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Author(s)	Salleh Hairon, Catherine Siew Kheng Chua and Wei Leng Neo
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School-Based Curriculum Development in Singapore: A Case Study of a Primary School

Salleh Hairon

hairon.salleh@nie.edu.sg, (65) 67903248

Catherine Siew Kheng Chua

catherine.chua@ucalgary.ca, +1 (403) 210-7557

Wei Leng Neo

weileng.neo@nie.edu.sg, (65) 62196198

National Institute of Education, Nanyang Technological University

1 Nanyang Walk, Singapore 637616

The term school-based curriculum development (SBCD) implies that teachers are to innovate and customize school curricula according to their local needs. This also means that SBCD requires co-constructive work among schools' key stakeholders in the school curriculum development process. While much work has made known on SBCD in Western contexts, much less is known in non-Western contexts. This paper reports on key findings pertaining to SBCD drawn from a case study of a primary school in Singapore. Singapore makes for an interesting case as education policymakers encourage schools to innovate their curriculum yet maintaining a steep culture of academic achievement and control over standards across schools. The study involved data collection from non-participant observations of classroom lessons, teacher group meetings and

focused group discussions. A salient finding that had emerged from the study is that the societal value for pragmatism underpins the processes of SBCD.

Keywords: school-based curriculum development, curricular innovation, curriculum, school reform, leadership

Introduction

Globalization has been argued to have created a dynamic market that fosters competition which increases pressure for organizations to innovate, and to improve their competitive position in the global market (Biccum, 2015; Gorodnichenko, Svejnar, & Terrell 2008). The ability to create new products and services has become a prerequisite for organizations to gain competitive advantage, and is one of the key factors to obtain success in the global market. Innovation specifies change that involves human intervention – that is, a deliberate effort to modify and improve a current practice, system or product (White, 1992). This phenomenon is also reflected in the education sectors. The demands brought on by globalization has been assumed to drive schools to become more innovative in their curriculum and teaching pedagogies. Since education is regarded as an invaluable asset in human society and is most susceptible to the changes occurring worldwide (Sinagatullin, 2006), educational policymakers, through appropriate educational policies, seemed to be pushing schools to innovate in the area of the curriculum so as to meet the changing demands of the 21st century workforce. Besides satisfying the economic agenda, these educational policies are also influenced by changes in social, cultural and political shifts resulting from globalization. Curricular innovations are therefore situated “within a matrix of cultural, political, economic, institutional, and administrative variables” (Markee, 1997, p. 172).

Curricular innovation can be defined as “an appropriate mix of professional, academic, and administrative change whereby teachers are encouraged to develop new materials, methodological skills, and values” (Markee, 1997, p. 172). It essentially involves the deliberate action and intervention of schools to create new practice, system or product that meet the needs of individuals and societies at large. The focus on the curriculum as the unit of deliberate action and intervention by schools is understandable bearing in mind that the

curriculum is considered to be an all-encompassing school experience – as captured in the definition below.

“... (The curriculum is) all of the educative experiences learners have in an educational program, the purpose of which is to achieve broad goals and related specific objectives that have been developed within a framework of theory and research, past and present professional practice and the changing needs of society.” (Parkay, Anctil, & Hass, 2006, p. 3)

An educational movement that appropriately captures the essence of curricular innovation in education is school-based curriculum development (SBCD, henceforth). SBCD can be understood as “the planning, design, implementation and evaluation of a programme of students by the educational institution of which those students are members” (Skilbeck, 1984 as cited in Marsh, 2009, p. 2). SBCD essentially privileges the idea and principle that decisions and changes are made at the school level as opposed to education central office. According to Skilbeck (1984, p. 2), schools are collaborators of education change process and that SBCD “is internal and organic to the institution, not an extrinsic imposition”. Therefore, it involves the entire school staff when making decisions about school programmes and creating curricula. Seen in this light, SBCD is a collaborative decision-making process that responds to the specific communities’ educational needs (Bolstad, 2004). Works by Marsh (1992) and Smith (1993) stressed the need to foster SBCD as a school-based curriculum because educational decisions made at the macro level might not take into consideration the diverse needs of the students and teachers. These works were “founded on traditions of local autonomy” (Leong, Sim, & Chua 2011, p. 51). Hence, SBCD is focused on creating school-based curriculum that is specifically designed to meet the needs of students in that particular school (Elliot, 1997).

SBCD, however, has a longer history in the West than Asian nation states, and its understanding in Asian contexts is not fully developed. This could be because Asian nation states tend to have high power-distance cultures than their Western counterparts (Hofstede, 2001). The focus on context as a basis for investigation is premised on the belief that macro contexts such as socio-cultural, economic and political do have a significant influence on the way SBCD is implemented in schools. This is the primary research focus in this paper. This paper seeks to provide insights into how context shapes the way SBCD is implemented, albeit in the Singapore education context, through a study of a Singapore primary school that attempted to initiate and sustain SBCD to support curricular innovation for 21st century competencies. The paper will first provide an overview of how certain educational policies had provided the impetus for SBCD in Singapore. This is followed by discussion on SBCD, and the presentation of the method and key findings of the study. The ensuing discussion examines how these key findings contribute to the current knowledge on SBCD focusing on macro contextual factors shaping the implementation of SBCD in an Asian Singapore education system.

