Світ наукових досліджень

Збірник наукових
публікацій міжнародної
Мультидисциплінарної наукової
інтернет-конференції

Випуск 13

25-26 жовтня 2022 р.

Google
Scholar

Тернопіль, Україна –
Переворськ, Польща
2022

Педагогічні науки

Педагогічні науки

DEVELOPMENT OF EDUCATION IN SINGAPORE

Chykharina Karyna
Ph.D. student at KhNPU, Chinese language teacher at KhNPU

Науковий керівник: **Гавриш Ірина Володимирівна**
доктор педагогічних наук, професор, Харківський національний педагогічний університет ім. Г.С.Сковороди

Abstract

The current scientific and education paradigm is on the verge of great changes. That is caused by the transition to the post-non-classical paradigm. It is obvious, that there is a necessity to form and maintain a new reality of education and upbringing. The study and analysis of pedagogical paradigms make it possible to understand the prospects of education development, upbringing tendencies, etc. Singapore is a small country, but the way, it managed to occupy world-leading positions, makes researchers examine its education system quite thoroughly. The education system in Singapore became a basis for the formation of the nation and cultural development of the country in general. The national ideology had to unite people of a small island state, without having natural resources, a common language, etc. The country paid special attention to the education and training of the younger generation. In the article, we examine the historical development of the education system in Singapore, focus on its features, and look at current educational processes.

Key words: Singapore, education system, education programs, upbringing.

The modern adaptable world of new technologies is extremely demanding. The rapid modernisation of the world is gradually bringing us closer to the fourth industrial revolution, which is characterised by the sixth technological stage. It is essential to pay attention to the upbringing of the intellectual elite of the nation, which is the basis for the successful development of countries that are facing a new scientific paradigm in the 21st century. The intellectual elite should consist of versatile citizens, that are able to use their own brain recourses productively in order to solve uncommon problems and think of new innovative ways of building a better future. We can claim that education is one of the key elements in these complicated processes. It is only by relying on the education and upbringing of the nation's intellectual elite that we can be confident in a successful future.

It is a well-known fact that pedagogical science is looking for new fundamental approaches to building educational processes in the present environment. The crisis of modern education and science can be overcome with the search for new ways in the field of education. The problem is that the old system is outdated and

the new system has not been formed yet. We need to educate the younger generation with a focus on the future, using new modern approaches and models. We cannot grow the person of the future using outdated programs and methods. Today, there is a transition to the post-non-classical type of scientific rationality and to the new scientific paradigm. A significant problem is that theoretical constructs, practically implemented forms, methods, and tools remain within the classical paradigm and classical rationality; while post-non-classical reality affirms fundamentally different values, goals, and approaches. In current conditions, seen education and upbringing as ways of transferring knowledge are insufficient, they do not meet the challenges of post-non-classical rationality [4].

The national development strategy should be based on a developed education system, and it is widely agreed that it is urgent to take the educational experience of developed countries into consideration. Singapore is one of the leading countries, which is actively implementing social innovations and maintains external relations with other countries. It is a country with an efficient and successful education system that has experienced several important stages in its development and transformed into an effective system, which is respected worldwide.

Features of education in Singapore and the stages of its development have been discussed by many Ukrainian and foreign scholars such as Goh C., Gopinathan S., Goodwin A., Low E., Tan C., Koh K., Choy W., Teck W., Shakirov I., Bielenka G., Maulik S., Fedorenko V., Hryshenko I., and others. A lot of scholars concentrated on the details of the history of the education system in Singapore. However, there are not many pieces of research connected with the usage of new educational programs in Singapore. In this article, we are going to summarise the information about the development of their education system; focusing on the regulatory framework and new educational programs. The materials of this article can be used for further research on the topic.

Singapore's current economic situation is characterised by intensive modernisation and transformation; it is a country with a developed market economy. Moreover, it is a financial and technological centre of Southeast Asia, that supports multilateral cooperation with the World Trade Organisation. However, the social and cultural environment in Singapore has not always been so perfect. Social, economic, and cultural conditions in Singapore have not always been favourable for the development of education and science. The history of this country reveals that modern Singapore has been formed through the severe conditions, poverty, and circumstances that made it difficult to lay the foundation for the formation of a nation. Nevertheless, there is no doubt that education has greatly contributed to the development of this leading country.

Singapore is a country that has formed without social and economic preconditions, with no language, unified religion, natural recourses, etc. Li Kuan Yu mentioned that they had to improve the only available resource – human resources. This idea became pervasive in the strategy and turned out to be successful.

