

Gifted Education in ASEAN

Nor Laili^{1,*} Novira Silmi Sabila¹ Vivi Mariesca Vibraena¹ Ahsan Romadhon Junaidi¹
Dimas Arif Dewantoro¹

¹*Faculty of Education, Universitas Negeri Malang, Malang, East Java 65145, Indonesia*

*Corresponding author. Email: nor.laili.1701546@students.um.ac.id

ABSTRACT

Education for children with special needs does include not only studies of children with disabilities, but also children who have certain advantages over normal people. Where then these advantages become obstacles for children to grow and develop in the community. Special education for gifted and talented children can help the government accelerate development. Several countries deserve to be used as models for the provision of gifted and talented education services to their citizens. This paper is a literature study of the gifted and talented in Singapore, Malaysia, and the Philippines. The indicators in this comparison are history, curriculum, and government support. The three countries serve their educational needs Gifted and talented can become models for other countries to catalyze their development.

Keywords: *Gifted Education, Gifted in ASEAN, Gifted Programs, Gifted Handling*

1. INTRODUCTION

To improve the quality of education is not only the responsibility and policy of the government, because it also depends on various other components in advancing the world of education (Soedjiarto, 2007:18). Each country provides the best policy for its community to get an education, especially for gifted children who have abilities above average age.

It is known that every individual who is born has his privileges. However, the privileges that each individual has cannot develop optimally if it is not supported by education that is following the abilities possessed by each individual (Bainbridge, 2014). That way, as a condition for the development of individual gifted potential, educational services that suit the individual needs of gifted children must first be created. (Gagné, 2003) in (Gross, 2004) defines gifted as the possession of a natural ability that is right far beyond its age.

Educational policies for gifted children began to be applied in developed countries. Within the scope of ASEAN, policies involving gifted education in the strategy to accelerate the country's development have been initiated by Singapore, Malaysia, and the

Philippines. Therefore, this article examines the gifted education systems of these three countries to get lessons or recommendations for other developing countries.

1.1 Related Work

According to the generation type of assumptions, we explain some points below.

1.1.1 Education for Gifted Children

Education for gifted children is not something that needs to be privileged. This special education is organized to help families, schools, and communities understand gifted individuals. Many aspects need to be understood, including a sense of humor, intelligence, curiosity, sensitive nature, independence which sometimes tends to be selfish because they feel they don't need other people, and even emotional delinquency. Therefore, gifted education is a need, not a reward (Goh, 2016)

The aim of organizing gifted education itself is basically to help the government reach its development targets more quickly. This is also the reason why the learning system and programs presented can differ from one country to another, because it adjusts to the

conditions of the development needs of each country (Vialled and Ziegler, 2016).

Gifted education is important to society as well as a topic of interest to psychological researchers. This is mainly related to the fact that gifted education is often given to children who have shown certain achievements in the academic field. While other children who are gifted, but have not had the opportunity to develop or be developed according to their needs, do not get seats in a special class of educational services for gifted children (Subotnik et al. 2011).

1.1.2. State of Singapore

Singapore is a small archipelago located between Indonesia and the Malay Peninsula. This city-state is multiracial with a composition of 77% Chinese, 13% Malay, and 9% Indian. Therefore, there are four official languages, the main ones being English for education, administration, and business matters; number two there are Mandarin, Malay, Tamil. Singapore is a country that is poor in natural resources. This background makes them rely on education to ensure the availability of human resources to ensure individual survival and national welfare (Yeo & Pfeiffer, 2018).

From there, Singapore managed to become a country with a very friendly regulation towards local businesses which then made it one of the most competitive high-income countries in the world. Even though in 1969 they were a developing country, their GDP growth was among the fastest globally, namely an average of 7.7%. In 2017, the gross national income was the US \$ 54,530 per capita (Singapore, 2019). This achievement is inseparable from the results of organizing special education for gifted and talented children. So that the government by itself has the belief that if the unique needs of gifted children are not facilitated, the state will suffer losses because they are only underachiever children who have great potential but are not utilized. (Hong, 2007).

