

# Principles of holistic education applied to the Teacher Education Model for the 21<sup>st</sup> Century in Singapore

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**Abstract:** The theoretical study relates the principles of holistic education to the Teacher Education Model for the 21<sup>st</sup> Century (TE21) in Singapore. Building on the principles of holistic education, TE21 aims to produce highly qualified educators who succeed in nurturing the potential in each child. Holistic education is a humanistic and democratic educational approach that was developed in the USA. Its goal is to help every learner reach their highest innate potential, find their identity and purpose in life, and become socially and environmentally responsible. This study shows how the same principles may lead to slightly different outcomes when adjusted to the needs of Singaporean society. As a direct product of the National Institute of Education and the Ministry of Education, TE21 confirms the importance of a national educational strategy, which is the core of economic growth and political stability, as well as a tool to be used for fighting inequality and dealing with other social issues.

**Keywords:** holistic education, Teacher Education Model for the 21<sup>st</sup> Century (TE21), Singapore, ultimacy, sagacious competence, values, competition, well-being

## Aplikace principů holistického vzdělávání na Model vzdělávání učitelů pro 21. století v Singapuru

**Abstrakt:** Teoretická studie ukazuje vztah mezi principy holistického vzdělávání a singapurským systémem vzdělávání učitelů Teacher Education Model for the 21<sup>st</sup> Century (TE21). Singapurský TE21 si klade za cíl produkovat vysoce kvalifikované pedagogy, kteří dokážou rozpoznat a plně rozvinout potenciál každého dítěte, to vše díky principům vycházejícím z holistického vzdělávání. Holistické vzdělávání je přístupem, který byl rozvinut v USA a charakterizuje jej důraz na humanistické a demokratické ideály. Jeho cílem je pomoci každému dítěti k tomu, aby mohlo plně rozvinout svůj potenciál, aby našlo svou identitu a smysl života a aby se stalo zodpovědným člověkem po stránce sociální i environmentální. Tato studie poukazuje na fakt, že přenos principů do prostředí Singapuru vede k trochu jiným výsledkům než v původním prostředí USA. TE21 jakožto přímý produkt Národního vzdělávacího institutu a Ministerstva školství poukazuje na velký význam vzdělávací strategie, která pomáhá

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udržet ekonomický růst a politickou stabilitu a zároveň předcházet nerovnosti a dalším sociálním problémům.

**Klíčová slova:** holistické vzdělávání, Model vzdělávání učitelů pro 21. století (TE21), Singapur, ultimátnost, kompetence k prozíravosti, hodnoty, soutěž, well-being

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## 1 Introduction

Every country or nation in the world wishes to provide high-quality education that will produce professionals who are well prepared for future challenges, who are able to cooperate with other people, and who understand the way their society works. Such knowledge and experience can help with the processes of socialization and enculturation. People who understand what is happening around them are more likely to be happy, and they find their place in the world more easily. However, the pace of the development accelerates in terms of not only technological development, but also education and its requirements. One of the most inspiring education systems has been created in Singapore. According to international rankings such as PISA (Programme for International Student Assessment), or TIMSS (Trends in International Mathematics and Science Study), the Singaporean education system is one of the most successful in the world. This article relates the principles of holistic education to the Singaporean Teacher Education Model for the 21<sup>st</sup> Century (TE21; NIE, 2010), as it claims to provide holistic education.

Both holistic education and TE21 are highly complex approaches to education, and thus this article focuses primarily on social issues and leaves out many other important topics. Even though the Singaporean education system is renowned for its academic excellence (the ultimate goal of TE21 is to produce “thinking teachers”); it claims that issues such as values, character building, social skills and commitment to the local community are of the utmost importance (Tan et al., 2017a). The Singaporean education system claims to have taken the principles of holistic education to heart in order to produce graduates who are prepared to succeed in an extremely competitive society with their creativity, professionalism, moral integrity, and ability to adjust to ever-changing conditions. For this reason, the entire education system is itself under constant scrutiny, and it changes and develops according to the needs of the society, in this case represented by the Ministry of Education (MOE) and National Institute of Education, Singapore (NIE). The goal of this article is to cast light on how the principles of holistic education have been applied to TE21, and to point out slight shifts in the understanding and practical application of these principles when transferred from the USA to Singapore.