The first mentions of a Malay settlement that was located on the site of modern Singapore date back to the 7th century. Major activities of the inhabitants of that settlement were fishing, trade, and piracy. Favourable location provoked a number

of changes; and from the end of the 13th century, the settlement turned into an important trade centre and became known as Singapore. In the 14th century, Singapore started to be a bustling trade centre and seaport in the Malacca Strait. In 1842, the island became dependent on Britain and turned into a powerful weapon for spreading British influence. The evidence suggests that Singapore was particularly valuable for Britain because of its naval and air force base. In the 1960s, there were negotiations between the government of Singapore and the British authorities connected with the autonomy of Singapore. Therefore, Singapore became a self-governing land, but Great Britain retained its military base on the island. As it has been mentioned before, the country did not have enough minerals, and a sufficient amount of fresh water; agriculture did not fulfil domestic needs. Nevertheless, Singapore re-established its role as an important transit point for ship repair and as a trading port. According to the Constitution, which was approved in 1959, Singapore was recognised as a separate country. In 1965 the Republic of Singapore was proclaimed. From the 1960s to the 1990s, Lee Kuan Yew, who headed the government, held the post of Prime Minister of Singapore. He is considered to be the father of the Singaporean nation, and the creator of the modern state of Singapore. Thanks to his skilful well-thought policy, Singapore has turned into a modernised prosperous country, one of the most developed countries in the world.

According to the Constitution, the principle of multi-nationality is declared to be the basis of nation-building, so because of this Singapore has always distinguished itself from other countries. The constitution proclaims the legal equality of the existing different ethnic groups, each retaining its own language, name, and identity. Cultural pluralism is considered to be a key aspect that differs the country and plays an important role in positioning the republic in the world. Such integration processes became one of the most important achievements of the policy in Singapore. The population of Singapore has always been multinational, so it became a strong impulse for maintaining the ideas of bilingualism. Starting from the 1960s students in all primary and secondary schools had to master both the English language and their mother tongue. It should be mentioned, that from the urgent need, bilingualism became an advantage, which still beneficially distinguishes the education system of this country. In spite of the fact that English used to be the language of colonial powers, it was necessary to support English learning in order to reach leading positions and build beneficial economic relations with other countries. The policy of bilingualism gave the opportunity for Singaporeans not only to learn English, which was in demand but also to learn their mother tongue.

Despite the fact that Singapore occupied an advantageous geographical position at the crossroads of trade routes, at the beginning of its development it faced serious difficulties such as high unemployment, limited domestic market, high dependence on external sources of food, fresh water, energy, capital, etc. Moreover, the educational level of the population was extremely low, infrastructure poor and there was a shortage of housing. The country tried to use social engineering in order to form a positive attitude of people to work, establish a positive image of the country in the world market and attract funds from abroad.

Over the last 50 years, Singapore has been able to develop an effective education system, similar to the system of some developed countries. It has not only managed to reach a comparable level but in some aspects surpass education systems in many leading countries of the Organisation for Economic Co-operation and Development (OECD).

Undoubtedly, education in Singapore has experienced several stages of its development, difficulties and challenges of each historical period have contributed to the final form of its education and its perception by the world. During the postwar period, educational processes were ambiguous. The government did not support Chinese schools but the growth of English-stream schools was encouraged. The Chinese-educated students were regarded as an underprivileged group, which could not get higher education or be employed in the civil service. After separating from Malaysia and becoming independent in 1959, the government paid attention to developing the country's military capability, industrial economy, and manpower development. The first stage of the development of the education system can be called survival-driven.

Since 1965 the role of education in social and economic development has been greatly emphasised. The government change the strategy of state development and started paying attention to socialisation and nation-building processes. Education became one of the key points in this way.

The government of Singapore started to pay attention to the citizens' skills, qualifications, and attitudes to work in order to improve the economic situation of the country and find new ways of its development. Improving the quality of education was seen as one of the main points in economic survival and nation-building processes. In order to achieve the deserved guidelines, the government started to provide each child with six years of education, without any kind of discrimination.

In 1961 one of the milestones in the history of Singapore took place, the government introduced a Five-Year plan, according to which the role of mathematics, science, and technical subjects was greatly emphasised, the policy of Malay, Chinese, Tamil, and English education was regulated, pupils were provided with free primary education. In 1978, it was widely declared that less academically successful and intellectually able individuals would have an opportunity to occupy vocational positions within the country [1].

