skills apart from it being more global. In Malaysia, more attention is put on soft skills compared to 21st Century Skills. Soft Skills is a skill which is emphasized in graduates of the present. Realizing the globalization of development in global technology, the education in Malaysia has changed the approach of teaching and learning to ensure effective productivity of individual potential that are knowledgeable and competitive globally. Revolution of technology in the digital era of the 21st century has brought changes in replacing soft skills with the production of individuals whom are equipped with the 21st Century Skills (KPM, 2010). The 21st Century Skills and Soft Skills have similar significance where both could contribute to the success of graduates in the industrial domain. In addition, the 21st Century Skills benefit students' knowledge as well apart from its contribution in the industrial domain. The

21st Century Skills is a set of skills which is essential for students in order to succeed in their study, career and life in this century which is full of challenges (Trilling & Fadel, 2012).

In a technology based learning environment, the 21st Century Skills is an important skill which needs to be there. There are varieties of challenges for 21st century learning in education. Having students to acquire knowledge outside the classroom is essential in the 21st century. The 21st Century Skills is a skill which is far beyond technology skill; it completes students with real life learning skill which would help them to succeed in their profession or career (Krulock & Hofreuter-Landini, 2011). 'Virtual Learning Environment' (VLE) is an environment which requires the adaptation of 21st Century Skills. Malaysia wishes to release VLE in every school under the Malaysia Ministry of Education (MOE) through 1BestariNet Project by using internet among the school communities. Through this project, it can be affirmed that integration of the 21st Century Skills is a need in realizing a technology based environment due to the important interaction of technology and 21st Century Skills blending in the educational world at this point. This is in line with 'Smart School Strategic Plan', 2011-2015 which in fact is practicing the technological approach in education to produce potential of individuals and capacity development which are skillful and professional in the integration of ICT in management and teaching and learning as well as the 21st Century Skills (MOE, 2011). In order to be outstanding on the universal platform, students of the cyber generation need to be knowledge literate and master the 21st Century Skills (Utusan Malaysia, 2011a).

However, research on the integration of the 21st Century Skills in technology based learning environment has not been carried out as this is a new skill which need to be explored and learnt by Malaysian students of this century. According to Pandian (2005), it is important for follow-up research to be carried out in identifying the 21st Century Skills which are needed by the industrial domain in fulfilling the demand of the workforce since skill is an important criterion in obtaining a job. Despite that, there is no research related to the 21st Century Skills been performed yet.

This phenomenon causes uncertainties from various parties and issue regarding the assurance for the convention of technology based environment could produce students' 21st Century Skills in ensuring their employability after graduation begins to rise. Educators are responsible in playing the role of promoting knowledge and providing practice in order to polish students' talent and skills so as to fulfill the demand of the industrial domain and the 21st century. In regard to the issue that arises, the initiative has been taken to help students in mastering the 21st Century Skills in teaching and learning in Malaysia. Integration of the 21st Century Skills in the educational curriculum is a way to ensure students being exposed and able to master the skill (Wagner, 2008). In identifying the learning skill which is needed by students in developing the 21st Century Skills, recommendation for follow-up research need to be carried out (Pandian, 2005). For that reason, the selection of technology as a medium of integration of the 21st Century Skills among the students will be carried out through this research.

In the 21st century which is quite similar to the digital era of ICT, skill in using the latest technology has been made an important aspect. ICT is one <https://assignbuster.com/goal-of-becoming-a-developed-country-education-essay/>

of the 21st Century Skills that are needed in producing potential of individuals of a global standard in line with the industrial demand apart from its major contribution in the economic sector. In relation to that, it is necessary for the integration of the 21st Century Skills to progress along with the current development of ICT. Both are significant in producing quality future graduates. The effectiveness of integration between technology and 21st Century Skills need to be further observed.