One of the breakthroughs in Singapore's education sector is to provide facilities for gifted children to channel their potential. In the Southeast Asian region, the Government of Singapore began to pay attention to educational services for gifted children since 1984 which then made this city-state the first country in Southeast Asia to initiate education for gifted children (Vialle & Ziegler, 2016). The concrete evidence at that time was the establishment of 2 elementary schools and two secondary schools that provided services for gifted children.

1.1.3 Condition of the Philippines

The Philippines is one of the largest archipelago countries in the world which has many mountains, forests, flora, and fauna. Many economic conditions

depend on nature traditionally. This has resulted in slow economic growth and development in other sectors. Since the enactment of the Millennium Development Goals in 2010, the Philippine Government has focused on solving the country's biggest challenges, namely poverty, one way is to strengthen the education sector (Phillipine, 2020). In fact, the Philippines began to pay attention to gifted children through the establishment of The Multiple Intelligence International School (MIIS) in 1996. This MIIS offers programs from Pre K-12. The gifted education foundation was then inaugurated in the 2017 or 2018 academic year where the Philippines has fully implemented the K-12 program.

The Philippines' gifted education program is still limited to providing programs in elite private schools in urban areas and only a few selected public schools. Most gifted children's mentoring is limited to science and math. Even so, the government through the Department of Science and Technology has established the Philippine High School for the Arts which aims to develop the talents of gifted children at high school level in the fields of music and arts (Pawilen & Manuel, 2018).

1.1.4 State of Malaysia

Malaysia is a multicultural country dominated by the Malay, Indian and Chinese races. When compared to other countries in the United States, Malaysia is a very fast growing country economically. This is due to the concentration of the government, which began to invest heavily in the education sector since the 1990s. Malaysia's education budget even exceeds Singapore and Thailand. Therefore the Malaysian government also always evaluates the results of education investment on the country's economic growth. After researching, although all levels have an effect on the country's economic development, it is higher education which focuses on technology that contributes the most (Phoong et al., 2017).

In the State of Malaysia, there is one central education institution for children gifted and talented in its countries. The service centre is called Pusat Permata Pintar Negara, which was established in 2009. This educational institution has successfully graduated from diploma students who have completed level two learning.

1.1.5 Literature Review

The objective of this literature review is to compare gifted education services in Singapore, the Philippines and Malaysia. The article is made using the library study with other terms of the study of literature, literature review, literature study, the theoretical basis, the book study (literature review), and a theoretical overview of data required in the study can be obtained from published sources or document (Zed, 2014). This article discusses

policy programs for gifted child education in three ASEAN countries in terms of curriculum, student and teacher recruitment mechanisms, facilities, and implementation.

Data were obtained descriptively and carried out in five stages as follows (Patricia Cronin, Frances Ryan, Michael Coughlan, 2008).

Stage 1: choosing a study topic as an initial strategy in conducting a literature study to focus on topics of interest. We chose a topic about educational programs for gifted children in three ASEAN countries, namely the Philippines, Malaysia and Singapore.

Phase 2: looking for literature on the topic with text identification structures are at and the information that is related to the topic.

Stage 3: collecting, reading, and analyzing literature. After collecting the data sources obtained, namely reading articles or journals to find out what was discussed. Abstracts and summaries as references in the decision to be feasible in following up. Literature analysis by analyzing the entire literature more systematically and critically of the content discussed.

Stage 4: Menu reviews the stages of introduction that discuss the purpose of discussing the education of gifted children, the central part of the discussion as a whole and in-depth education of gifted children (curriculum, the mechanism of recruitment of students and teachers, facilities, and the implementation of education), and conclude with a brief summary from the review to describe current knowledge as the next stage of research

Stage 5: Reference ends with a complete bibliographic list of all books, journal articles, reports and other media according to the APA reference writing style.

1.2 Our Contribution

This paper presents a brief to understand gifted education services in three countries among ASEAN.