The strategy of Export-oriented industrialisation started to bring positive outcomes, so the problem of harsh poverty and unemployment started to disappear. However, it was obvious to the ruling elite that in order to maintain current economic positions and develop the country, citizens are obliged to acquire additional competencies in science and technology. Considering the whole situation, the government started to work out ways of attracting foreign expertise and multinational cooperation. The main goal of this strategy was to develop industry and improve the conditions in the field of science and technology. What made the situation more complicated is that there was a lack of professional administrators in the Ministry of Science and Technology, which did not have enough skills connected with the predictions of the perspective of the development of education and the

promotion of research work. One more fact that contributed to the whole condition is that young Singaporeans were not eager to be involved in "blue-collar" jobs.

Drawbacks in the development of science and technology were examined; in the 1980s, the government accepted new development strategies aimed to facilitate improvements in terms of technology, economic sector, and social development.

After rapid developments in education such as introducing universal primary and lower-secondary education, it was logical to concentrate on quality and improvements, rather than quantity and expansion. One of the drawbacks was detected, standards demanded that all students had to progress at the same pace and rate, no matter what level of intelligence they had. So gifted pupils were ready to deal with more complicated tasks, while some children had difficulty absorbing the information that was given. Taking these facts into account, it was decided to focus on efficiency, and a New Education System (NES) was introduced. NES enabled each student to go proceed at a different speed, as far as they can. It gave them an opportunity to put all their effort into achieving the best results and hope for a better career in the future. We can notice that the new efficiency-driven education system focused on moral education, bilingualism, civic education, technical education, and science. Testing Division and the Ministry of Education's Research were responsible for assessments; the Curriculum Development Institute of Singapore was in charge of curriculum materials. By 1984, a systematic training program for principals and heads of departments was launched. All these innovations and improvements contributed to the elimination of the shortcomings of the system and motivated students of different abilities to succeed in learning [1].

It was noticed, that from 1985 to 1991 educational changes managed to increase the efficiency and flexibility of the education system in terms of school and offer better opportunities to reach higher education. After primary school, all pupils were divided into groups and got a place in the course, that was suitable for their abilities. In general, such changes helped students to perform much better in language exams, almost all school students (about 99 percent of school pupils) left school after 10 years of education.

In 1985 a program for gifted students was introduced. Some decisions were made in order to deal with the teacher shortage. However, students still were not eager to have a "blue-collar job" or to do technical training. The vast majority of school graduates wanted to go to university and get academic qualifications in insurance, banking, trading, and government service because they were convinced that such careers would guarantee high prestige, prospects, and job security. Such preferences were remnants of colonial origins, so white-collar mentality prevailed. The government was trying to change the attitude toward these kinds of jobs, but vocational institutes remained to be seen as educational institutions for less academically gifted pupils. Because of such assumptions, Singapore still suffered from the lack of qualified technical and engineering workers, management trained in modern techniques, and levels-skilled labor. Such beliefs motivated the government to implement new changes with the aim of changing the perception of technical education, as changing the white-collar mentality was beneficial for them. For instance, in 1992 the Vocational Institute of Technical Education was

totally renovated. It started to be called the Institute of Technical Education (ITE). Its campuses and sports infrastructure became well-developed to fulfil all student's needs, and up-to-date technological support was available. Moreover, the secondary curriculum was changed to give students more time to master basic skills and proficiency in English. Scholarships were also available for top ITE graduates to pursue diploma courses in the polytechnics.

By the end of the1990s, it was evident that the efficiency-driven education model was working well. In 1995 pieces of research showed that students had demonstrated good fundamental knowledge and understanding of mathematics and science. One of the key success factors was differentiating students according to their inclinations and abilities at both primary and secondary levels. It helped teachers to understand the learning needs of students better in order to meet their learning requirements. Changes introduced to the mathematics syllabus in 1990 and to the teaching of science in 1985 were also important; emphasis was placed on concepts comprehension and thinking skills, rather than simple mastery of content [1].

The processes of globalisation, technological changes, and rapid improvements became decisive in the transition to a new concept of reality. The embodiment of new ideas and discoveries became fundamental points that could replenish the state treasury and bring recognition. The change of paradigm was taking place and the economy based on knowledge, innovation, and new creative ideas started to dominate. Knowledge-based economy (KBE) was the need of changing world that demanded corresponding transformations and implementations. The people of Singapore did not perceive such changes easily as it meant fundamental changes in their way of life, and traditional values; focus on industrial production faded into the background, and the use of knowledge in the creativity and innovation sector occupied an important place in the new economy of the country. Singaporeans did not feel secure and could not be confident in their abilities and skills, which needed to be upgraded.

