



RESEARCH ARTICLE

A Comparative Study on Desirable Attributes in Primary Education Curricula of Thailand and Singapore

Krittatt Phaisamran^{1*}, Dr. Parimon Phaisamran²^{1,2} Headstart International School Phuket Chaofah City Campus 39/99 Moo 4, Vichitsongkram Rd., Soi Na Seau 1, Vichit, Muang, Phuket 83000, Thailand**ARTICLE INFO**

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ABSTRACT

The objective of this comparative research was to compare desirable attributes in the primary education curricula of Thailand and Singapore. The content analysis was used to analyze the data under the constructed analysis framework. The results revealed that the goals of the curricula were consistent in designating curriculum directions on holistic learners' development. The distinct feature of the Thai curriculum was to maintain the national identities, while that of the Singaporean curriculum was broad-based learning. When the desirable attributes were considered, they were consistent with their national contexts. The difference was that Singapore clearly and concretely designated social and emotional learning. Regarding the subject contents, they were consistent in specifying fundamental courses and learners' development activities. The distinct feature of the Singaporean curriculum was that subject classification was a broad-based education. As for learning time structures, period length, learning time structures, and the number of hours per year of the Thai curriculum were more than those of the Singaporean one. With regard to learners' development activities and practical guidelines, they were consistent in the two countries. Desirable attributes were integrated into classroom learning and the development activities were consistent with school or community contexts. The distinct feature of Singapore was that the activities were based on learners' aptitudes and interests with the participation of parents. For the measurement and evaluation of desirable attributes in the two countries, there were clear evaluation criteria and the evaluation was based on actual conditions via activities and contexts of schools. The distinct feature of Singapore was a holistic manner with both qualitative and quantitative evaluation. From the comparison of the desirable attributes in the primary 1-6 curricula of the two countries, it was found that the goals of the curricula were clearly stated in consistence with social contexts in the 21st century with the maintenance of national identities.

***Corresponding Author:**

Krittatt2@gmail.com

INTRODUCTION

In the past century, the global educational systems focused on the development of cognitive skills like intelligence and academic abilities of students, due to the fact that they could be used as a criterion to predict educational and professional successes. However, in the past decade, economic, psychological and social researchers had collected relevant data to support that non-cognitive skills, such as, soft skills, social and emotional learning skills, the 21st century competencies and other desirable attributes, were able to contribute to educational and professional successes as much as or more than cognitive skills (Ministry of Education, 2008; Gutman & Schoon, 2013; Zhou, 2017; Tan, Koh, Chan, Costes-Onishi & Hung, 2017; Kirchgasser, 2018). Therefore, cognitive skills per se could not answer the questions of the labor market. From the above-mentioned issue, the education sphere has been aware of curriculum changes, from human resource production to human capital

production with holistic development, which includes intellectual, emotional, behavioral, thinking, and feeling developments.

Several countries have nowadays reformed their educational curricula with a focus on holistic development. For instance, the 2014 Basic Education Core Curriculum of Finland implemented the PhenoBL learning management. It is a multi-disciplinary learning based on holistic real-life experiences as a learning stepping stone (Mahawijit, 2017). From the 2018 PISA Assessment, it was revealed that a students' opinion survey on the growth mindset was conducted for the first time. It reflected that OECD did not put an emphasis on cognitive skills *per se*. It was found from the assessment results that, in countries with successful educational systems like Estonia, 77% of the students had the growth mindset, higher than the average of the OECD member countries, which was at 63%. For the national curriculum, non-cognitive skills were emphasized, e.g., social skills, self-management, and communication skills (Zhou, 2016). In the ASEAN countries, the average was 60% for Singapore, whereas it was 43% for Thailand. Moreover, the growth mindset is consistent with reading abilities (The Institute for the Promotion of Teaching Science and Technology, 2020). The assessment results indicated the significance of Thai educational foundation which should focus more on thinking abilities, emotions, and behaviors of students in order for them to acquire holistic learning.