The usage of Web 2.0 technologies is not something new for every student. However, the integration of Web 2.0 technologies is a new phenomenon in the learning environment of the educational field. This learning environment gives students the privilege to be in charge of their own learning more proactive in developing knowledge and acquiring skills (Haihong, 2007). Web 2.0 is a term which is newly created. It comprises a collection of web based tools which provides an individual with free social networking services such as blogs, wikis, pictures and videos sharing and others. Web 2.0 technologies encourage users to collaborate with each other and it also gives them the opportunity to amend, summarize and contribute to the production of a document of the content. Web 2.0 technologies are not only used in our daily life, but it is also essential in the industrial domain (Salomon & Schrum, 2007). Web 2.0 is a strategic means of sharing information. Everyone could have access to this great technology which is indeed necessary in almost every task.

Revolution of Web 2.0 usage in the learning process is a new revolution in improving students' information searching. One could learn and understand techniques or new knowledge technology in the process of learning through <https://assignbuster.com/goal-of-becoming-a-developed-country-education-essay/>

the application of Web 2.0 (Wactlar, 2000). Incorporation of Web 2.0 technologies in the integration process of 21st Century Skills knowledge among students is due to the effectiveness of the technology as one of the teaching medium itself (Zhang, 2003; Salomon & Schrum, 2007; Berk, 2009). Web 2.0 technologies such as multimedia technology has a dramatic effect on both learning process and product as this learning environment involves a variety of senses which could help in maximizing students potential in retaining the information acquired (Syed, 2001). The research found out that using multimedia could improve one's problem solving skill as full attention is paid to the task given through active, interesting and clear presentation of task using multimedia (Weston & Baker, 2001).

In spite of that, technology alone is still unable to create a meaningful experience for one's learning. It needs to go together with learning strategies. A student needs to make sure that the learning strategy which is used along with teaching and learning through technology is the main focus (Levine, 2005). This is because different media create different impact. The effectiveness of a technology based learning environment can be measured by looking at how the technology is used, user's role, and the learning process itself. A good learning process depends on the knowledge on the principles of practice which are self, students, content and methods (Galbraith, 2004).

Integration of Web 2.0 technologies in incorporating 21st Century Skills among students will not be a success without appropriate learning strategies. Self-regulation is important when learning process involves internet based environment (Shen, Lee, & Tsai, 2007). Preparation of a <https://assignbuster.com/goal-of-becoming-a-developed-country-education-essay/>

technology based environment among students in incorporating the 21st Century Skills has a high probability to be ineffective if students themselves do not have the skills to be responsible for their own learning, learning strategies need to be integrated and practiced in preparing students towards achievement in their studies (Chang, 2005). Zimmerman & Schunk (1989) defines Self-directed Learning as a systematic orientation of feeling and action to help students in achieving their aims. On the other hand, Driscoll (2000) claims that self-directive are a skill where students need to decide their aims and manage their own learning as well as their achievement. Students who are equipped with self-directed skill would usually achieve better achievement than those who do not (Zimmerman & Martinez-Pons, 1986). This shows that Self-directed Learning strategy plays an important role in students' achievement (Zimmerman, 1990). On top of that, concern over the improvement of students also gives a positive impact on students' motivation. This is suitable with the Web 2.0 technology based learning which is motivating.

Learning which practices Self-directed Learning strategy through Web 2.0 technologies is suitable with the context of technology based environment as students have more control over time and task that is given to them and they have to decide on their own learning strategies (Pintrich, 1995). In contrast, traditional way of learning rarely encourages the development of self-directed learning among students (Orange, 1999).

Hence, this research will be focusing on the effort to identify the integration of 21st Century Skills among students using Web 2.0 technologies. This effort is an initiative in developing the usage of technology mechanism <https://assignbuster.com/goal-of-becoming-a-developed-country-education-essay/>

concerned such as Web 2.0 technologies in developing the integration of 21st Century Skills among students in line with the demand of industrial domains. This initiative is taken as the phenomenon of the 21st Century Skills which becomes important in the educational field in Malaysia has now been taken into consideration in assisting the implementation of the Smart School Strategic Plan, 2011-2015 in Malaysia.