Educational Policies Supporting School-Based Curriculum Development (SBCD) in Singapore

It has been observed that due to globalization, Singapore is compelled to re-examine its educational policies in order to prepare Singaporeans for the highly competitive economy. Similar to other countries around the world, the Singapore government has to remain competitive in the global economy, and the reforming education system is one primary means of achieving global competitive status (Gopinathan, 2007). This phenomenon is even stronger for the Singapore state due to its small island status, and thus its high dependence on human capital for survival. It is therefore understandable that education reforms need to be

substantively sensitive and relevant to the prevailing economic needs and shifts. Hence, in 2005 the Ministry of Education (MOE) launched the *Teach Less Learn More* (TLLM) initiative as one of the key educational reforms. It was built on the notion of creating a more flexible and broad based education system that would further enhance the idea of cultivating the spirit of innovation and enterprise among students. The shift was centered on providing more space for teachers to create innovative teaching pedagogies and for students to learn better so as to ensure that Singapore students acquire the required knowledge, skills and attributes needed for the 21st century economy, and not solely focused on academic achievements (Author, 2012). The focus of the initiative was on the specific requirements that constitute ‘a broad-based, holistic education’ (MOE, 2014). This initiative implied that such transformation process would extend from primary education and spread across to pre-university study.

To further reinforce this concept of TLLM, the MOE started to decentralize and give schools the autonomy for curriculum development. For example, more funds were given to ‘autonomous schools’ to expand their enrichment programmes so as to further enhance learning (Liew, 2009). SBCD as a system-wide movement can therefore be said to have its impetus at the inception of the TLLM policy initiative. Although SBCD is not a totally alien concept since the 1980s, the SBCD movement which started in 2005 differs insofar as it involves the participation of all Singapore schools and with much greater emphasis. Schools are given more autonomy and space to construct their own curricular innovations, albeit within the ambit and scope of the stipulated curriculum developed by MOE. The recent SBCD movement has also brought about the idea of ‘Niche Schools’ whereby each school have to work on their unique branding of curriculum innovation (Goh, 2006). This has since morphed into two initiatives (Applied Learning Programme and Learning for Life Programme) where schools are encouraged to develop curricular innovation in either of these

two foci. Schools were also strongly encouraged to set aside 1-hour per week of curriculum time for teachers to come together in their respective groups (e.g., similar subject or grade) to engage in professional dialogues to improve on their pedagogical practices. By 2010, the MOE initiated their push for all schools to embark on professional learning communities (PLCs) (Author, 2012). The groups of teachers that meet regularly on a weekly basis – termed as Professional Learning Teams (PLTs) – then become the means from which pedagogical changes can take place at the ground level. Curricular innovations are supposed to be taking place at the ground level among teachers in collaboration with school leaders with support provided from the top – that is, the ministry of education (MOE, 2005). This initiative can be captured within the policy philosophy of “Bottom-Up Initiative, Top-Down Support” (MOE, 2005). Although the initiative seems highly attractive in terms of its promise to bring about education reforms at the micro curricular level to create pedagogies suitable for the 21st century learning outcomes, its micro implementation processes are not fully understood especially in terms of the macro contextual influences, and the challenges and affordances that these can bring.

The Contexts of School-Based Curriculum Development

SBCD is not a new phenomenon; it has been researched in the West more than in Asia, namely from Australia, Canada, United Kingdom and United States (Keiny, 2006). However, SBCD has only recently been studied in Asian contexts (e.g., Taiwan, Hong Kong, South Korea) with a focus on school autonomy (Leong, Sim, and Chua 2011), and strengthening teacher professionalism. Taiwanese teachers have been given greater autonomy because schools are given greater “flexibility to adapt, improve, and be innovative in their own curriculum” (Chang & Hwang, 2002, p. 155). Similarly in Hong Kong, efforts were made to reduce governmental control so as to give teachers more room to concentrate on teaching

(Morris, Cogan, & Liu, 2002). Likewise in South Korea where the elementary and secondary school curricula are under the purview of the Korean National Curriculum, SBCD was used to develop integrated curricula that allow teachers to take on the role of researchers by increasing the autonomy of individual regions, schools and teachers. However, the focus is on decision-making on curriculum content and not in the methods and procedures of curriculum implementation (Jeong, 2010).

In Singapore, SBCD operates within a centralized system as ‘curriculum reform has to be managed within a national education system dedicated to strong quality control enforced through high-stakes examinations’ (Leong, Sim, & Chua, 2011, p. 51). Although the new fervor and momentum for SBCD in Singapore started since 2005, there has still been a lack of substantive work on SBCD. SBCD in Singapore is claimed to be less radical because Singapore teachers adapt and integrate the curricular materials provided by MOE rather than teachers creating new curriculum to fit the local context (Gopinathan & Deng, 2006). Similar to Taiwan, Hong Kong and South Korea, Singapore has been experiencing curriculum shifts from central control to local schools, and teachers are hence given increasing autonomy to modify the curriculum and operationalize the changes in the classroom. Teachers are thus encouraged to be active in designing, planning, implementing, and evaluating curriculum materials within a particular school.