1.3 Paper Structure

This paper opened by explanation about what is gifted education, condition in Singapura state, Filipina and Malaysia. Then, the background contains comparison from curriculum, teacher and pupil recruitment system, facilities also implementation. The table help the readers to read this paper entirely. Last is conclusion about our discussion in this paper and presents direction for future research.

2. BACKGROUND

2.1 Curriculum Comparison of Singapore, Philippines, Malaysia

The development of education in Singapore since 1965 is committed to always instilling local values that breathe nationalism so that when they are ready to work, the child will work to rebuild Singapore. This policy also applies to gifted children's programs. (Boon & Gopinathan, 2006). The mission of providing gifted education in Singapore is to be a model in the education of gifted intellectuals. The government is committed to developing the potential of gifted individuals for the sake of self-fulfilment and the advancement of society.

Slightly different but still in the same direction, according to the people in the Philippines (Rhoda Myra Garces-Bacsal, 2011) has the perception that gifted children with extraordinary intellectual abilities and other skills are a reflection of the strong religious culture of Filipino society. The existence of gifted children is proof of God's love (Baldo, 1987). The Philippine government itself considers that if it succeeds in educating gifted children, it will help the Philippines to compete in the 21st century.

Likewise, in Malaysia. The government has the perception that gifted children will help in the development of the country (Phoong et al., 2017). Back again to Singapore, despite being the first country to provide gifted education to its citizens, it turns out that Singapore is not necessarily an expert in providing gifted education. Singapore's gifted education began when its Ministry of Education conducted a comparative study to Germany and Israel. Then it was concluded that the Israeli gifted education system was more compatible with the culture of Singaporean society. That is why the concept of Singapore's gifted education development is based on the theory of multiple intelligences, and Gagne's opinion is combined with holistic education (Hong, 2007).

The Philippines also uses a head-start program and a multiple intelligence approach that draws on the theory of Harvard cognitive psychologist Howard Gardner to be ready to compete in the 21st century. They apply it in the Philippine Science High School System, the Philippine High School for the Arts, and the public regional Science high schools. In addition, (Greg Tabios Pawilen, 2018) stated that the Philippines developed its first gifted national curriculum through a team at the Ministry of Education. This curriculum is then used as a national curriculum and is used in public and private schools that

provide gifted educational programs except in schools that have adopted the curriculum from abroad.

The curriculum in Philippine pre-school aims to develop the various intelligence of each child and its specific learning domains, which include: Linguistics (Literacy, Speaking, Reading & Writing), Musical (Music & Performing Arts), Logic-Mathematics (Mathematics), Spatial (Art), Naturalist (Science), Body-Kinesthetic (Physical Development: Gross & Fine Motoric), Interpersonal (Social Studies & Social Skills Development), and Intrapersonal (Character Building, Job Skills, & Emotional Development). The MIIS pre-school special features are the art preparation program, the literacy evening program and the international food fair.

Junior high school subjects consist of the following; English, Languages, Arts, Mathematics, Science, Social Sciences, Filipino, Entrepreneurship, Computing, Music, Arts, Physical Education, Health, Foreign Languages, Character Building, Home Economics & Livelihood Programs. Specialized programs for junior high schools are leadership, international studies, and programs for excellence.

This secondary school focused on preparing students to form to enter the campus and ready to compete in real life, the skills for independent learning habits, and attitudes for the culture of college readiness—same subjects as junior high school. Specialized programs for high schools are programs for excellence, international study tours, and social entrepreneurship programs.

The school's main program for gifted and gifted pre-school children in public primary schools piloted in March 2006. The main objective is to offer basic skills and rapid development of multiple intelligences and the gifted and gifted, providing an environment that encourages talent, nurtures and develops talents their abilities.

