

Article

# Bridging The Gap Between Education and Community

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**Abstract:** It is found that there is a gap between the education and community. This gap has caused problems such as unemployment or graduates work on the job other than their qualifications. About thirty years ago in United States, STEM (Science, Technology, Engineering and Mathematics) has been initiated in order to fill the job vacancy in Science and Engineering fields. A decade or two ago, under Organisation for Economic Co-operation and Development (OECD), a new education model which focuses on the students' literacy competences has been introduced. All these aim to train students to adapt to 21<sup>st</sup> century job market and community needs. What is prominent in the abovementioned reformation is that they already remove exam-oriented system from their education. Thus, there are differences between these nations and Malaysia, in term of culture and intellectual level. Before we go on and transform our education, we ought to look at how they perform and only adapt those policies that are applicable for Malaysia. Chinese Taiwan, which is two decades ahead of us, in term of education reform, found out that examination oriented assessment is still relatively fair system for the whole Taiwan society. This indicates that Western educational reform could not be totally transplanted into oriental society. Taiwanese experiences warn us to plan out the reform properly before move on. In Malaysia, we have get started with the school based evaluation in 2012. Initially it did not turn out as it intended to. The second phase which started in 2019 is more satisfying. In order to carry on, we need to train up our teachers, first at primary level to adapt to new pedagogy and learning assessment methods. The successful transformation will require attentive monitoring from all parties. In a generation time, we will harvest the fruits of this education reformation.

**Keyword:** 21<sup>st</sup> century learning; Education transformation; Literacy competence

## 1. Introduction

Since the implementation of movement control order (MCO) in

Malaysia due to the COVID-19 pandemic, it is found that the unemployment rate of university graduates is rising (Nur Hayati A.R. et al., 2020). Apart from Malaysia, the OECD reported that 25 percent of graduate in England and North Ireland earn the income which is less than their corresponding education level (MacDonald & Giazitzoglu, 2019). These facts indicate that despite of the pandemic, university and college graduate found difficulties in finding compatible jobs after graduation. This is due to two major factors; first, graduates do not take initiative in learning new skills, and secondly, they are not trained with the skills that are required for employment. There exists a gap between education and society. From a survey conducted by me, the top reason was that the school curriculum is not comprehensively accommodating the need of a community. The second reason is due to the curriculum which is outdated. Therefore, this paper is aimed to analyse the policy practised in various countries including Malaysia in bridging the gap between education and community.

## 2. Existing policy and practices

The American graduates were found not fulfilling the job market need, especially in the fields of science and engineering (Elaine, 2014). Their students were found weak in Science and Mathematics subjects. Thus, American government took initiatives to reform their curriculum and came out with an approach to integrated Science, Technology, Engineering and Mathematics (STEM) in the education blueprint. The success of the STEM implementation in America has seen its approached were widely accepted by countries such as Canada, Europe and many eastern part of the world, including Malaysia. According to Karen A.B. et al, (2018), the Grade 7 to Grade 9 (corresponding to 12 to 15 years old) are the key time in developing one's interest in STEM and to build their self-confidence with Sciences and Mathematics. Those influences come from parental, teachers, peers and dictated by their academic performances in STEM subjects. Thus, the effective period to intervene the youth's

future start during their young age and not at the start of the tertiary education.

There are various organisations have invested effort to cultivate students' interest in STEM in Malaysia. The Ministry of Education (MOE), together with many non-government organisations have been promoting STEM as early as at the primary schools. In 2021, 1.2 million has been allocated for the STEM advancement in Malaysia (Ihsan bin Ismail, 2021). Besides, the Pusat STEM has been also providing training to the Sciences and Mathematics teachers so that latter learns to teach with new pedagogy. For example, the Inquiry Based Science Education (IBSE) and Inquiry Based Mathematics Education (IBME) is being implemented in schools throughout the nation. However, the impact of the government policy towards the advancement of STEM in Malaysia is yet to be evaluated.

## 3. Analysis of existing policy and practices

The abilities of students are traditionally evaluated with written examinations. Universities, colleges, or tertiary institutions admit students based on the examination results such as Sijil Pendidikan Malaysia (SPM), Sijil Tinggi Pelajaran Malaysia (STPM), A-level, SAT, TOEFL, IELTS and many others. After graduation, employers employ their staffs based on these graduates' examination results. In old days, the examination result tells the qualification of a student. However, it does not measure other aspects such as interpersonal skills, leadership quality, visual-spatial intelligence, musical-rhythmic intelligence, intrapersonal intelligence, naturalist intelligence and many more (Cherry, K. 2021). We are at the dawn of 21-century and some developed nations have pioneered the education based on literacy competence (National Kaohsiung Normal University of Taiwan, 2019). The term literacy focuses on graduate qualities more than just skills. It is initiated by Organisation for Economic Co-operation and Development (OECD) and has already gained support from countries such

as Finland, United States, England, China, Chinese Taiwan and Singapore. In order to incorporate literacy competence in education, the developing nations had made a major paradigm shift by measuring the students' ability beyond paper examinations. The evaluations were made based on multi-dimension appraisals such as evaluation of in-class activities such as group discussion, presentation, acting, singing and many others. In short, the large proportion of summative assessment in old days has shifted to formative assessment (National Kaohsiung Normal University of Taiwan, 2019).