The introduction of TLLM means that more space is given to teachers and students to engage in in-depth learning as opposed to preparing for tests, and teachers are expected to engage actively to interpret reforms and develop relevant activities based on the school contexts (Teo & Osbourne, 2010). However, SBCD in Singapore functions as a complement to MOE’s curriculum planning and development as the Ministry holds the existing national curriculum which is considered to be relatively well-developed and effective (Gopinathan & Deng, 2006). Thus, Singapore teachers are given greater responsibility for curricular

decision-making rather than complete and total decision-making (Reid, 1995 as cited in Gopinathan & Deng, 2006, p. 99). How SBCD is conceptualized and operationalized in Asian countries, such as Singapore, may therefore differ from their Western counterparts, especially those that have been reported in the Anglophonic countries such as Australia, Canada, United Kingdom and United States as identified by Keiny (2006). This is because countries in Asia, like Singapore, operate within a centralized system unlike Western-style democracy, which privileges shared decision-making between teachers and students (Kennedy & Lee, 2008) as opposed to hierarchical relations. Even in cases where country, state or district authorities attempt to control the implementation of specific curricular reforms, albeit at a distance, in Western countries (e.g., academisation of schools in the UK), the fundamental value to pursue Western-style democracy still prevails. However, this is not to say that SBCD will work better in Western than Asian schools, but perhaps merely explains why low power distance cultural value is more germane to shared decision-making, which has been assumed to potentially benefit the implementation of SBCD. It may even not be surprising that the cultural value for individualism over collectivism can work against SBCD.

It is even fair to say there will be variations in the implementation of SBCD among Asian countries – even East Asian countries such as Singapore, Taiwan, Hong Kong and South Korea with strong Confucius influence. For example, Singapore has its own brand of pragmatism, which governs the day-to-day decision-making process. This pragmatism is inevitably entwined with the ruling party's version of pragmatism – that is, essentially non-ideological, a viewpoint that is well-ingrained in the populace (Chua, 1997, p.5). In Prime Minister Lee Hsien Loong's interview with TIME magazine, he pointed out that Singapore “looks for solutions, rather than starting out from any ideological presumptions” (Beech & Abdoolcarim, 2015). The primary focus is on achieving the desired outcomes based on

evidence informed by science and technology, and not be “shackled by ideological, moralistic and sentimental rigidities” (Tan, 2017, para. 24), giving a result-oriented impetus in the decision-making and policy-making processes that is heavily influenced by cost-benefit calculations (Tan, 2012). In essence, the Singapore’s pragmatism is a framework that evaluates problems rationally, and takes a flexible approach in selecting workable means with a view to attaining the ends. However, as Tan (2012) rightly explained, “Singapore’s pragmatism, as a distinctive way to make sense of the world and to act within it, is ... unavoidably ideological” (p. 83). Therefore, there are identifiable underlying principles in the idea and practice of Singapore’s pragmatism. Finally, the Singapore’s pragmatism is based on its dynamic and adaptive nature, which values efficiency in order to keep up with and be ahead of in ever-changing and fast-paced world (Tan, 2012). The process of SBCD would therefore be influenced by this same pragmatism.

In attempting to understand SBCD beyond the West-Asian bipolarity, Wand and Neo (2012) conceptualized SBCD in two ways. First, SBCD can be understood as situating within certain educational philosophies. SBCD arguably contains a blend of philosophical ideals that defined education (Marsh, 1992; Skilbeck, 1984). One primary philosophical ideal in SBCD is the principle of co-construction that transcends the West-Asian dichotomy. In other words, co-construction of the curriculum can take place in both Western and Asian contexts, albeit in different fashion – the former more individualistic egalitarianism and the latter more collectivistic hierarchy. Skilbeck (1984) suggests that SBCD requires the co-construction of the curriculum by teachers and students – that is, teacher and student autonomy in curriculum development, and schools providing the ideal environment (local conditions) to enable such interactions to take place. The participation of various stakeholders in the co-construction of the curriculum could also be affected by teacher’s level of job satisfaction and personal characteristics (Marsh et al., 1990). The philosophical approach of SBCD also highlights the

importance of developing structures and policies at the school level that would allow shared decision to be made by all participants, especially teachers and students (Bezzina, 1991).

Extending this perspective, we argue that SBCD can also be understood as a process which focuses on the practices of both school teachers and leaders in the development of curriculum. School leaders do play a significant role in supporting teachers' work in SBCD. The process of SBCD involving specific practices of planning, design, implementation and evaluation of curriculum is however not materialized in a stipulated sequence. These practices take on different dispositions depending on empirical realities of multilevel conditions in which curriculum development takes place. Moreover, the specific school conditions such as the capacities of teachers and the characteristics of students inevitably impinge on the development of curricular goals and objectives as well as teaching and learning goals. SBCD could also vary from one teacher investigating an area for a one-off activity to collaborative effort among teachers, parents, and students working together to create curriculum for long term school plans (Marsh et al., 1990).

Second, SBCD can be understood as situated within systemic contexts. This is because SBCD is inevitably contextualized within larger systems. Contemporaneously, SBCD takes into consideration the broader context of educational change and reform. Fullan's works (1993, 1999, 2001, 2007) highlighted the importance of viewing schools as complex systems requiring restructuring and re-culturalizing to bring about fundamental educational change and reform. Although emphasis is given on focusing larger systems such as school districts and states, and changing these contexts as necessary for the sustainability of widespread school curriculum change, the fact remains that the larger systems have significant influence in the way SBCD is shaped in schools whether in Western or Asian contexts.