Undoubtedly, these trends influenced educational processes, which had to meet the requirements of the new century. The country was undergoing a process of entering into an ability-driven phase to meet the demands of the knowledge-based economy (KBE). The new paradigm, which was initiated in 1997 supported the "Thinking Schools, Learning Nation" (TSLN) vision. It became clear, that relying on the capacity and abilities of its people would be a beneficial strategy in order to survive, prosper, and gain sustainability and wealth.

In fact, the quality of education would be a crucial factor of success and would have a great effect on the economic and social conditions in the country. While entering the 21st century it was urgent for Singapore to examine the experience of other countries such as the United States, Britain, and Japan, which was not perfect as well. The USA was one of the leaders in producing creative individuals, but low general and technological literacy levels could be noticed as well. Almost the same situation prevailed in the UK. The refined education system in Japan (from primary to postgraduate education), brought the country to the leading positions, and Japan was recognised as one of the world's most advanced innovative centres. Like Japan, Singapore has tried to preserve the best of the old

model of the education system and introduce necessary changes. Evidently, a flexible ability-driven education system has proved to be effective and efficient, providing pupils with 10 years of general education, taking their abilities and strength into account. The school system continues to work according to a national curriculum, with several examinations conducted at the end of the primary, secondary, and junior college years. Nowadays, the most successful students can try to join the Integrated Programme, which gives an opportunity to span secondary and junior education without the intermediate examination at the end of secondary school. For students with different abilities, the Academic and Technical tracks offer many academic and technology-based subjects.

Nowadays, education levels in Singapore include four stages: preschool, primary education, secondary education, and post-secondary education (junior colleges, polytechnics, Institute of Technical Education, universities, etc.). Each stage of education is regulated by different programs that comprise control of different spheres of students' development.

Till the present time, the Ministry of Education (MOE) has outlined the most important desired results of education, that are expected to be acquired by all Singaporeans. They are obliged to have a developed sense of global- and self-awareness, be individuals with a sound moral compass, and be good specialists, that possess hard and soft skills necessary for dealing with the upcoming challenges. MOE claims that following these guidelines helps educators to understand the target educational achievements, and can be understood as means for monitoring the state and efficiency of the education system.

The Desired Outcomes of Education are rendered using a set of eight expected outcomes for each stage of education: primary school, secondary school, and post-secondary education. For instance, in primary school pupils are taught to understand their strengths and potential. In this way, they will become more adaptable to changes before becoming students of secondary school. During the post-secondary level, they will continue improving the soft skills and hard skills that are necessary to realise themselves as competent specialists [7].

Framework for the 21st-century competencies was launched by the government in 2015 and became one of the most prominent programs focused on upbringing the citizen of the 21st century. It supports the ideas of holistic education and describes core values (responsibility, respect, resilience, etc.), social-emotional competencies (self-management, social awareness, self-awareness, etc.), and competencies for the globalised world (cross-cultural skills, global awareness, critical thinking, collaboration, etc.). The synthesis of all the mentioned skills is aimed to develop a highly aware individual, which is capable of getting the best out of our digital and innovative age [5].

National Education (NE) and Social and Emotional Learning (SEL) are essential in the educational programs of Singapore. Starting in 2021, the program "Character and citizenship education" has been implemented. It contributes to the holistic development of pupils and works in synthesis with national guidelines in order to achieve the set goals. It can be discussed as an integrated approach to the development of students' values, social-emotional well-being, character, etc.

The CCE 2021 Curriculum Frame originates from the Framework for 21st Century Competencies and Student Outcomes and clarifies the cohesion and connection between the core values and social-emotional competencies. The program is guided by some basic principles such as coherence in character development, internationality, and student centricity. This framework proves the general concepts of education in Singapore, learning is seemed to be a "continual lifelong process" and is realised in different ways. Practical tasks are adjusted to the interests of the students and demands of modern society, realised through "authentic and meaningful connections to real-world contexts". Moreover, the role of assessment in CCE isn't reduced, as Singapore has always paid attention to the assessment and control of students' knowledge during different periods of their studying experience. Pedagogical and assessment strategies are closely linked. A content overview of the recommended topics can also be found in the framework. All topics are student-centric. They are comprehensible but act as a strong motivation for self-reflection and understanding own role in the world [6].