Background of the Study

Technology based learning is gaining attention in recent times. This is due to the nature of the technology in today's economy. High demand on k-worker who has the expertise and skills to handle technology in the industry brings about the awareness on the importance of technology. Employees should be given training and education on the use of technology as technology is able to develop employees who work smarter in producing high-quality product and services especially for clients.

Information and communication technology skills (ICT) is one of the 21st Century Skills that is needed in producing a world-class individual in line with the demand of industry and it also offers significant contributions in the economic sector. The ICT industry in Malaysia is expected to generate U. S. \$14.1 billion (RM43.71 billion) in 2012 (Utusan Malaysia, 2011b). This is an era of globalization which based on knowledge and k-economy. Therefore, adaptation of the fundamental principles of education needs to be implemented in order to cope with the current situation. The information technology which is growing so rapidly made it necessary for the Malaysian education to introduce and use computers.

Education in this era of information is more concerned with the practice of ICT in teaching and learning process (Glancy & Isenberg, 2011; Gill & Dalgarno, 2008). Thus, in order to meet the challenges in this digital era, Malaysia has embarked on a paradigm shift in line with the development of ICT. The aim of Malaysia towards developing economy through ICT has enhanced the empowerment of the use of ICT in various sectors such as commerce, industry, education, health, and in all aspects of life. The implementation of the Multimedia Super Corridor (MSC), which has seven applications of ICT-related activities in various sectors as major projects in Malaysia provides a platform and environment that can encourage and enhance the use of ICT can encourage change to promote this country towards a digital era which is global in the 21st century.

Education is seen as an important sector in introducing the use of ICT. Integration of ICT has become important in the educational field particularly. Based on 'The Development of Education' report by MOE in year 2004, MOE hopes that ICT could improve teaching and learning by promoting activities such as video conferencing and the Internet as a common practice in the Malaysian schools. It is expected that in 10 years' time, the development of ICT infrastructure will be intensified by expanding access and equity for ICT facilities; develop ICT-based curriculum; and improve evaluation as well as the evaluation system using ICT. Thus, Computer Literacy, Smart Schools, and Computers in Education, which has become one of the agenda in promoting ICT in schools, are implemented. Smart School is a school which emphasizes the application of ICT as pedagogy and in the school management. Use of ICT in school management as well as teaching and

learning process is a noble effort of the Ministry of Education Malaysia (MOE) in promoting integration and its optimal use among the school community.

Malaysia's effort in the integration of ICT is developing with the implementation of the 1BestariNet Project in January 2012 by the Ministry of Education Malaysia (MOE) for schools with the aim to reform and improve the SchoolNet project. 1BestariNet is an 'End to End' (E2E) computer networking for the purpose of teaching and learning and management and administration of 10,000 schools for the period of 15 years (1BestariNet, 2012). This project emphasizes on the major component of teaching and learning through internet access and services' Virtual Learning Environment (VLE) for the school. This shows that Malaysia is moving towards providing a learning environment with the concept of e-learning in schools. Teachers and students need to develop ICT skills together in order to achieve the aspiration of government in improving ICT through education and mastering the 21st century skill in order to comply with the demand of the current industrial domain.

Teachers and students need to be exposed to the skill of using digital media in order to equip themselves in overcoming challenges in the future (Pandian, 2005; Dakich, 2005). Teachers are the main input of students' exposure to the skill. A study done by MSC Malaysia suggests that Ministry of Education Malaysia (MOE) needs to plan for on-going professional development of teachers by providing and enhancing their knowledge and skills which can build their confidence in using the ICT. ICT skills are essential in order to meet the expectations of the country in producing creative and innovative nations with the use of ICT as the catalyst to the development of <https://assignbuster.com/goal-of-becoming-a-developed-country-education-essay/>

the country's economy in achieving the status of developing country by the year 2020 (Nghah & Masood, 2006; Park, Roman, Lee, & Chung, 2009). In the context of vocational education, ICT is seen as having a great potential in providing students a broader acquisition of knowledge where students can learn something insightful and meaningful in line with the demands of the industry and the main aim of the Smart School Strategic Plan, 2010-2015 (KPM, 2010). Use of the Internet such Web 2. 0 technology which provides services such as Facebook, Twitter, wikis, Blogs, YouTube and others has great potential to be used in the classroom and its benefit students' learning in the process of teaching and learning (Harris & Rea, 2009).

