

Impact of 21st Century Teacher Practices on Students' Soft Skills in Subject-based Classrooms in Bentong, Pahang.

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Abstract -To assist teachers with 21st century learning transformation, Malaysian schools have opted to adopt subject-based classrooms that allow a more rigorous implementation of 21st century learning. Many studies have been conducted to associate 21st century learning and students' academic progress. Yet, little is known about the impact of 21st century teacher practices on students' soft skills. Thus, this research aims to identify the level of teacher practices on 21st century policy and level of students' soft skills before investigating further into the correlation and impact of 21st century teacher practices towards students' soft skills. Using survey and short interviews involving 31 teachers and 30 Form Four students, this mixed-method study was conducted at two secondary schools in Bentong, Pahang. Descriptive data illustrated teacher practices on 21st century learning was at high level. The level of students' soft skills was also high. Pearson correlation analysis showed a very strong relationship between 21st century teacher practices and students' soft skills. Simple regression test results later indicated 21st century learning had a significant impact on students' soft skills in both schools. Meanwhile, semi-structured data interview from 30 random students demonstrated positive feedback, stating that they have developed better communication, collaboration and problem-solving skills. Realizing the importance of 21st century soft skills, a more integrated and structured program should be designed at school level. Future studies can consider the use of evaluation mechanism to assess students' soft skills progress as indicator that they have developed holistically.

Key words - 21st century teacher practices, students' soft skills, subject-based classrooms (SBC)

1. Introduction

The Malaysian Education Blueprint (2013 – 2025) has envisioned the ideal future generation with six elements of students aspiration. The students aspirations are knowledge, thinking skills, leadership skills, bilingual proficiency, ethics and spirituality and finally, national identity (Ministry of Education, 2013). The ministry has paved a drastic transformation in the education system to equip students with all six aspirations so that they will be prepared to meet the challenges of 21st century economy. One of the

primary changes seen is the implementation of 21st century learning in schools beginning 2014. 21st century learning, which is more student-oriented, is perceived as being more relevant to today's generations. Students are trained to be more participative, independent and more accountable in their quest for knowledge. Teachers, on the other hand, have to facilitate, supervise and guide instead of spoon-feeding students with content (IAB, 2017). This slow and arduous process of learning will eventually shape the characteristics of the students besides

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improving their overall academic standard. Realizing the idea of producing future well-rounded workforce, Malaysian government has made large investment in education compared to other sectors to execute various educational policies (Mohd Yusoff, 2014)

To accommodate the needs to have more vigorous 21st century learner-centred activities blended with teachers' creativity, some schools initiated the subject-based classrooms or SBC program to substitute the traditional classrooms. Teachers take ownership of their classes according to the subjects they taught (Norlela, 2017). This allows them to design the classes and activities in compliance to 21st century learning. Under this SBC management, students become more alert and dynamic as they swap classrooms based on subjects (Pem, 2017). SBC emphasizes on the importance of supportive learner-centred environment that encourages students' soft skills development (Normairah, 2017). Zook (2017) clarifies that 21st century skills encompass of three soft skills categories, namely learning skills, literacy skills and life skills. Learning skills which is also known as the 4C's (critical thinking skills, creativity, collaboration and communication) develop students' mental processes in order to adapt and improve on a given task. Literacy skills which include information literacy, media literacy and technology literacy set up a foundation for digital comprehension skills. Meanwhile, life skills blend one's flexibility, leadership, initiative, productivity and social skills to prepare one for future career (Zook, 2017). All these three categories are crucial in this competitive world where future job opportunities are no longer determined by academic qualification.

Large-scale effort has been done to acclimatise students and teachers with the 21st century learning environment. Though still green in its implementation, positive impacts of 21st century learning on students are already evident. Yet, effects on students' soft skills, which are learning, literacy and life skills, have yet to be explored.