We further argue also that SBCD can be understood along the centralization and localization/decentralization of curriculum development work. This is because there is no one

fixed type of Western and Asian (education) systems. Although SBCD assumes internal and organic shared decisions made between key stakeholders (Marsh, 1997) – a more fluid interplay between different groups of stakeholders, this may not totally be suitable for Asian contexts that tend to operate under a highly centralized work relations. Nevertheless, this does not mean that there is no shared decision made in all Asian education systems. SBCD cannot therefore be conceptualized as a dichotomy between centralization and localization/decentralization of curriculum development work, rather one which requires careful consideration at the specific balance points that schools negotiate in developing their curriculum innovations. SBCD becomes an endeavor to increase schools' autonomy so as to meet the individual needs of the school encompassing the needs of school leaders and teachers, students and parents, but also satisfying the needs of the wider community such as district and state policymakers.

The above perspectives essentially bring to attention the importance of context – especially along the centralized-decentralized continuum – in influencing the processes of SBCD, which is currently severely lacking attention. This study makes for an interesting case insofar as it aims to explore how SBCD plays out in terms of its processes and outcomes in centralized Singapore education system, which increasingly encourages greater school autonomy yet requires schools to keep to national standards.

Method

This study employed a case study approach to obtain in-depth and multi-faceted understanding of the phenomenon surrounding the implementation of SBCD in a Singapore primary school. This research design allowed the researcher to investigate events in its natural settings, and facilitated “the search for meaning and understanding with the researcher as the primary instrument of data collection and analysis” (Merriam, 2009, p. 39). The use of

case study also afforded the researcher to understand the lived experience of participants in their social settings so as to develop understanding of the social processes involved in the settings (Jeffrey & Troman, 2004) – in this regard, the processes of SBCD. The school, Coronation Primary School (*fictitious name*), was selected because of its track record in initiating SBCD and was at the beginning phase of a new trajectory in its SBCD journey. The data collection spanned over a 1-year period so as to develop the generation of a thick description of the case and to allow the generation of new insights to the phenomenon (Merriam, 2009) – in this case study, the SBCD phenomenon in an Asian Singapore context.

Two main sources of data collection were undertaken – non-participant observations, and focus group discussions. Non-participant observations of SBCD implementation were made to reveal the congruence or discrepancies in perceived and practised SBCD. These provided insights into negotiations in SBCD practices, and highlighted the conditions that afforded or constrained SBCD practices. In total, participant observations were made on 28 grade four lesson observations and four professional learning meetings (PLMs). PLMs are allocated timeslots for teachers to design, plan and review curriculum development matters. Fieldnotes were generated from these non-participant observations. Other unplanned non-participant observations conducted outside these PLMs. Focus group discussions (FGDs) involved school leaders, middle leaders (e.g., department heads, subject heads, level heads), and grade four teachers and students. FGDs were conducted at the start and end of data collection stage of the study. The FGDs served to provide the perceptions of school leaders, middle leaders, teachers and students on the processes and perceived outcomes of SBCD in their school context. In total, 18 FGDs were conducted: two for school leaders, two for middle leaders, four for teachers, and 10 for students. Each FGD comprised about four to six participants. The audio-recorded FGDs were transcribed verbatim. As the study is exploratory in nature, an inductive thematic analysis was used – a method for identifying,

analyzing, organizing, describing, and reporting themes found within a data set was used, albeit without any initial pre-determined set of codes (Braun & Clarke, 2006). The process of the thematic analysis took into consideration the following key steps to maintain trustworthiness (Nowell, Norris, White, & Moules, 2017): (1) Transcripts were read once to be familiar with the data; (2) Each transcript was coded line-by-line; (3) Themes were identified and named from identified codes; (4) Codes were reviewed by the research team members; and (5) Triangulated with the fieldnotes. From the aggregated codes, five main themes surfaced.

The selected primary School, *Coronation Primary School*, is an established government-aided single-sex girls' primary school in Singapore with a long history that goes beyond a century with extensive network of alumni, fraternity and parental group. Government-aided status is given to schools in Singapore with strong and historical affiliation with a religious group (e.g., Catholics, Methodists, Buddhists). In the context of the education ministry's TLLM initiative that promotes holistic development and greater engagement with students, *Coronation Primary School* embarked on a curriculum innovation which began in 2010, albeit focusing only at grade four level with the hope of scaling up to other levels. The curriculum innovation was a bought curricular package from an Australian education consultant company. The curriculum package contains both the curricular contents and instructional tools for users. The curricular contents cover several broad themes such as community, identity and sustainability with a library of instructional tools which teachers could use to augment thinking and social skills in students. These skills are also considered vital for deep learning and cooperative learning. In teaching the themes, the teacher acted as facilitators of student learning. Students were expected to engage with the knowledge presented to them couched in the broad themes of the curriculum. Students' engagement with the knowledge presented to them within the broad themes also sought to equip them with 21st

century competencies such as critical thinking, problem solving, creativity and cooperation. The raft of learning outcomes that the curriculum package was purported to deliver was the primary motivation in the acquisition of the curricular materials, along with these outcomes being tied to 21st century competencies. The only remaining task for school leaders and teachers was to integrate the curricular contents to its existing subject-based curriculum. This preceding backdrop provides the grounds for the research study. The study sought to answer the following research questions:

1. How is SBCD implemented in a Singapore primary school?
2. What contexts supported and constrained SBCD implementation in a Singapore primary school?