The educational reform of Singapore in 1966 revealed that human resource development was conducted for economic purposes, starting from developing various skills in one individual with a focus on vocational education to produce human workforce for the industry section. In 1970, the skills development in students for economic drive emphasized sciences and technology in an attempt to catch up with the West. In 1977, the vision, "Thinking School, Learning Nation" or TSLN, was created in preparation for the 21st century, and the goal was to develop learners holistically in order to cultivate analytical and creative thinking skills as well as awareness on good citizens ready for lifelong learning under the national culture (Tan, Koh & Choy, 2016). In 2005, the vision, "Teach Less, Learn More" or TLLM, was formulated in consistence with TSLN with a focus on learners' holistic development. Learners were able to express their potentials according to their aptitude and the role of teachers was changed from teaching to facilitating (Tan et al., 2017). In Thailand, educational reforms took place long ago, dating back to the Sukhothai Period (1238-1378). However, the reform practical guidelines were clear in 1999, when the first National Education Act was established, which emphasized the knowledge-based society in accordance with global changes. In 2009, the reform focused on educational quality and holistic quality of life of Thai people, bringing about lifelong learning. Additionally, there have been the 20-Year National Strategies, the National Education Plan (2017-2036), the Thailand 4.0 Policy, the 12th National Social and Economic Development Plan (2017-2021), the 12th Educational Development Plan (2017-2021), and the National Education Plan Framework (2017-2031). From the above educational reforms, it was revealed that both countries have emphasized the development of human quality. But why have the educational results of the two countries been so different?

Furthermore, educational curricula of the two countries have focused on developing their youths to have desirable attributes, particularly at the primary education level. This is due to the fact that primary school students have just started educating and learning things around them with their learning processes. If they cultivate these attributes from the beginning, they will become good and acceptable social members. From the above-mentioned issues, it is interesting to compare desirable attributes in the primary education curricula of the two countries by conducting a comparative analysis of each proposed component. The Objective is to compare desirable attributes in the primary education curricula of Thailand and Singapore.

METHODOLOGY

The contents were concerned with comparing desirable attributes in the primary 1-6 curricula in Thailand based on the 2008 Basic Education Core Curriculum. For Singapore, the investigation was based on the primary education curriculum of the country. The data were qualitatively synthesized from secondary sources based on the research topics and interpreted by comparing similarities and differences of the attributes in the curricula. The five components for comparison comprised curriculum objectives/goals, subject contents, study time structures, learners' development

activities and practical guidelines, and measurement and evaluation of desirable attributes respectively.

Data resources:

1. The 2008 Basic Education Core Curriculum for primary education 1-6 levels (Ministry of Education, 2008)
2. Development guidelines for measuring and evaluating desirable attributes based on the 2008 Basic Education Core Curriculum (Bureau of Academics and Educational Standards, Office of the Basic Education Commission, 2011)
3. Guidelines for organizing learners' development activities based on the 2008 Basic Education Core Curriculum (Bureau of Academics and Educational Standards, Office of the Basic Education Commission, 2010)
4. The primary school curriculum documents: *Bringing out the Best in Every Child*; *Primary School Education: Preparing Your Child for Tomorrow*; and *Advancing 21st Century Competencies in Singapore* (MOE, 2020; Tan et al., 2017; MOE 2015)

Research instrument and data collection methods:

The research instrument was a desirable attribute component analysis table under the constructed analysis framework based on Taba (1962) for the primary education curricula of the two countries. There were five components which included curriculum goals, subject contents, study time structures, learners' development activities and practical guidelines, and evaluation and measurement of desirable attributes. The steps of data collection are as follows.

1. Examine fundamental data about desirable attributes in the curricula of the two countries from books, documents, relevant academic articles, and online databases.
2. Define the analysis scope and create the analysis table of the five desirable attributes in the curricula.
3. Submit the contents to lecturers in the Curriculum Design and Pedagogy in Science Education Program for content validity and propriety.
4. Correct and improve the contents according to their suggestions and recommendations.