In, conclusion, Singapore and its education have a complicated background. The development of the education system of Singapore can be discussed as a bright example of building a strong educating system from scratch. During the first period of education and nation-building reform since the late 1960s, major efforts have been concentrated on increasing the number of educational institutions, and an active institution-building program has been launched to provide space for every child. The second stage, since the 1970s, was connected with improving the quality of the functioning of the educational institution. During the third stage of reformation in the late 1980s, the state tried to arrange the system of education to meet the needs of not only the state but also individuals. Today the extensive system of education satisfies all internal needs of the state and accepts foreign students from all over the world. What distinguishes Singapore from other countries is the great number of educational programs developed for each stage and educational approach. Bilingualism has always been a necessary component of the country's policy caused by an ethnic variety. However, it stopped being just a means of reaching general cohesion between different ethnic groups, but it has been seen as a strong plus for employees in the world marketplace.

References:
1. Goh C., Gopinathan S. Education in Singapore: Development since 1965. Fredriksen & J. P. Tan (Eds.). *An African Exploration of the East Asian Education. Washington, DC: The World Bank*. 2008. pp. 80-108.
2. Kam H. W., Gopinathan S. Recent Developments in Education in Singapore. School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice. 1999. Vol. 10. No. 1. pp. 99-117.
3. Koh A., Chong T. Education in the global city: the manufacturing of education in Singapore. Studies in the Cultural Politics of Education. 2014. Vol. 35. No. 5. pp. 625-636.
4. Petrenko O. Postneklassychna paradigma osvity yi vykhovanniya: teoretychny analiz. Innovatyka u vykhovanni. 2016. Vyp. 3. pp. 40-49.

5. 21-century competencies. Ministry of education in Singapore: website. URL: https://www.moe.gov.sg/education-in-sg/21st-century-competencies (date of access: 28.11.2021).

6. Character and citizenship education. Ministry of education in Singapore: website. URL: https://www.moe.gov.sg/-/media/files/secondary/syllabuses/cce/2021-character-and-citizenship-education-syllabus-secondary.pdf (date of access: 28.11.2021).

7. Desired outcomes of education. Ministry of education in Singapore: website. URL: https://www.moe.gov.sg/education-in-sg/desired-outcomes (date of access: 28.11.2021).

ФОРМУВАННЯ МОВЛЕННЄВОЇ КОМПЕТЕНЦІЇ ДІТЕЙ ДОШКІЛЬНОГО ВІКУ ЗАСОБАМИ НАОЧНОГО МОДЕЛЮВАННЯ

Базарська Ольга Анатоліївна
комунальний заклад «Дошкільний навчальний заклад
(ясла-садок) № 464 комбінованого типу Харківської міської ради»

Відомо, що розвиток мовленнєвої компетенції дитини дошкільного віку відбувається в процесі формування її особистості. Маленька дитина активно досліджує навколишній світ предметів, явищ, у процесі чого відбувається активний розвиток мовлення дошкільника. Педагог активно керує цим процесом під час спеціально організованих занять, спостережень, бесід.

У період дошкільного дитинства набуття дитиною мовленнєвої компетенції має вирішальне значення для розвитку її світогляду та взаємодії з навколишнім світом. Мовленнєва компетенція передбачає розуміння дітьми зв'язного тексту, вміння відповідати на запитання, звертатися із запитаннями до дорослих і однолітків, підтримувати та розпочинати розмову, складати різні види описів, розповідей. Метод наочного моделювання допомагає в оволодінні дитиною мовленнєвою компетенцією. Він відтворює істотні властивості досліджуваного об'єкта за допомогою схем, малюнків, моделей. Даний метод допомагає дошкільнику уявити абстрактні поняття (звук, слово, речення, текст), навчитися працювати з ними. Це є важливим для здобувачів дошкільної освіти, адже переважно їх мислення є наочно-образним.

На практиці підтверджено, що доступною для дітей дошкільного віку формою на позначення і виділення відносин є саме наочні моделі.

На сьогодні є актуальними дослідження педагогів і психологів щодо ролі оволодіння дитиною діями наочного моделювання та заміщення в розвитку її розумових здібностей.

На обгрунтованість методу наочного моделювання в розвитку мовлення вказували педагоги С. Л. Рубінштейн, Л. В. Ельконін, А. М. Леушина. У сучасній науково-педагогічній літературі моделювання розглядається