Findings

The analysis from the data collected from the FGDs supported by the non-participant observations surfaced five key findings.

1) Pragmatic implementation of SBCD

The implementation of SBCD at Coronation Primary School was essentially underscored by pragmatism. The approach at using a bought curriculum and integrating it with the school's existing subject-based local curriculum can be considered strategically pragmatic. This way of revamping the curriculum as opposed to developing a new curriculum from scratch had placed lesser demands on teachers. Teachers only had to do curriculum modifications taking into consideration the new contents and instructional strategies as opposed to doing the full works of curriculum development such as the creation of curriculum content and instructional strategies. The school leaders fully understood teachers' heavy workload, and one way of gaining buy-in from teachers was to provide the initial basic curriculum contents along with

the instructional strategies to help students acquire satisfactory mastery of the expected curriculum learning goals.

The teachers using the bought curriculum package also perceived it as another advantage in terms of professional development. The curriculum contents and proposed instructional strategies were used as training materials to develop teaching competencies. The following quote from the teacher leader highlights how the curriculum package materials were used to develop teachers' teaching competencies.

It (the curriculum package) is also a training platform for teachers, and the thing that I really like about the curriculum package. And what it is to me is that it allows the teachers to be trained on a weekly basis. So training is done bite-size and application is done immediately. (Teacher Leader)

The library of instructional tools containing a range of teaching strategies provided in the curriculum package were appreciated by the teachers in the context of teachers' busy schedules as they fed into the lessons for each theme. These instructional tools were essentially teaching strategies to directly build thinking and social skills in students. For example, the 'tip-the-scale' instructional tool serves to help students think through the 'pros' and 'cons' of issues to aid in decision-making. The instructional tools had thus helped teachers to ease their way in engaging in SBCD.

These were the toolkits that were really useful for me ... But the toolkits that we used were very, very useful. (Teacher 4.3)

Yeah, for me were the toolkits ... I've used ranking ladders and tipping the scales, and all, these are the toolkits that I've used. (Teacher 4.1)

So, what I will say is that training for teachers is very JIT, very just in time. But application is also immediate. So the teachers' repertoire of the toolkit – of varying strategies and knowledge becomes widened very much faster. (Teacher Leader)

The instructional tools had also helped teachers grow in their role as facilitators for learning in their respective classrooms as opposed to the dispenser of knowledge. By applying and integrating the instructional tools in the school's subject-based curriculum, the teachers gradually saw themselves more as facilitators for learning than a dispenser of knowledge. This is illustrated by the following quotes.

*More like facilitators, we facilitate – we guide the students, we give them direction.
We try to give them direction so it's more like a guiding role, facilitating the lesson.
(Teacher 4.5)*

Inadvertently, teachers did not have to expend too much time and effort at consciously becoming facilitators of learning. Rather, the application of instructional tools automatically aided in the teachers' implementation of facilitation for students' learning. The applications of the instructional tools created the learning opportunity for teachers to develop their facilitation skills.

On the whole, the modification of the bought curriculum package, along with the attendant contents and instructional tools, was motivated and sustained by pragmatism. This approach had not only cut down teachers' time and energy in curriculum development work, but also aid in the professional development of teachers.

2) Teacher Leadership supporting the development of SBCD

Besides the strategy of modifying an externally bought curriculum, the school leaders also saw the importance of investing a strong teacher leader to lead in SBCD at the ground level.

The school leaders appointed an experienced teacher who was an aspirant leader but did not have a senior management positional designation (e.g. department head) to be the champion and change agent for SBCD at the grade four level. She was the main driver for curriculum development work processes for grade four teachers. These work processes required the following leadership enactments: a) setting the direction for the implementation of SBCD, b) facilitating discussions during PLMs to explore and develop specific lesson plans, c) providing professional development for teachers to understand the broad themes, and exploring and demonstrating appropriate instructional practices during PLMs, d) providing appropriate instructional materials, and e) monitoring the curriculum implementation through feedback during PLMs.

Underlying the wide range of teacher leadership enactments was the challenge of guiding and developing teachers' capacity in curriculum development work but without impinging on teachers' sense of professional autonomy. The quotes below highlight this challenge.

To play the role well, I believe they (teachers) must of course understand the concept, so they are the so-called facilitators of teaching these children the concepts, and the thinking aspect and the social aspect of the curriculum. Okay, I also get them to, what I call, do a bit of research and then share during PLMs. (Teacher Leader)

The teacher leader was considered to have shown strong enactments of leadership insofar as she displayed more directed than distributed or shared influence. She was the only one taking the lead in discussions for curriculum development during PLMs, and was often directive and didactic in her interactions with her teacher colleagues. Nevertheless, her colleagues appreciated this approach because these interactions had helped them understand the concepts

and skills required for the implementation of SBCD given the short of time given for curriculum development work.

The teacher leader had therefore played an instrumental and orchestrating role in leading and managing the implementation of SBCD. Her role in curriculum leadership for SBCD was also perceived to be clearer and more substantive than the department heads.