Joel and April (2012) mention that there is another model of Filipino gifted learning, namely the SSES (Special Science Elementary School) curriculum which also applies science and technology to children (grades 1-6) which began to be implemented in 2007. Developing the SSES program for regular schools and special education centres. Competencies in the SSES curriculum refer to Higher Level Thinking Skills (HOTS) activities and are student-oriented. Gifted children will develop communication, decision making, teamwork, and lifelong learning skills through a variety of activities. The science curriculum is divided into three areas: Life sciences

(Humans, Plants and Animals); Physics (Materials, Energy, Strength and Movement; and the Earth and the Solar System (Earth and Space). Student SSES are those enrolled in special schools are classified as schools for children with giftedness, and regular pass screening procedure SSES.

In developing the teaching and learning process at the Permata Pintar Negara Malaysia Center, the initial emphasis of semester one to sixth-semester students is learning music using a syllabus from the Philippines. In 2017, the centre of the agency realized that there are some shortcomings in the implementation of the syllabus, the syllabus central eventually replace adopt the California State syllabus and introduced in early 2018. The process of learning music is based style of learning and the ability of each child.

In Malaysia, because the main problem of gifted and talented children lies in the socio-emotional of children who are less able to join their social environment, so they need an effective curriculum to process the social-emotional problems of children. The Learning models are more emphasized on giving more attention to gifted children. Various models can be used to develop an effective curriculum for gifted youth in Malaysia. These models include Krathwohl's Taxonomy of the Affective Domain, emotional intelligence, bibliotherapy, talent development plans and career development programs.

Several aspects of career and talent development can be identified at the beginning of entering Permata Pintar School or School Holiday Camp. Both programs are designed to promoted education holistic for gifted children and develop the potential and skills, the gifted children who are not directly reflecting on learning strategies used are direct and indirect (Universiti Kebangsaan Malaysia, NDD).

Participants in School Holiday Camp is not only related to their academic development but also a sense of responsibility. In addition to existing programs, talent development plans and career development programs must be included in the Smart Asasi program because they are more relevant to be applied to gifted children who are ready to determine their chosen career choices. However, talent development and career programs are not only limited in gifted education but also extended to the general curriculum so that the average ability of other students may also take advantage of the self-development program.

2.2 Comparison of Student and Teacher Recruitment Mechanisms in Singapore, Philippines, Malaysia

The foundation of the education system is the quality of teachers. In Singapore, every teacher who will handle gifted children is always given training first. In this course, the teacher will be given material for affective education on how to instil values and shape the character of gifted children. In addition, teachers are also equipped with the ability to develop curricula according to individual needs, teaching strategies, development of supervision. What proves Singapore's seriousness in paying attention to gifted children is the regular meeting between teachers and representatives from the Ministry of Education to ensure the implementation of the program, whether it is in accordance with the curriculum process design or not. Conferences are also held to review gifted educational curricula and also design new curricula in the following academic year. The Singapore government facilitates teachers to attend courses or similar events related to the management of gifted education. Meanwhile, in the country, there are also workshops that usually invite Ministry officials along with gifted educational consultants from abroad. (Hong, 2007).

Singapore uses a model approach of self-contained classes in regular schools. This approach is given after the child is identified as gifted or at the age of 9 years or grade 3 SD. There is no accelerated program to follow up, but it is replaced by enrichment. Meanwhile, to find gifted children, the test includes language, mathematics, and general knowledge. Giftedness testing is given universally to students without exception. The test consists of two cycles that are two months apart from the first test. Students who graduate are deployed to 9 gifted education centers in Singapore. The best 4% of schools outside of gifted education centers are also involved in gifted education services with encouragement to create individualized curricula according to student needs. Giftedness tests were conducted again in 6th grade. If the passing test results show that they are still in the gifted category for the advanced level, then the child may choose the 16 Integrated Program option, which is a 6-year program that allows students to study without entrance exams (Brown & Wishney, 2017).

Reception system of gifted education program Singapore is not based on quotas. Regardless of the number of children who pass the gifted test, all of them

will receive services regardless of their background, including economic conditions (Subotnik et al., 2011).