Data analysis:

The content analysis was used to analyze the data under the analysis framework based on the research topics, and the results were interpreted and compared about the similarities and differences of the desirable attributes in the primary education curricula of the two countries based on the five components.

RESULTS

1. The goals of the curricula. It was revealed that the direction of the curricula was aimed at developing learners holistically in the three domains. For the Thai curriculum, it was clearly stated that, in the cognitive domain, learners should possess universal knowledge; in the psychomotor domain, learners should have communication, thinking, problem-solving, technological and life skills; and in the affective domain, learners should be moral and ethical with desirable values and self-worth. They should be disciplined and practitioners of their respective religions. They should also adhere to the Sufficiency Economy Philosophy. They should love their nation with awareness on being national and global citizens as well as being Thainess. The main goal of the Singaporean curriculum stated that learners must have undergone broad-based learning. When the desirable attributes were taken into consideration, it was revealed that similar attributes between the two countries included the love of nation, honesty, discipline, inquisitiveness, work determination, and public mind. Clear differences were sufficiency economy and being Thainess, which are the Thai identity and in consistence with the Thai contexts. For Singapore, social and emotional learning was designated under the 21st century skill framework.
2. The subject contents. It was revealed that there were eight fundamental strands with three learners' development activities in the Thai curriculum. The three activities included guidance activity, student activities, and activities for social and public benefits. The activities

were optional, depending on the contexts of schools. The Singaporean curriculum specified three subject groups. The first group was the core subjects which comprised languages, humanities and arts, and mathematics and sciences. The second group was about knowledge and skills with a focus on thinking and communication skills through the project-based learning management. The third group was concerned with behavioral development, and the activities were optional, depending on school contexts like in Thailand.

3. The study time structures were divided into two topics as follows.
 - 3.1 Study period. It was found that the number of study hours per day was the same, not exceeding five hours. However, when the period was considered, it was a 50-minute period in Thailand, but it was a 40-minute period in Singapore.
 - 3.2 The total hours per year allocated for developing desirable attributes in Thailand were higher than those in Singapore. It was 120 hours per year per subject, and additional activities according to school readiness and focus should not exceed 80 hours per year. In Singapore, at least one co-curricular activity per semester was required. For character and citizenship education activities, 60 hours per year were required for grade 1-3 students and 75 hours per year for grade 4-6 students.
4. Learners' development activities and practical guidelines. It was revealed that the practical guidelines of the two countries were similar. The practices were integrated into learning strands and there were learners' development activities and programs for developing their desirable attributes with an integration into their daily-life activities. From the practical guidelines to development activities, they were congruent, enabling schools and teachers to design the activities efficiently. In Thailand, the guidance activities were consistent with the active learning program in Singapore. Student activities in Thailand were consistent with the learning for life program in Singapore; and activities for social and public benefits in Thailand were consistent with the character and citizenship education and value-in-action programs in Singapore,
5. Measurement and evaluation of desirable attributes. It was revealed that the evaluation in both countries was based on real conditions through students' activities and practices with clear evaluation criteria. Diverse evaluation instruments were used in order to reflect behavioral expressions of students. In Thailand, however, evaluation depended on teachers and school administrators, but not in Singapore. The evaluation was from classmates and parents and was both qualitative and quantitative.

Table 1: Comparison of education in Thailand and Singapore

Singapore	Thailand
<u>Time requirement</u> -12-year compulsory: 4 years of lower primary school, 2 years of higher primary school, 4 years of secondary school, and 2 years of pre-higher education	<u>Time requirement</u> - 9-year compulsory - Teachers divided according to their majors - One year of teaching practicum
<u>Teachers' training institution</u> - Focusing on teachers' training rather than studying teachership	<u>Teachers' training institution</u> - A large number of institutions and they are free to offer the program -Some institutions do not have demonstration schools -Teaching practicum possible if schools got approvals from the Office for National Education Standards and Quality Assessment
<u>Entrance</u> - 16 years old and over and finishing the 10 th grade and over	<u>Entrance</u> - Assistant teachers - Senior professional level teachers - Course teachers - Guidance teachers
<u>Educational curriculum</u>	<u>Educational curriculum</u>