1.1 Problem Statement

The objective of 21st century learning is met when a student obtains good grades in academic, is competent in technology as well as being able to demonstrate commendable values and leadership skills. One cannot deny the importance of soft skills in moulding thinking generations. Unlike cognitive subjects with specific syllabus like Science or History, soft skills like leadership or critical thinking take years to be mastered. More often than not, students leave schools with only little exposure or training on some soft skills, thus hope that their careers later would provide more opportunities for self-growth. This scenario should cease to happen as it is not the end result that the ministry wishes to attain for the future generation. Hence, this is definitely a justification needed to explore the current progress of students' soft skills in

Malaysian schools.

Much has been said about the 21st century learning and its relation to students' attitudes and academic achievement. Many studies conducted have acknowledged the positive impact of 21st century learning towards students' motivation and performance in various subjects in schools (Masyuniza, 2015; Ainun Rahmah et al., 2017). Some studies associate specific cognitive skills like critical thinking skills or communication skills with students' achievement (Zuriawahida, 2016; Peng & Zulhazmi, 2018). It is because these skills are immediately linked to the subject content taught in schools. Unfortunately, studies on 21st century learning and its effects on students' soft skills are rather scarce in Malaysia although they are also vital elements to make an individual successfully wholesome (Ministry of Education, 2013). Researches on non-cognitive skills receive far less attention compared to traditional academic skills like numeracy or literacy (Lamb et al., 2017). One reason for such cases is due to the fact that soft skills are difficult to be measured compared to academic progress where students' examination results are good indicators to see the impact of 21st century learning in class (Sims, 2017). Realizing the lack of studies done on the aforementioned issue, it is apt to conduct one in Malaysian 21st century classroom setting.

Since the implementation of subject-based classroom (SBC) is still at its infancy stage, very limited studies are conducted to investigate how well the program accommodates students' development in soft skills. Not many are aware that subject-based classrooms setting provides a suitable platform for soft skills development. Thus, this study is very relevant to find answers to these identified issues in the current education policy with special focus given to students' soft skills.

1.2 Objectives of the Study

- a. This study aims to answer the following objectives:
- b. To identify the level of teacher practices in 21st century subject-based classrooms
- c. To identify the level of students' soft skills in 21st century subject-based classrooms
- d. To determine the most prominent category of students' soft skills developed in 21st century subject-based classrooms
- e. To determine the correlation between 21st century teacher practices and students' soft skills
- f. To ascertain the impact of 21st century teacher practices on students' soft skills in the chosen schools

2. Literature Review

A number of 21st century frameworks were proposed and designed to provide a broader perspective on soft skills and how they are amalgamated to shape student success in school and beyond. One of the most widely

adopted is the US Partnership for 21st Century Learning Framework (2015). Within the framework, students are expected to nurture three categories of skills, a) information, media and technology skills, b) learning and innovation skills, and c) life and career skills (Partnership for 21st Century Learning, 2015). The framework, which is used from kindergarten to Year 12 students in United States, places all three categories of key skills as equally important for one’s survival in today’s demanding world (Dede, 2010). Besides United States, Finland too has acknowledged the paramount impact of soft skills development towards their young generation. Hence, educational reforms have aggressively taken place. In 2002, Finland introduced ‘learning to learn’ framework policy where students were to acquire skills so that they can prepare themselves for life beyond school (Hautamaki et al., 2002). Finland even established a mechanism that equipped teachers with instruments to gauge students’ skill acquisition (Hautamaki et al., 2002; Hautamaki & Kuplainen, 2014). Massive data from 120,000 students from 1996 to 2013 was tabulated through this evaluation system using multiple instruments to provide a comprehensive overview of the development of key skills amongst Finnish children (Hautamaki & Kuplainen, 2014).

Unlike academic achievement, soft skills are not tangible, thus make them hard to be measured (Sims, 2017). This leads to the misconception that once they are not tangible, they are not regarded as part of students’ learning outcomes. Lamb et al. (2017, p.30) however refuted this notion by stating that skills are certainly ‘legitimate learning outcomes even there is no way of measuring students’ level of expertise with standardised test’. He emphasised on constant monitoring of student skill acquisitions instead.