In the Philippines, the guru develop the self-esteem of individuals in a positive and self-control through respect and guidance counselling. Every teacher is always trying to educate according to trends; therefore, there are Teacher Training Programs and Professional Learning Communities. Teachers as a reference to make students perform better and provide what they need. They guide students to find their identity and even life goals. Each teacher is able to teach a class of gifted as much as two classes for one session per day. The student enrollment steps are recruitment, screening, assessment or identification, and decision or placement

In the Philippines, it is also known as the Special Science Elementary School (SSES). SSES teachers must have three years of experience in teaching the subject in question plus specialize in Science and Mathematics. Teachers use English in teaching subjects, responding to Executive Order No. 210 series 2003, which aims to strengthen the use of English as a medium of instruction in the Philippine education system.

The Filipino gifted child care system in the MIIS considers student enrollment with assessment, age, scholastic record, and last school completion date. Based on Howard Gardner's Theory of Multiple Intelligence. The programs offered include pre-school (Toddler, Nursery, TK1 & 2), Low School (Grades 1-4), Middle School (Grades 5-8) and High School (Grades 9-12). These programs comply with international standards and the Philippine Ministry of Education.

Pawilen & Manuel (2018) explained that Filipino teachers should not only be trained on pedagogy but also on providing advanced content and psychosocial support for the gifted. During the consultative workshop, participants mentioned that gifted classes are supervised by the SPED Center. This means SPED teachers receive training on gifted education to teach gifted children. According to the Ministry of Education (2017), SPED teachers must be ready to handle; 1. Independent or Special Class - a separate class for only one type of exemption that caters for moderate to severe types of disability; 2. Mobile Teaching - a travelling teacher, reaches out to children with special needs in other schools or at home to provide direct and consultative services; 3. Resource Room - a designated place where children with special needs enrolled in regular school programs go to use special equipment, either in tutorial situations or in small group sessions handled by SPED teachers; 4.

Withdrawal - a kind of program in which a child registered in a regular class reports to the resource room for a certain period of time for special instruction by a SPED teacher; 5. Integration or Mainstreaming - refers to the enrollment of children with special needs in regular classes with support services.

There are two types of integration in the Philippines, namely Partial Integration and Full Integration. In Partial Integration or Mainstreaming, a child with special needs enrolled in a special class is integrated with regular children in non-academic activities such as work education, physical education, arts, school programs, among other institutions, then gradually integrated into academic subjects if they meet the requirements. Meanwhile, in Full Integration or Mainstreaming, a child with special needs sits in regular classes in all academic and non-academic subjects.

Science secondary schools are built around the ability of gifted talented students who have demonstrated aptitude in science and technology and mathematics. Greg and Sheena (2018). This is a service agency of the Ministry of Science and Technology (DOST) which is authorized to provide free scholarships for secondary courses with special emphasis on subjects related to Science and IMANA destination end it prepares students for Air career in the field of science. This is in accordance with Part 2 of Republic Act 3661 which established the first Philippine Science High School campus in 1964.

Science high schools are currently assisting the Ministry of Education in preparing students in the STEM pathway of the high school program. Science, Technology, Engineering, and Math or STEM. STEM is a curriculum for Young Children offered to second and third-year pre-service teacher education students Greg and Marie (2019). Studying Science, Mathematics, Technology and Engineering is always integrated into the real-life context. Children learn important skills such as process skills, critical thinking skills, and life skills which are necessary for coping with the activities of daily life (Chaille & England, 2002; Tolman, 1995).

While in Malaysia pad educators assume that gifted children are not a need for the right help, because they assume that the gifted child is able to handle their own problems (petrosone, 2002). However, that does not mean that Malaysia does not provide gifted talented services at all.

In Malaysia, the STEM curriculum for learners is to enhance the experience and various skills such as in science doing problem-solving, observing and

experimenting, wondering how things work. In theology, they can increase their creativity to make something new as an innovative product. It will also enable students in engineering to model, design and create. Learners will be able to recognize that mathematics is not about numbers and theory, but that it can be applied in everyday life and as a tool for science and engineering. This learning is used by gifted Malaysian children. At the primary level, gifted children in Malaysia emphasize learning the art of music, only at the advanced level of learning with this applied STEM curriculum.