I think they (school leaders) strongly champion the curriculum innovation but when it comes to execution and providing the support, I think it came mainly from the teacher leader actually. She did really a lot of work for the curriculum development of the curriculum innovation. So the roles of the KP (Key Personnel such as department heads) are not really very sure actually (Teacher 4.6)

In summary, the enactment of teacher leadership to support the process of SBCD in Coronation Primary School has evidence of pragmatism. The school leaders saw the benefit of deploying only one teacher leader to provide the needed direction, supervision, professional development, and monitoring for the entire grade level teachers. Furthermore, the use of PLMs for professional development and monitoring was seen to be a productive of time by both the teacher leaders and teachers. The teachers saw the use of the PLMs to be helpful and productive insofar as it provided the time and space for the teacher leader to provide the needed direction, guidance and support. All these can be seen as pragmatic moves whereby resources are minimized so as to maximize output.

3) Student learning depends on teacher learning

Although the teacher leader played the prominent role to collectively support teachers to design, plan, implement and review the curriculum development work, the effects on individual classroom teaching practice varied across classrooms. This is understandable

taking into consideration the varying levels of capacity and competency of teachers, along with the variation in student learning needs. Although the grade four teachers followed a standard curriculum innovation framework where the teachers collectively agreed on modifying the curriculum to instructional approaches, they had to individually adapt these instructional approaches to satisfy their respective student learning needs – as indicated in the quote below.

I think the main idea is collectively – the big idea is that it is collaboratively done but after that, we go into our classes and each class is different where we adapt and modify. (Teacher 4.2)

Variations in the implementation of the curriculum package were evident in the lesson observations from various teachers across the grade level. Teachers collectively learned as a group during their PLMs, and this was followed through by teacher learning at the individual level in order to suit their respective student learning needs. The adaptations that teachers had to commit are obvious insofar as they had to make the curriculum work for their respective students' learning needs. These adaptations also showed that teachers had gained new knowledge in terms of curriculum content and instructional strategies beyond the conventional subject matter knowledge. The following comments illustrate this finding.

Actually for me as a new teacher, the curriculum innovation has provided me with another way of teaching, or another way of delivering my lessons, so I thought that was really good. I have also gained greater awareness of issues, like sustainability. And I've gained new knowledge than I have previously – about things that I didn't know. (Teacher 4.5)

The findings seem to suggest that the PLMs afford the time and space for teachers to learn from one another, and hence build their understanding on the use of new curriculum to be implemented in their respective classrooms. However, the actual implementation of the new curriculum is left in the hands of the grade four teachers. There was no structured lesson observation made by the teacher leader at the classroom level. This is quite in line with the general professional culture of not ‘interfering’ with individual teachers’ classroom teaching.

4) Learning beyond academic achievement (holistic learning)

The findings indicated that the curricular innovation has brought about outcomes of learning that are beyond the academic, albeit perceived by students and staff members. The teacher leader had the following vision and expectations when engaging in SBCD.

I wished for them (students) to actually see a world around them and even themselves through the concept of identity/community as well as sustainability ... I would like my students to actually have a broader perspective of the world around us, and not just see education or the word ‘education’ as exams. I hope to actually get them to love the world around them, and love the knowledge around them so that they have a love for learning ... My expectations as a teacher was never to score all A-stars or As and all that ... And I believe very strongly that, like the habits of mind and social skills, would actually get them to become better workers and contributors to society. That’s my expectation. (Teacher Leader)

Students had reported that they had learnt social skills such as working together, overcoming relationship problems, awareness of others, and respect others’ decisions – as illustrated by the following quotes.

I learnt about social skills, and I think that we should cooperate with our friends and teachers in order to learn more about our friends and teachers. (Student 4.3)

We also learn respect; to respect others' decisions and also humility because we cannot – we have to respect people's decisions, and we cannot think our decisions are always right without hearing others' decisions. (Student 4.15)

Students had also indicated that they had gained new awareness about themselves, their teachers and their abilities to make a difference to the environment and the lives of others.

We also learnt courage because we have to have the courage to say our own opinions and stand by it no matter what others say. (Student 4.23)

Through the lesson, I've learnt that we should not only care about ourselves but also about what is happening around us. (Student 4.7)

I remember most about sustainability, and that we can sustain our environment. We can sustain our environment by picking up litter that we see on the floor. And we can join campaigns to help pick up rubbish at the beach every weekend. (Student 4.30)

On the whole, the findings suggest that the students have benefited from the curricular innovation. This may then suggest that SBCD had translated to student learning outcomes that the school had intended. However, the link between SBCD and student learning is based on perception data only.

5) SBCD is seen as an 'add-on'

Although the benefits of SBCD had been generally reported by both students and teachers, some teachers viewed SBCD as an 'add-on' – that is, intensifying teachers' workload. Modifying existing curriculum for the new curriculum entails additional workload and competition for lesson time. Further, the task of integrating new curriculum contents to

existing subject-based curriculum was not easy, and was seemingly incommensurable with academic achievements.