3. Methodology

This study utilized both quantitative and qualitative methods. Descriptive and inferential quantitative data was collected from 25-question survey from 31 teachers from two secondary schools in Bentong, Pahang. Both schools are currently practising the subject-based classrooms (SBC) program which optimises the implementation of 21st century

teacher practices to the fullest. Using SPSS version 22.0, the instrument used had undergone satisfactory reliability and validity analysis of Cronbach Alpha 0.805 (Construct on Level of Teacher Practices), 0.932 (Construct on 21st Century Learning Practices) and 0.940 (Construct on Students’ Soft Skills). Descriptive data in form of means and standard deviations was used to identify the level of teacher practices and level of students’ soft skills in 21st century classroom as well as to determine students’ category of soft skills which has developed the most. 4-point Likert scale was used to measure the respondents’ feedback while score means from the responses are interpreted based on indicators. To guide in the analysis and interpreting the findings on relationship between 21st century teacher practices and students’ soft skills, researcher referred to Pearson’s Correlation Scale and Indicators.

To validate the quantitative findings, researcher also utilized a qualitative method in the later data collection phase. A semi-structured interview of five written questions was conducted to 30 Form Four students from the chosen schools. Students’ short responses were decoded into various themes to seek its relevance to the scope of the research. This qualitative approach will allow a more comprehensive data as the interview would be able to capture wider range and more in depth responses from the students.

4. Results

4.1 Level of teacher practices in 21st century subject-based classrooms in Bentong, Pahang

Based on the descriptive data in Table 1, all five items demonstrate high score means with the highest score mean of 3.355, SD=0.551 at Item 5 and the lowest score mean is at Item 3 (M=3.129, SD= 0.499). Generally, findings from the survey illustrate that the level of teacher practices in 21st century subject-based classrooms is at high level (M=3.226, SD = 0.503).

Construct (Teacher Practices)	Mean	SD	Interpretation
1. develop students’ thinking skills	3.226	0.425	High
2. practise 2-way communication	3.226	0.497	High
3. use ICT devices effectively	3.129	0.499	High
4. carry out lessons based on my students’ needs	3.193	0.543	High
5. prepare a conducive learning environment	3.355	0.551	High
Level of Teacher Practices	3.226	0.503	High

• Mean Interpretation : Low (1.00 – 2.00), Moderate (2.01 – 3.00), High (3.01 – 4.00)

Table 1 : Level of teacher practices in 21st century subject-based classrooms

4.2 Level of students’ soft skills in 21st century subject-based classrooms in Bentong, Pahang.

Data illustrated in Table 2 suggests that students’ current level of soft skills is at high level (M=3.145, SD = 0.507). Item 6 ‘learn new knowledge faster’

shows a moderate mean score (M= 2.988, SD = 0.547) while the rest indicates high mean scores, ranging from the lowest, Item 1 (M= 3.097, SD= 0.539), Item 2 (M= 3.097, SD= 0.473) and Item 7 (M= 3.097, SD=0.473) to the highest which is Item 5 (M=3.290, SD=0.558).

Construct (Students’ Soft Skills)	Mean	SD	Interpretation
1. enhance problem solving skills	3.097	0.539	High
2. improve communication skills	3.097	0.473	High
3.improve subject knowledge with help from technology	3.129	0.499	High
4.perform activities using existing resources	3.226	0.617	High
5.produce and exhibit better work / products	3.290	0.588	High
6. learn new knowledge faster	2.968	0.547	Moderate
7. inculcate moral values through daily social activities	3.097	0.473	High
8. apply what is learned in class into daily life	3.193	0.402	High
9. improve social skills	3.161	0.454	High
10.display self-holistic development	3.194	0.477	High
Level of Students’ Soft Skills	3.145	0.507	High

• Mean Interpretation : Low (1.00 – 2.00), Moderate (2.01 – 3.00), High (3.01 – 4.00)