Teaching and learning process needs to progress along with the rapid development of information and communication technology. Tradition way of teaching and learning process has now been regarded as irrelevant to the current practice (Marold, Larsen, & Moreno, 2000). Current teaching methods need to be more flexible (Zhang, 2003). Traditional way of learning has now been adapted with technology based learning such as the use of video and text in lesson that simulates students' participation in the real world (Beard, Wilson, & McCarter, 2007). Web 2. 0 provides a new alternative in shifting the traditional teaching and learning environment towards technology based education though E-learning environment which focuses on lifelong learning and on-demand learning (Zhang, Zhao, & Nunamaker, 2004). E-learning has now become one of the evolutions in the educational field where information could be shared instantly and it becomes a medium of integration of learning materials which is effective, efficient, immediate and more economical (Ong, Lai, & Wang, 2004).

In the context of education, research on the use and impact of e-learning shows positive improvement (Akaslan & Law, 2010). ICT in vocational education is an idea that is still new in Malaysia and it is not impossible to be implemented with the effort of the Ministry of Education Malaysia in providing a technology-based learning environment which involves the Technical and Vocational Education Division in the development of individuals. Lambert & Cuper (2008) stated that students are exposed to the latest technology such as internet, computers, mobile phones, social networks and others since their early age. Therefore, it is not surprising that students will be able to understand the learning content delivered through simulations, video and audio as technology helps them to learn effectively (North Central Regional Educational Laboratory [NCREL] & Metiri Group, 2003). Each student has different ways and the ability to acquire knowledge in the learning process. Thus, it is unfair if we assume that all students will be able to acquire knowledge at the same time, in the same manner and with the same method used in the past and provides the same effect in the world of learning today (Berk, 2009). The use of technologies such as visual, audio, graphics and simulation have significant effects on the students. As a result, students need an interactive teaching and learning process in helping them develop the knowledge. Educators need to have an effort in learning to use new technology in order to meet the demand of students in the 21st century. Through the use of Web 2.0 technologies, it brings benefits in the aspect of time and learning location, students' motivation, facilitate basic skills acquisition among students and it could improve teacher trainees' skills in a way which is effective and economical (Haddad & Jurich, 2002; Brecht & Ogibly, 2008).

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Integration of Web 2.0 technologies in teaching and learning process is one of the alternatives for the use of e-learning in education. Web 2.0 technologies provide various advantages for the students (Zhang, Zhou, Briggs, & Nunamaker, 2006; Schmerbeck, 2000; Salomon, Perkins, & Globerson, 1991). In the context of this research, Web 2.0 technologies are used in the teaching and learning process in order to inculcate 21st Century Skills among students. This approach is taken due to rapid advancement of ICT today and the changes of the 21st century students themselves. Today's younger generation, especially students are getting more occupied by the current world development of technology. Prensky (2001a) stated that students nowadays are the 'digital natives' where they are born, grow and communicate using digital technology throughout their lives. It seems that technology and students cannot be separated because they grew up in an environment which is well equipped with the use of computers, video games, digital music, mobile phones, e-mail, internet and others. Students of this era show significant differences due to the rapid development of Information and Communication Technology (ICT) that is happening throughout the world. Students of this generation have undergone a radical transformation. They could no longer receive teaching and learning activities which are traditionally proposed by the earlier education system. Transformation in the integration of Information and Communication Technology (ICT) in the teaching and learning process is seen as an important aspect of the education today.