Singapore	Thailand
- 4 semesters with 10 weeks per semester	- 5 – year educational degree - Bachelor degree for guidance teachers
<u>Working conditions</u> - Full time - Punctuality - Learner - centeredness	<u>Working conditions</u> - Full time - State employees
<u>Salary</u> - 13,812 – 17,217 baht	<u>Salary</u> - 15,000 – 80,000 baht
<u>Administration</u> - Autonomous administration at the tertiary level with inspection systems for reliability	<u>Administration</u> - Secondary school and primary school levels

DISCUSSION AND CONCLUSION

From comparing the five components of desirable attributes in the primary education curricula of Thailand and Singapore, the results are discussed as follows.

1. The goals of the curricula of the two countries were unidirectional, with a focus on broad learners' development and in consistence with the 21st century, societal needs, and educational policies of the countries. This was due to the fact that both countries perceived the importance of human resource development. Therefore, the holistic human resource development was in the focus, which was consistent with OECD policies (OECD, 2014). In Singapore, the distinct attribute was broad-based learning, which would enable learners to discover their aptitudes and abilities. Learners would be able to connect what was learnt, which was an essential factor to promote them to efficiently live in the complicated global society (Wongyai & Phatphon, 2019). The desirable attributes of the two countries were similar. Thailand specifically emphasized national identity, sufficiency economy initiated by King Rama IX, and Thainess. Singapore focused on social and emotional learning under the 21st century skill framework, which would create a good school culture and promote better relationships between teachers and students. It would cultivate in students good and positive values, skills, attitudes, and behaviors, which were expected to turn them into good and productive citizens. Additionally, social and emotional learning was integrated into educational curricula in many countries, such as, China, South Korea, the United States, and the United Kingdom (Liem et al., 2017). This reflected that social and emotional learning of students could play an important part in driving learners to have the 21st century skills.
2. As for the subject contents, details of the contents in fundamental courses and learners' development activities in the curricula of the two countries were based on relevant concepts, theories, and principles. They were chronological and step-by-step, enabling learners to acquire basic to more advanced contents. Thus, they were able to develop themselves continuously and in consistence with the goals of the curricula. The difference was in Singapore, where board-based education was implemented. It was flexible and diverse in learning management, enabling learners to select courses according to their aptitudes and interests. The practice enabled learners to know themselves and apply their potentials efficiently (MOE, 2015). Kaewbut (2020) stated that inquisitiveness is fundamental to human beings. If learners start to learn from what they like and are interested in, which is an intrinsic motivation, it will motivate them to learn by themselves. Yuanchuen (2013) pointed out that, to develop learners' abilities, they should be free to select courses according to their aptitudes, needs, abilities, and interests, which could bring about learning motivation. However, the Citizenship Course was a separate subject for primary school students to learn about, understand, and take pride in their country in Singapore; whereas it was integrated in the Social Studies strand in Thailand. This might result in learners lacking deep knowledge and understanding about being good Thai and global citizens.
3. Regarding the study time structures, it was found that the study time did not exceed five hours per day in both countries. However, the period length and study time structures related

to developing desirable attributes in Thailand were longer than those in Singapore. It was thus seen that the number of period hours did not affect learning efficiency of learners, for instance, 40-45 minutes per period in South Korea and 45 minutes per period in Germany (INCA, 2011). These countries have been recognized worldwide for their educational quality. Singapore also added more hours for the character and citizenship education in accordance with levels and ages of learners. Nevertheless, the number of hours for development activities remained unchanged. This reflected that learners' development activity structures should be based on development of learners in order to specify activity hours appropriately and efficiently