2.3 Comparison of Facilities for Gifted Education in Singapore, Philippines, Malaysia

The Singapore government to date has fully funded the education of children who are positively identified as gifted. Furthermore, the government also continues to develop methods for assessing gifted children at a lower age than grade 3 SD, but the results are not accurate (Sahlgren & Heller, 2018) as well as studying intervention models outside of enrichment and acceleration when gifted children are in college (Vialle & Ziegler, 2016). The egalitarian culture of Singapore society is very strong. So that making cases of jealousy between gifted children and the average student almost never happens. Gifted children get good appreciation from their peers, teachers, as well as parents at home to the Government (Goh, 1994). This shows the success of Singapore in educating its people about education services for gifted children with special needs.

According to Aris and Masakata (2015), a special curriculum that is marked as a Special Education Program (SPED) by the Department education policy Philippines in 2011 per Academic Year 2012-2013 has been implemented in one hundred and fifty-three high schools. If a child wants to register, the fee is Five Hundred Thousand Pesos (PhP500,000.00), but there is a subsidy for children with special needs, including gifted. At the intermediate level, gifted children are divided into two groups, namely the art group with the science and mathematics group. Students who are gifted in the arts attend the Philippine College of Arts (PHSA), while those gifted in science and mathematics attend either the schools affiliated with the Institute of Science and Technology of Science (DOST SEI) affiliated schools or the Department of Education (DepEd) various curricular programs which science oriented. DepEd has three main types of schools, namely; Regional Senior High School (RSHS); Science and Technology (S&T) oriented high schools; and the National High School with a Special Science Program (NHS-SSP).

While the Philippines which uses K curricula have SSES, each school must have a science lab, computer lab, speech labs, a music room and a gym with sports facilities functional. Much effort has been made to enhance the programs of the center since the Malaysian National Permata Center was founded. Several efforts have been made, namely by collaborating with universities both domestically and abroad, conducting student exchanges with students abroad and holding conferences in developing internationally certified curricula to be used for gifted children in Malaysia.

In 2009, the National University of Malaysia launched the Permata Pintar Education Program and School Holiday Camp 2, a program they created to identify and provide accommodation according to the learning needs of gifted children in the country. The Malaysia Education Blueprint 2013-2025 released by MOE describes a long-term plan to be provided and implemented for gifted children in Malaysia (Ministry of Education, 2013).

The launch was based on Silverman (1994a, p.327) arguing that children will easily feel anxious, depressed, socially inadequate, and emotionally if the child is too emphasized on cognitive aspects only in education. Research sheds light on the psychological problems of gifted children in Malaysia. Bakar and Ishak (2010) revealed several counselling problems faced by gifted children in Malaysia when attending school holiday programs, on average, they missed playing with their peers, felt anxious and had thoughts of suicide. Apart from that, the problem of self-esteem, a great sense of competition, and the perfectionism of gifted children are one of the psychological problems experienced by gifted children in Malaysia. According to Cross (1997, quoted in Clark, 2008, p.135) the social-emotional growth of gifted children depends on how well the environment responds to them and provides the services needed by gifted children according to the characteristics of each child.

2.4 Implementation Comparison of Gifted Education in Singapore, Philippines, Malaysia

In education, Singapore has always been at the top of both TIMSS and PISA surveys. Singapore education adopts a meritocratic social system, with competition as one of the advantages of the system. Tests are used to identify those who are more capable of academically and direct them to a learning stream suited to their abilities. (Caleon & Subramaniam, 2008) although in practice, it is not only the academic aspect that becomes the focus of teacher attention (Hong, 2007).

In Singapore, education for gifted children is really prepared and escorted by the government directly. Every higher education institution at university level is always endeavor to cooperate with the Ministry of Education to provide services for gifted children (Goh, 1994). Singapore has the highest number of gifted children in Asia. The standard used is the child's IQ score. From there, it is stated that Singapore has gifted children as much as 1% of the population (Boon & Gopinathan, 2006).