Students understand the learning content delivered via simulations, video and audio better for the use of this technology can help them more

effectively (North Central Regional Educational Laboratory [NCREL] & Metiri Group, 2003). The concept of Web 2.0 technologies is not something new, but it is taking a new form of approach to be used in the teaching and learning process. The use of Web 2.0 technologies such as interactive video has been widely used in institutions of higher learning which is more on adult learning (Glancy & Isenberg, 2011). Adaptation of Web 2.0 technology approach in learning environment for students in Malaysian schools will be conducted. Web 2.0 technology-based learning is still believed to have a profound impact on education despite the fact that this approach has limitations in terms of teaching and learning delay among students (Song & Hill, 2007). This is due to the online learning environment itself which allows students to have full control over their own learning compared to the traditional learning (Elvers, Polzella, & Graetz, 2003). Besides, the usage of Web 2.0 technologies is actually fostering self-directed learning among students (Song & Hill, 2007). Self-directed learning allows a student to have the initiative and high self-motivation in the success of their learning. Self-directed learning is capable of nurturing individual skills among students. It also provides students room in planning, monitoring and evaluating their own learning. The success of online learning depends on the learning strategies used (Hill, 2002) as well as the students' high level of motivation (Shapley, 2000). Therefore, the integration of Web 2.0 technologies with the emerging of self-directed learning in developing 21st Century Skills among students is in line with the demand of the industry domain of the 21st century is an alternative to ensure the effective use of technology in teaching and learning process can be achieved. However, the doubt on the

effectiveness of Web 2.0 technologies in developing the 21st Century Skills is still unanswered.

Development of information and communication technology has brought changes in Malaysia in various sectors, particularly in improving the education and economy sector (Salman & Hasim, 2011). Various efforts have been made by the education sector in producing a workforce which could contribute in the Malaysian industrial sector, in line with the rapid development of current technology. Achievement in producing a variety of technological facilities in the education sector has begun to develop rapidly. However, will this technology help in improving students' skills in line with the demands of the industry is still uncertain.

The 21st Century Skills need to progress along with the current technology. This is because both elements are important aspects of today's digital era. However, today's graduates are facing problem in the lack of knowledge in information technology field (The Star, 2004). Knowledge of information technology is important in the 21st century. Students are not able to get jobs because they fail to exhibit their skills (Quek, 2005; Hussin, Zakaria, & Salleh, 2008).

Presenting a skill will not be successful if the person does not have the knowledge of the skill. Through this research, the production of 21st Century Skills which is becoming more important will be adapted and improved through the use of Web 2.0 technologies in ensuring that students who use this technology would indirectly be practicing the 21st Century Skills.

Through the use of technology, students gain knowledge in skills such as

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solving complex tasks and make quick decisions (Prensky, 2006). This is due to the use of technology such as video games, music and others which require them to think and move fast. Students' abilities will not bring significant benefits if it is not imparted in classroom teaching (Berk, 2009). Therefore, the use of Web 2.0 technologies in teaching and learning process is a recommended alternative in bringing benefits for teachers and students (Berk, 2009). Web 2.0 technologies are an innovation in e-learning. This innovation should be practiced by teachers and students in teaching and learning activities. However, the use and acceptance of Web 2.0 technology among teachers and students is still unknown. An innovation of technology will not bring much knowledge to the consumer if the factor of acceptance is not identified (Glancy & Isenberg, 2011; Rogers, 2003).

This 21st Century Skills can actually be improved from time to time. Sanders & Morrison-Shetlar (2000) stated that the integration of ICT in teaching and learning process not only enhances students' achievement, but it also improves their skills such as critical thinking skills and problem solving skills which are skills needed in the 21st century. ICT has great potential in producing students equipped with the 21st Century Skills.

Students of the 21st century need skills such as: 1) study skill and innovation (including the skills of creativity and innovation, critical thinking and problem-solving skills, as well as communication and collaboration skills, 2) information and communication technology (ICT) skills (includes information literacy, media literacy, as well as information, communication and technology literacy skills), 4) life and career skills (including flexibility and adaptability, initiative and self-directed, social and cross-cultural, <https://assignbuster.com/goal-of-becoming-a-developed-country-education-essay/>

productivity and accountability skills as well as leadership and responsibility skills) (Partnership for 21st Century Skills, 2007). This is in line with Malaysia's vision of producing potential of individuals who are equipped with the 21st Century Skills which is global in preparing students for the future.