Table 2 : Level of students’ soft skills in 21st century subject-based classrooms

4.3 The most prominent category of students’ soft skills developed in 21st century subject-based classrooms in Bentong, Pahang

Table 3 displays data tabulated in determining which soft skills out of the three category skills mentioned (learning, literacy and life skills) becomes the most prominent skills developed amongst the students. Findings show that 21st century learning in subject-based classrooms has improved students’

learning skills the most with a high mean score of 3.181, SD = 0.524. It is followed by students’ life skills with mean score of 3.151, SD=0.468. The least developed skills but still considered at high level is students’ literacy skills (M=3.049, SD=0.523). In general, mean scores for all three categories of students’ soft skills indicate that these skills have developed positively under the implementation of 21st century classroom practices.

Construct	Category	Mean	SD	Interpretation
1	Learning Skills	3.181	0.524	High
2	Literacy Skills	3.049	0.523	High
3	Life Skills	3.151	0.468	High
Categories of Students’ Soft Skills		3.145	0.507	High

• Mean Interpretation : Low (1.00 – 2.00), Moderate (2.01 – 3.00), High (3.01 – 4.00)

Table 3 : Categories of Students’ Soft Skills

4.4 The correlation between 21st century teacher practices and students’ soft skills

Based on correlation in Table 4 below, there is a very strong relationship detected between 21st century

teacher practices and students’ soft skills with $r^2=0.921$ at the significance level of 0.01 ($p<0.01$). Findings from this study suggest that students’ soft skills are greatly influenced by teacher current practices in 21st century subject-based classrooms.

21 st	Students’
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		century teacher practices	soft skills
21st century teacher practices	Pearson	1	0.921**
	Correlation		
	Sig. (2-tailed)		0.000
	N	31	31
Students’ Soft Skills	Pearson	0.921**	1
	Correlation		
	Sig. (2-tailed)	0.000	
	N	31	31

**Correlation is significant at the 0.01 level (2-tailed)

Table 4: Correlation Between 21st century teacher practices and students’ soft skills

4.5 The impact of 21st century teacher practices on students’ soft skills in the chosen schools

Regression analysis data in Table 5 presents how far

21st century teacher practices affects their students’ soft skills. A very distinctive $R^2 = 0.862$ indicates that students’ soft skills are 86.2% impacted by teacher practices in 21st century classroom.

R	R Square	Adjusted Square	R	SE of the Estimate
0.929	0.862	0.858		0.15523

Predictor : 21st century teacher practices

Dependent Variable : Students’ soft skills

Table 5: Simple Linear Regression For 21st Century Teacher Practices And Students’ Soft Skills

Interviews with random students produced a congruous outcome with findings in Table 7. Respondent 1 claimed that he has more initiative now that there are “*more varieties of new teaching techniques*” that encourage students to “*search for new information on our own and have to remember them*”. Communication skills are enhanced via collaborative work with others in smaller groups as supported by Respondent 2, “*I often engage in team work activities where I have to communicate with my friends. I see that I communicate better now. I tend to give more ideas too.*” Respondent 3’s leadership skills has improved tremendously through group works that they “*can handle many group activities and even school programs*” on their own. 21st century learning also has developed Respondent 4’s critical thinking skills, claiming that he “*can also make decisions quicker and more matured.*”. As students have more opportunities to use technology in class, students like Respondent 5 become “*better in class presentations especially in using powerpoint*” and now opts for “*lesser use of mahjong paper.*”

5. Discussion

Research findings are solely focused in driving answers to the research objectives. The first objective is to identify the level of teacher practices in 21st century subject-based classrooms in Bentong, Pahang. Results of the findings exhibit teacher practices in

subject-based classrooms is at high level, thus indicating that teachers in both schools implement the 21st century classroom teaching very closely. This is aligned with the findings in National Education Blueprint 2013 – 2025: Annual Report 2017 stating that majority of the schools in Malaysia are aggressively executing 21st century learning policy (Ministry of Education, 2017). Teachers believe that 21st century learning is becoming a creditable platform for their students’ future self-development and careers. Continuous monitoring, either by the external related authorities or the school administration personnel, also contributes to the rigorous teacher practices in the 21st century classroom. Such monitoring particularly in rural schools are needed to ensure equal opportunity to access quality education as envisioned in the national blueprint (Mohd Yusoff, 2014).