3. CONCLUSION

Basically, all countries hope that gifted education can be a catalyst for the development of their respective countries. However, in the curriculum system, the system for recruiting and maintaining teachers, facilities provided by the government, and the implementation of education services in each country can be different according to the cultural conditions of the community and the ability of the country itself.

REFERENCES

- [1] J. van der Geer, JAJ Hanraads, RA Lupton, The art of writing a scientific article, *J. Sci. Commun.* 163 (2010) 51–59. <https://doi.org> or 10.1016 or *j.Sc.*2010.00372.
- [2] F. Joel Bernal, H. April Daphne Floresca, *Special Science Elementary School: Project and Prospects for Gifted Education in the Philippines*
- [3] Executive Order No.210 series of 2003: Establishing the Policy to Strengthen the use of the English Language as a Medium of Instruction in the Educational System. Manila, Philippines.
- [4] LarroderAris, Ogawa Masakata, <https://www.manilatimes.net> or 2017 or 02 or 26 or news or top-stories or 600-schools-cater-children-special-needs-DepEd or 314 217 or 314 217 or
- [5] Goh, Ban Eng. (2016). Reflections on Gifted Education in Singapore and the USA, *Gifted and Talented International*, 9: 2, 52-53. DOI: 10.1080 / 15332276.1994.11672794
- [6] Boon, GC, & Gopinathan, S. (2006). *The Development of Education in Singapore since 1965*. Nanyang Technological University.
- [7] Brown, EF, & Wishney, LR (2017). Equity and Excellence: Political Forces in the Education of Gifted Students in The United States and Abroad. 4 (*Global Education Review*), 22–33.
- [8] Caleon, IS, & Subramaniam, R. (2008). Attitudes towards science of intellectually gifted and mainstream upper primary students in Singapore.

- Journal of Research in Science Teaching, 45 (8), 940–954. <https://doi.org> or 10.1002 or tea.20250
- [9] Goh BE (1994). Reflections on Gifted Education in Singapore and the USA Gifted and Talented International, 9 (2), 52–53. <https://doi.org> or 10.1080 or 15332276.1994.11672794
- [10] Gross, MUM (2004). Gifted and Talented Education Professional Package for Teachers (2nd ed.). Gifted Education Research, Resource and Information Center (GERRIC), UNSW.
- [11] Hong, HB (2007). Gifted Education in Singapore: The Nanyang Primary School Experience. ICP Conference Auckland, Auckland.
- [12] Pawilen, GT, & Manuel, SJ (2018). A Proposed Model and Framework for Developing a Curriculum for the Gifted in the Philippines. International Journal of Curriculum and Instruction, 10 (2), 118–141.
- [13] Phillipine, U. (2020). About the Philippines. <https://www.ph.undp.org> or content or philippines or en or home or countryinfo.html
- [14] Phoong, SW, Tan, XJ, Chen, WY, Phoon, MC, Tan, CF, & Chan Yep, H. (2017). Education and Economic Growth: A Case Study in Malaysia: <https://www.researchgate.net> or publication or 322222847
- [15] Singapore, WB (2019, April 9). The World Bank in Singapore [Org]. <https://www.worldbank.org> or en or country or singapore or overview
- [16] Subotnik, RF, Olszewski-Kubilius, P., & Worrell, FC (2011). Rethinking Giftedness and Gifted Education: A Proposed Direction Forward Based on Psychological Science. Psychological Science in the Public Interest, 12 (1), 3–54. <https://doi.org> or 10.1177 or 1,529,100,611,418,056
- [17] Vialle, W., & Ziegler, A. (2016). Gifted education in modern Asia: Analyze from a systemic perspective. Information Age Publishing, 273–291.
- [18] Yeo, LS, & Pfeiffer, SI (2018). Counseling gifted children in Singapore: Implications for evidence-based treatment with a multicultural population. Gifted Education International, 34 (1), 64–75. <https://doi.org> or 10.1177 or 0,261,429,416,642,284