Employers in Malaysia need graduates, who are equipped with skills such as communication skills, problem solving skills, computer literacy, teamwork and management skills. The demand of employers in Malaysia towards the desired quality of graduates is still an issue today. Educational institutions have been given the responsibility to produce graduates who have 21st Century Skills as well apart from technical skills with the aim to produce outstanding individuals. However, educational institutions are still having problems in realizing the demand (Suratman & Mohd Rosli, 2010). As mentioned, the problems encountered in information and communication technology are strongly related with the development of 21st Century Skills among students. E-learning which is already being practiced in institutions of higher education actually has a great potential in developing students' 21st Century Skills (Jones & Fitzgibbon, 2006). In spite of that, the method and approach in integrating e-learning with the development of 21st Century Skills need to have proper planning. The elimination of e-learning from students' skills development agenda is a big mistake made now (Jones & Fitzgibbon, 2006). Teachers need to play a role in the integration of 21st Century Skills through the use of Web 2.0 technologies. Teachers need to adopt ICT technology and apart from that, adaptation and innovation need to be done as well. This is a challenge taken in producing skilled manpower in

the economy in realizing Vision 2020 and to create a learning environment that is compliant with the 21st century.

With the current development of technology, Malaysia has moved towards producing k-worker which emphasizes the skills and expertise to handle technology in the industry. Economic revolution has brought demand on a new and different set of skills such as innovation, communication, interaction, and so forth. The current education system needs to take a paradigm shift in producing students who are in line with the 21st century and not simply producing workforce but not in accord with the current demand of industry. However, there is still not much research is related to this issue among students either within or outside the country. Therefore, a study should be conducted to survey the implementation of that strategy. This is an effort to help the education sector in producing skillful students in line with the demand of industry to fulfill the need for workforce who are successful in their studies apart from their achievement in their careers. The aim of this research is to identify to what extent the use of Web 2.0 technologies-based Virtual Learning Environment (WVLE) in teaching and learning process and could 21st Century Skills be instilled among students through WVLE.

Limitations of this study are as listed below:

Time constraint

The duration of time given to finish this research is 6 months; this limits the collections of the data because of problems likely to arise during collecting

the data. Because of the constraint, the data cannot be accurately evaluated.

Cost constraint

The researcher will have financial constraint if all of the schools in Malaysia were included in this study. This is because researcher needs to choose a random location to carry out observation on respondents. Therefore, only selected schools will involve in this study depend on the location of the schools.

Probity constraint

In the quantitative phase of study there is a potential risk of a non-response error i. e. problems caused by differences between those who respond and those who do not in the event of a low response rate (Dillman, 2000).

Besides, the researcher also has the risk in trusting the data collected from the respondent because of the sincerity factor.

Distance constraint

The distance between researcher and respondents is one of the limitations in this study. The researcher can only select nearest schools as the study location in order to collect data directly from the respondents.

Population constraint

Because of the convenience sampling will be used in the quantitative phase of the study, the researcher cannot state with confidence that the sample

will be representative of the population (Creswell, 2002). While in the qualitative phase of the study, researcher only can select a few students from nearest schools to be the respondents. This is because researcher needs to collect data directly from the respondents.

This study would be significant in a number of ways. The significance of this study is closely related to the benefits or contribution obtained through the study. The contributions of the study are as listed below:

Virtual Learning Environment (VLE)

Introduces and defines the concept of VLE, discussing how a VLE differs from the traditional classroom and differentiating it from related, but narrower. Students need a transformation in their studies, from traditional to online learning in obtaining a more effective learning experience (Mezirow, 1990). This research can help in identifying whether a VLE can be created more effectively with the integ