I still find that it (curricular innovation) is not seamlessly incorporated into your local curriculum, it is an add-on for me. Because I teach EMS [English, Maths and Science] I've the privilege of time that I can take this and do it – cut short and do something else with [the curricular innovation]. But if you're not a different subject teacher, you will be really rushing for time with [SBCD activities] coming in. Scheduling of all the tasks, I think it was easier this time around but for the first 2 years, it was really painful for me. I mean as it – I don't know where to put what in, which one to take out, which one to prioritise so it was just learning for the 2 years. This year maybe it was more focused and I think like what the skills in there are useful but they have to be incorporated into the curriculum or else we're just doing and doing, and doing. (Teacher 4.3)

The above comments also depict a certain degree of ambivalence. On the one hand, teachers pragmatically saw the benefit of SBCD in preparing students for the 21st century world. On the other hand, they saw the added work involved in initiating, developing and sustaining the curriculum work that needed to be done. This ambivalence was exacerbated when teachers felt morally obligated to maximize and maintain students' academic achievement outcomes. The sense of 'adding-on' is therefore understandable when limited resources are to be stretched between maintaining academic rigor and exploring new ways of learning. The need to balance and maintain students' academic achievement outcomes can be interpreted as a pragmatic move because while teachers know that holistic student learning outcomes are necessary, they are equally aware that student academic achievement outcomes play a significant part in determining the success of students' future careers. In order to achieve this dual outcomes, more support needs to be given to integrate the new and existing curriculum.

Discussion

The findings from the study provided insights into the processes and perceived outcomes on how a Singapore primary school attempted to initiate and sustain SBCD supporting curricular innovation for 21st century competencies, and taking into consideration the conditions shaping these processes and outcomes. The aggregative analysis of the findings has proven to be highly productive insofar as it accentuates the role of contexts in shaping the processes and outcomes of SBCD. The findings of the study revealed that the societal value for pragmatism permeates nearly all aspects of SBCD. At the national policymaking level, pragmatism in Singapore ‘involves prudent political management of the means, directions, timing, wording, and public presentation of policies, especially sensitive policies involving language, religion, and culture’ (Mauzy & Milne, 2002, p. 53). In essence, pragmatism promotes ‘commitment to rationality and practical results’ (Mauzy & Milne, 2002, p. 52). The Singapore government adopts the ‘pragmatic value for efficiency and the need for control to attain efficiency’ (Author, 2015, p. 23). Since the nation’s independence in 1965, the key driving force underlying this concept of pragmatism is the need to ensure Singapore’s economic and national survival. This belief for pragmatic efficiency has also been cascaded down to the level of practice in schools giving legitimacy to hierarchical work relations in schools (Author, 2006). These features of pragmatism encapsulate the Singaporean version of pragmatism – all of which have significant bearing on the processes and effects of SBCD.

First and foremost, the inception of the curriculum innovation was shaped by pragmatism. Schools in Singapore are continuously encouraged by education policymakers, who are constantly aware of the nation’s economic survivability, to commit to continual school improvement in their curricula in response to the constant change in the education landscape. This is essentially a pragmatic response to prepare future Singapore citizens with

21st century competencies. Having this in mind, the school leaders of Coronation Primary School had to also meet the expectations of both parents and the school board to bring the school to ever increasing heights with regard to students' learning experiences and outcomes. However, in order to ease the burden on middle managers and teachers, the school leaders adopted the strategy of modifying from a bought curriculum rather than starting from scratch. Furthermore, the modifications from the bought curriculum needed to be seamlessly integrative in order not to tax teachers. This modification strategy hence reinforces Gopinathan and Deng's (2006) assertion that SBCD in Singapore is less radical insofar as teachers adapt and integrate the curricular materials provided externally – in this case bought – rather than teachers creating new curriculum to fit the local context. This pragmatic strategy had afforded teachers with far more focus and time to implement SBCD.

Secondly, the *modus operandi* to invest in the development and supervision of one teacher leader was also heavily shaped by pragmatism. Mobilizing department heads to lead in curricular innovations would have involved more of existing limited resource. Furthermore, the main reason for the teacher leader to adopt a more directive and didactic approach in her interactions with the teachers is to maximize the use of limited time resource available during school time build teachers' capacity to implement the curriculum successfully. The strategy of investing resources to recruit, select and empower teacher leadership can therefore be interpreted as a pragmatic response, especially in terms of minimal investment (i.e., one teacher leader) for maximum output (i.e., teachers from one grade level and their respective students). In view of this, the appointed teacher leader played many essential roles that impacted positively on SBCD: setting direction, facilitating discussions in curriculum work meetings, developing teacher capacity for curriculum change, providing appropriate instructional materials, and monitoring the curriculum implementation through feedback.

Thirdly, the findings from the study have also surfaced greater nuanced differences between the Asian and Western conception of SBCD. While the latter emphasized more egalitarian conceptions of shared decision-making processes, the former more hierarchical centralized yet collectivist decision-making processes. What is more nuanced here is the pragmatism that has surfaced in the findings. This is because although greater autonomy has been given to school teachers to enact change, the specific area of change is very much scoped by the education ministry and school leaders. In Asian societies such as Singapore, importance is placed on conformity, and collective interest is placed above individual interest – reinforcing the policy philosophy on centralization (AASA, 2011). Conformity can therefore be said to serve efficiency and maintain the Asian value for hierarchy (Author, 2015).