The second objective of the research is fulfilled when findings exhibit that students in both subject-based schools possess high mastery of soft skills. This strongly shows that students have enhanced soft skills that they are required to grasp over the years. Ever since 21st century learning policy began its running in 2014, these students were the first batch to be actively involved in various 21st century learning programs in schools. Such involvement has successfully equipped the students with soft skills needed to adapt themselves to today’s challenging tasks and higher examination standards. This is in line

with Azlin Norhaini et al. (2014) study that teachers now have become more aware and effective by incorporating multiple soft skills in lessons. Based from the findings too, learning skills that encapsulate critical thinking skills, creativity, collaboration and communication, become the most outstanding skills that students have managed to develop under the 21st century learning policy. In comparison to learning skills, literacy skills and life skills function less significantly in shaping one's characteristics and determining one's success. Lamb et al. (2017) shares the same outcomes. The answer to this research objective suggests that most of the lessons in classes are focussing on the importance of the 4 Cs. To meet the requirement of examinations, teachers provide students with a variety of high-order thinking question sets. The National Education Blueprint 2013 – 2025: Annual Report 2017 (Ministry of Education, 2017) affirms that 70% of the in-class lessons consist of high order thinking skills questions. Additionally, prevalent use of group works and presentations is adopted by teachers across subjects in schools. This is aimed none other than to develop students' creativity, collaboration and communication skills. It is now a common scenario in 21st century Malaysian schools.

The fourth research objective of determining whether there is a correlation between 21st century teacher practices and students' soft skills is accomplished when the correlation is significantly strong. In both schools, apparently teachers have played their roles well in becoming facilitators and coaches. They give more time for students to develop their skills at their own pace and abilities. By having more student-oriented lessons, students will achieve many self-discoveries and realize what they can actually do if they are empowered to do so. The findings to fulfil the fifth objective have demonstrated a very positive outcome. The 21st century teacher practices have a significant impact on the development of students' soft skills. In other words, 21st century approaches and activities that teachers administer during lessons determine the progress of students' learning, literacy and life skills. This is supported with findings from Lamb et al. (2017) in a nationwide research in Australia. If a teacher is able to provide his students more exposure to problem-solving questions and allows them sufficient time to make decisions, he will soon notice the progress made in his students' critical thinking skills. Findings from interviews held with students further support the significant impact of 21st century teacher practices on students' existing soft skills. It is undeniable that students develop and enhance multiple soft skills through continuous class activities. Students claim that 21st century lessons and subject-based classroom setting allow them to take charge of their own learning.

This research contributes to the current 21st century policy in a number of ways. One of them is 21st century teacher practices has become an asset in

moulding future generation's cognitive as well as non-cognitive skills. To ensure soft skills development receives equal priority at par with academic progress, a more structured program can be devised by the ministry or schools. By having a structured program, teachers would constantly be aware of the importance of soft skills among their students. Besides, the ministry could consider designing an evaluation mechanism in schools. Finland opts for such evaluation being used so that students' effort to improve their multiple skills is given unbiased recognition (Lamb et al., 2017). With this evaluation, teachers will be more accountable to train their students with related skills needed in life.

Another suggestion that can be proposed is having more schools adopting subject-based classroom (SBC) concept. Data from the study has displayed strong involvement by teachers and students in creating 21st century learning atmosphere and culture. If the subject-based classrooms program (SBC) is applied on widespread basis, more robust implementation of 21st century classroom would likely to be seen. Findings from this study depict that learning skills which comprise of the 4Cs has become the main focus in the 21st century teacher practices. Equal attention should also be given to the development of the other two categories of soft skills which are life skills and literacy skills. In this digital age, students should be given more opportunities to benefit the internet where sources of knowledge are endless. The same goes with teaching students to be independent in learning. The ability to seek information on their own and learn from other sources will groom their adaptability skills to survive in the working world. To realize all these, teachers have to be more aggressive in providing students with such opportunities.