4. As for learners' development activities and practical guidelines, it was found that they were consistent in the two countries. Desirable attributes were integrated into learning activities and contents. In addition, diverse learners' development activities and desirable attribute development programs were conducted besides integrating into daily-life activities with reference to school and community contexts. Furthermore, Office of the Education Council (2019) recommended and specified diverse activities to promote discipline of primary school students at the classroom, home and community levels. The activities aimed at developing the desirable attributes prescribed in the Basic Education Core Curriculum, Nonetheless, the activities had not successfully achieved the objectives due to the activities being diverse and non-directional. Although the activities were diverse, they were not congruent, resulting in the learning being below potentials of learners. Furthermore, the activities were not consistent with learners' interest, but were conducted in response to the policy of the agency. Therefore, learning results were not sustainable (Kaewbut, 2020). The activities in Singapore were truly based on learners' interests and aptitudes with the participation of parents. Singapore regards the family institution as crucial. It is the first institution and closet to learners, providing collaboration to direct and monitor their learning progress. Moreover, creating a positive school atmosphere like interactions between teachers and students or among classmates could encourage learners to change their behaviors as expected by the curriculum, and cultivate lifelong learning (OECD, 2014).
5. Measurement and evaluation of desirable attributes. For Thailand, the measurement and evaluation depend on teachers who observe students' behaviors in real contexts in schools in an attempt to evaluate and judge according to the standards of indicators prescribed in the 2008 Basic Education Core Curriculum (Amendment in 2017). Responsible teachers or advisors in the activities play a part in designing activities in consistence with aptitudes and abilities of learners under the philosophy, principles, and guidelines in organizing learners' development activities. The evaluation criteria may be from activity participation, practices of the activities, or finished works of learners. Those involved in the development activities supervise, monitor, and assess students' performances in order to approve the evaluation. It is seen that the evaluation applies a variety of assessment instruments. Nevertheless, most of these instruments have not truly been able to assess desirable attributes of learners. Some teachers have not fully understood those instruments and the attributes are individually intrinsic, which can be difficult to evaluate accurately. There could bring about discrepancies in the evaluation results. Nowadays, there have been research studies in developing and improving assessment tools to evaluate the attributes. Taksino et al. (2016) developed a model for broadly measuring and evaluating the attributes based on the national education standards as well as a set of tools to measure attitudinal structures of primary school students. The construct validity and reliability of the tool set were at the acceptable criteria that could be used to evaluate the desirable attributes. The situation in Singapore is different from that in Thailand. Here, the evaluation does not only depend on teachers, responsible teachers, or school administrators but also on classmates, parents, and students themselves. This qualitative and quantitative evaluation is holistic, enabling learners to know and realize themselves, which would facilitate their learning and development efficiently (MOE, 2009). From comparing the desirable attributes in the two countries, it was revealed that their curricula clearly specified their goals in consistence with current social contexts while

maintaining national identities. The contents and learners' development activities were consistent with the curriculum goals. The development was chronological and suitable for levels and ages of learners. The activities were diverse and consistent with daily-life activities. Additionally, the measurement and evaluation criteria were clearly stated, so that the practices could be unidirectional.

Singapore is highly international. Education from the secondary school level onward focuses more on English, since the language is a lingua franca for communication and work. Teaching and learning in the country emphasize an orderly learning system, practical application of knowledge, and teaching styles with a mixture of East and West. Learning assessment is mainly based on testing, so students must be prepared as much as possible by means of revision. Courses emphasize understanding and skillful practices in each step of knowledge. Various examples are presented for practices in order for students to broadly understand and apply the knowledge and skills in real life. Some classes provide students an opportunity to discuss assigned topics. Education in general is teacher-centered and students are required to catch up with course contents. Singapore has been recognized for its educational quality and as an educational hub. Educational management at all levels has been acceptable for its quality. This is particularly so for early childhood education with good teacher development models, atmosphere management, and suitable curricula and instructional media. It is regarded as a prototype childhood education center. Moreover, the Local Administrative Promotion Department has emphasized the early childhood development, providing top-rated educational center system, training courses on child development, and development programs for early childhood teachers and caretakers on a regular basis. This is particularly the learning experience promotion for caretakers in order for them to know about quality working methods and actual practices. It is recommended to carry out an excursion and training program on early childhood educational management for caretakers in Singapore. The program comprises integrity learning and promotion at the government level and integrity learning and promotion.

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