The students from Coronation Primary School were not expected to participate in the co-construction of the new curriculum evidenced in the lack of ‘student voice’ on matters of SBCD. This is in stark contrast to SBCD as idealized by proponents of SBCD in the Western sphere, whereby students’ voice on teaching and learning is assumed to be important (Delpish et al., 2010; Rudduck, 2007). Although in recent years, there have been more calls for students to be more involved as co-creators of learning – i.e., a partnership between teacher and students in creating curriculum (Skilbeck, 1990), the notion that learning involves students as co-creators and collaborative problem-solvers was absent in the Singapore classrooms.

Unlike Skilbeck’s (1990) idea that shared decision-making should involve both teachers and students, the teachers’ role in the Singapore case was mostly to elicit the desired responses and generate interactions between teachers and students in class but not to promote shared decisions and responsibility on teaching. Basically, there was no partnership between teachers and students to include some or all aspects of the students’ experiences in SBCD. Such limited involvement of students is consistent with the concepts of the Singaporean

version of pragmatism because the interactions between teachers and students would be perceived as taking up additional curriculum time and hence less efficient in attaining the desired student outcomes. The focus of the SBCD is thus primarily on students' intended learning outcomes and not on student's perspectives on teaching and learning. The 'student voice' can be said to be restricted to active learning whereby students were given more space to be more critical and to take more responsibility in their own learning (Kuh, 2008).

The lack of 'student voice' also reflects the Asian respect for hierarchy. Students are considered to be at the lowest level of the hierarchy in terms of social hierarchical relations and knowledge and expertise in matters pertaining to content and teaching knowledge. Many (modern) Asian countries, including Singapore still practice and value hierarchical social relations. Transferring this ideal to the Asian classrooms, teachers are perceived to be the bearer of knowledge and therefore are placed above students in terms of knowledge bearer. Similarly, the teacher leader was perceived to have more knowledge on the content and pedagogy pertaining to the curricular innovation in contrast to the teachers. Such hierarchical ordering was also seen between school leaders and teachers. For example, SBCD was strongly encouraged by the school leaders, and it was strongly 'advocated' to teachers to take on and execute. Although Singapore education policymakers have been increasingly empowering schools to be innovative in their curriculum, the modus operandi is still 'top-down' at the school level (Author, 2012).

Finally, the Singaporean version of pragmatism is also evidenced in how teachers struggled with attempting to develop a curriculum that prepares students with the relevant 21st century competencies while maintaining and satisfying students' need to do well in examinations. The sentiments from school leaders are resoundingly similar. The importance of student academic achievement is rooted in the exam-based meritocratic ideals that the Singapore government espoused since independence. It essentially legitimizes the way

national resources are allocated to the mass population. While investments in curricular innovations to prepare students for 21st century competencies serve to sustain national economic viability, investments in preparing students for examinations serve in part to maintain social viability of the nation – that is, how incomes earned from foreign direct investments are distributed within the country.

Conclusion

This paper has put to the fore the importance of contextual factors in the realm of economic, political, social and cultural to have significant bearing on SBCD. In the Singapore context, the ideology of pragmatic efficiency has a huge impact on the implementation of SBCD. Markee (1997) is indeed accurate to assert that the process of curricular innovation takes place within a matrix of cultural, political, institutional and administrative variables. Regardless of SBCD implementation within the centralized-decentralized or Asian-Western continuums, the wider contexts such as social, economic, cultural and policy variables play, and will continue to play, a significant role in the processes and outcomes of SBCD regardless of the context where it plays out. However, more empirical studies need to be conducted to extend the knowledge base on SBCD in Singapore school contexts. This is a case study of one primary school (government-aided type) having to adapt to a bought curriculum, and employing mainly FGDs to uncover participants' perceptions as opposed to one-to-one interviews where more sensitive information can be solicited. Furthermore, the perception data collected was only triangulated with fieldnotes from non-participant observations which focused more on PLMs and other non-solicited interactions. Future research studies, especially more ethnographic in nature, would probably give more nuances to the notion of SBCD as idealized in the Western literature. Also, quantitative data need be employed to give more support on the claims to SBCD impact on student learning outcomes.

Nevertheless, the findings from the current study has already given a more nuanced understanding of SBDC that is different to the one idealized by Skilbeck (1984). SBDC in this current time can and would most probably be manifested in its varied forms.

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Biography of Salleh Hairon

Dr Hairon is Assistant Professor with the Policy and Leadership Studies Academic Group at the National Institute of Education, Nanyang Technological University, Singapore. His research interests center on school leadership for teacher learning in communities comprising areas such as distributed leadership, teacher leadership, professional learning communities, teacher professional development and action research.

Contact: 1 Nanyang Walk, Singapore 637616, hairon.salleh@nie.edu.sg, (65) 67903248.

Biography of Siew Kheng Catherine Chua

Dr Chua is Associate Professor with the Werklund School Education, University of Calgary. Her research interests include language planning and policy, globalisation and educational reform, globalisation and social change and 21st century competencies.

Contact: 2500 University Dr, NW Calgary, Alberta, Canada, T2N 1N4, catherine.chua@ucalgary.ca, +1 (403) 210-7557

Biography of Wei Leng Neo

Wei Leng is a Research Associate with the Curriculum, Teaching and Learning Academic Group at the National Institute of Education, Nanyang Technological University, Singapore. Her research focus and interest is in curriculum innovation and development.

Contact: 1 Nanyang Walk, Singapore 637616, weileng.neo@nie.edu.sg, (65) 62196198.