It might sound promising to adapt literacy competence into our education. However, we need to analyse how Malaysia and other countries can adapt to it. Taiwan has taken a lead in education reform since 1994. Before 1994, Taiwanese was criticized for their education system which was too examination oriented. Thousands of students had failed to excel in their examination which consequently failed to secure their tertiary education (National Kaohsiung Normal University of Taiwan, 2019). In Taiwan or most of eastern countries, education served as a path to change one's social status. As such, students suffered from the fierce competition. After the reformation in the education system, Taiwanese evaluate the students based on multi-dimension intelligence and the varsities intakes had drastically increased. There is a quote, "most of the younger generation in Taiwan are varsity graduates". Does this become their edge? Yes. The abandon of examination-oriented system has enabled the selection of talents from multiple aspects. On the other hand, some portion of the community who lack of resource still suffer from poverty and underdevelopment. We could only say that not every policy will satisfy everyone. This is a complex issue that requires carefully-tailored measurement to resolve the problem. Ironically, after twenty years, Taiwanese found that examination is still a valid tool in measuring the students' ability. Perhaps, an evaluation but not paper-based examination can serve the purpose of learning assessment.

In Malaysia, the government implemented school based evaluation (PBS) around 2012 to relieve the students from examination-oriented system. Certainly, it is of good intention. However, it had caused some turmoil among the education workers. In a nutshell, it is not well-planned. It had increased the workload of teachers and the IT system did not support the huge amount of entries from the teachers all over the nation. In 2019, Malaysian government abolished the tests and examinations at lower level of primary schools throughout the nation. The students are then evaluated on classroom and school-based evaluation. This time, there is less complaints from the school teachers. In the same year, Singapore government has implemented similar policy (Pan Yong Qiang, 2020). With such approaches, school teachers can use excess time used to prepare exams papers for better learning experiences.

#### **4. Summary of findings and recommendations for improvement**

The literacy competency cannot be compromised as it will equip the nation with capable human resources. The young generations who are trained with new methodologies will be able to think and act critically, creatively and constructively. They will also better adapted to in the challenging work environment or in their daily life. The question to ask is, how are we going to evaluate students from various perspectives and maintain the fairness. With the removal of some term/semester examinations in the schools, we can assess the students' learning in more dynamic ways. It could be in the form of guided learning, discussion, group work, project-based learning (PBS), with final presentation recorded. As contrary to the traditional assessment which only evaluate the ability to read and write, the new age evaluation could evaluate students from listening, reading, writing, speaking and even acting. This mode of learning relies heavily on the teachers. The teachers therefore have to fulfil certain requirements by attending teacher trainings. They will be equipped with new era teaching methodologies and dynamic evaluation skills, coup-

led with the core subjects training. The teachers also have to be trustworthy that they do not make up assessment results for the sake of school performances.

As mentioned before, the introduction of STEM in schools require new form of pedagogy, for instance, contextual learning, learning by doing as defined by John Dewey and inquiry based learning (developed in 1960s). The dominance of exam-oriented education system does not permit the alternative pedagogy, because in the former, they do not value the curiosity, inquiry and hands on experiments. At the end, the students' curiosity, initiative and creativity are killed by drilling for examination questions (Ihsan bin Ismail, 2021). This limitation is not only occurred in the STEM-related subjects. In other subjects such as language and writing class, a contextual experience will enhance the learning process. For example, when the students want to learn how to write a news article, it would be ideal if a reporter or columnist shares the writing experience with them. Without new pedagogy, the traditional classroom learning limits the students' development.

## 5. Improvement plans, options, and feasibility

From the Malaysian Educational Statistics 2018 by MOE, there are 240,101 primary level teachers throughout the nation. At earlier phase, MOE will have to train this group of teachers. They could attend intensive trainings during the school holidays for a year. The costs of the training are estimated to be RM 3000 per teacher. Online training could be provided to save time and costs.

At the end of the first round (six years), the students' literacy competence is to be evaluated. If they meet the requirements, then second phase of the plan at the secondary school can be rolled out. The secondary level teachers will then receive their training. A placement examination is to be carried out at the end of primary and secondary school. The summative assessment still exists, but its portion is reduced. The network among the teachers should

also established. This enable the teachers to exchange their teaching experience during the implementation. An example of this is STEM Community formed by the British teachers. They had built an online community and their members benefit from the exchange of experiences (STEM Community, 2021).

With more flexibility introduced into the learning assessment, the government, NGOs, and local enterprises can cooperate with the education department in integrating the required skills for work in the school curriculum. For instance, in states, NASA has collaboration with schools and universities. The students are exposed to skills required for aeronautic field in their curriculum. Apart from that, Smithsonian Institutes also organised activities and reach out to secondary school students and undergraduates. In Malaysia, we have organisations such as MPOB, MARDI, BURSA and many others to cooperate with education department in curriculum development. Students are exposed to working skills at their community at earlier age.

In Malaysia, the 2020 primary school examination (UPSR) and the lower secondary PT3 were cancelled due to the COVID-19 pandemic. Starting from Year 2021, UPSR is abolished permanently. This incident has catalysed the change of mind set that examination serves as the ultimate goal of learning. It takes time for the whole society to adapt to the alternative pedagogy and assessment. As mentioned earlier, education policy will take decades to show its efficacy. We need to plan properly and roll it out deliberately.

The pandemic also transforms the traditional learning at school to blended learning. With the layout of online learning, flipped classrooms can be experimented by the teachers (National Kaohsiung Normal University of Taiwan, 2019). On the other hand, the students could submit their homework in digital form, be it scanned homework or in sound clip, video clip or any other dynamic form. Facilitators and speakers at remote location can be

invited into virtual classrooms. This somehow benefits the students and thereby the quality of education can be uplifted.

### Conclusion

The transformation in learning assessment and introduction to new pedagogy and curriculum content will set a horizon for new learning experiences. Students can be assessed not only through paper-examination, but also learn to listen, create, innovate, cooperate with each other and present. The dynamicity introduced in the current education policy will equip the younger generations to survive through the challenging 21<sup>st</sup> century and globalization. Consequently, this will bridge the gap between the community.

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