6. Conclusion

This study has concluded that the 21st century subject-based classroom (SBC) setting and teacher practices serve as a productive ground for students' soft skills to flourish. It is hoped that teachers would be more committed to enhance their students' soft skills in order to produce thinking, innovative and resilient generation.

References

- Ainun Rahmah I., Zamri M., and Wan Muna Ruzanna WM. (2017). 21st century learning and its effects on secondary school students' attitude, motivation and achievement. *Malay Language Education Journal*, 77- 88
- Azlin Norhaini M., Wong KE., Mohamad Satar R, Moh Izham MH & Aida Hanim AH. (2012). Effective Classroom Management. *International Education Studies*, 5 (5), 35 – 42
- Aminuddin Baki Institute. (2017). *Implementation Guidelines on 21st Century Learning*. IAB :Ministry of Education

- Dede, C. (2010). "Comparing frameworks for 21st century skills," in *21st century skills: Rethinking how students learn*, J. Bellanca and R. Brandt, Eds. Bloomington Solution Tree Press, 51 – 75
- Hautamaki, J., Arinen, P., Eronen, S., Hautamaki, A., Kuplainen, S., Lindblom, B., Scheinin, P. (2002). *Assessing learning to learn: A framework*. Helsinki: National Board of Education Finland
- Hautamaki, J., and Kuplainen, S. (2014). "Learning to learn in Finland : Theory and policy, research and practice," in *Learning to learn : International perspectives from theory and practice*, R. D Crick, C. Stringher, & K. Ren, Eds. Oxon and New York: Routledge, 170 -194
- Lamb, S., Maire, Q., and Doecke, E. (2017). *Key skills for the 21st century : An evidence-based review*. New South Wales : NSW Department of Education
- Masyuniza Y. (2015). Students' attitude and perception towards learning 21st century skills in Malay Language. *Malay Language Education Journal*, 5, 22- 30
- Ministry of Education. (2013). *Malaysian Education Blueprint 2013 – 2025 : Preschool to Post Secondary Education*. Putrajaya : Ministry of Education
- Ministry of Education. (2017). *Malaysian Education Blueprint 2013 – 2025 : Annual Report 2017*. PADU : Ministry of Education
- Mohd Yusof MN. (2014). Potential of Contextual Value-added measures in assisting schools become more effective. *International Education Studies*, 7(13), 75- 91
- Norlela, M. (2017). Subject-based classroom. Retrieved from <https://prezi.com/ez7nuau9fb0n/subject-based-classroom/>, 27 July
- Normairah, J. (2017). Subject-based classrooms improve students' communication skills in *Utusan Melayu*. 15 May
- Partnership for 21st Century Learning. (2015). P21 framework definitions. Retrieved from http://www.p21.org/storage/documents/docs/P21_framework_0816.pdf,
- Peng, CF., and Zulhazmi, H. (2018). High order thinking skills in the teaching of Malay Language using questioning technique. *Malay Language Education Journal*, 8, 1- 12
- Sims, D. (2017). Soft Skills and 21st Century Education in The Alexander Dawson School. Retrieved from <https://www.adsrm.org/page/news-detail?pk=894777>
- Pem, S. (2015). Subject based classrooms help improve students' learning ability in BBS.25 Oct
- Zuriawahida, Z. (2016). The effectiveness of problem solving method in improving high order thinking skills among students. Masters Thesis. Kuala Lumpur: Universiti Tun Hussein Onn
- Zook, C. (2017). What are 21st century skills? in *Applied Educational Systems*. Retrieved from <https://www.aeseducation.com/careercenter21/what-are-21st-century-skills>