Following the introduction, the second part begins with a description of transmission, transactive and transformative positions, as described by Miller and Seller (1990). This may seem to be a slight step away from the topic; however, a good understanding of the transformative position so typical for holistic education is the key to understanding the nuances in the structure and approaches of TE21. Part three introduces holistic education as an eclectic approach that is able to adjust to the needs of those who wish to use it. It is characterized by a belief in the goodness of human nature, and by the premise that every person can find meaning and purpose in life, thanks to the interconnectedness of people and the environment, human values, and the awakening of awe or wonder. A substantial part of the section on holistic education is dedicated to an explanation of the notions of ultimacy and sagacious competence, which are also linked to the Western and Eastern approaches and their educational goals. The rest of the third part of the article deals with transformative learning and the specific role of a teacher who wishes to employ the principles of holistic education. The fourth part deals with selected issues of TE21, and it attempts to find similarities or slight differences between TE21, on the one hand, and holistic education and transformative learning on the other.

## 2 Transmission, transactive and transformative positions

The principles of holistic and transformative education can be understood clearly if contrasted with other approaches to education. In their book “Curriculum: Perspectives and Practice”, Miller and Seller (1990) distinguish three basic approaches (in their words “positions”) to educating people. These positions describe the relationship and the way information, skills, values, etc. are transmitted between the teacher/pedagogue/educator and the pupil/student/participant. These positions are the transmission position, transactive position and transformative position. Holistic education is an eclectic approach, and therefore sometimes it uses principles of transmission and transactive positions, but essentially it is deeply rooted in the transformative position.

### 2.1 Transmission position

The transmission position is, according to Miller and Seller, based on the ideas of Bacon, Locke, and analytical philosophy, which leads to the compartmentalization of life into segments that are unrelated. The same happens with the curriculum, which is broken into small components that can be easily mastered (Miller & Seller, 1990). Personal life is unrelated to work, which focuses on analysis and verification. Thus, success in school comes with a good knowledge of conceptual terms. Technical skills and abstract knowledge are important, whereas qualities like empathy and compassion are suppressed. In terms of education, the transmission position is a one-way channel in which the student adapts or responds to situations. Essentially, it is a passive process. The transmission position is strongly “textbook” oriented, and the teacher plays a directive role, giving instructions as well as feedback so that the student’s mind is shaped according to standards.

### 2.2 Transactive position

The transactive position is based on the ideas of Dewey, characterized by inquiry approaches to the curriculum, and cooperative interactions (transactions) between teachers and students. Teachers create learning situations that ensure personal growth, and they are “agents through which knowledge and skills are communicated and rules of conduct enforced” (Dewey, 1997, p. 18). It is a two-way interactive process between the students and teachers, who are no longer the only bearers of truth. The students should be intrinsically motivated by the problems or situations they have to resolve. The transactive position also builds on the ideas of Kohlberg and Piaget, who (together with Dewey) believed that mature thoughts emerge in the process of reorganization of psychological structures. This means that students learn not only by encountering emerging issues (information, aesthetic perceptions, new skills, social interaction, etc.), but also thanks to constant reflection on their own concepts, which they have previously created in their minds. “Sound educational experience involves, above all, continuity and interaction between the learner and what is learned” (Dewey, 1997, p. 10). Teachers should foster investigative and problem-solving skills so the students develop rational intelligence (a scientific approach), and consequently may fully participate in democratic decision-making (Miller & Seller, 1990).

### 2.3 Transformative position

The transformative position is characterized by the observation of the principles of holistic education, together with the interconnectedness and interdependence of all phenomena (including people and things) in the universe. It is a truly ecological worldview (represented by Capra and others). Its roots can be traced to transcendentalism (Emerson, Thoreau, Whitman), perennial philosophy (Huxley), and the law of complexity-consciousness formulated by de Chardin (although Dewey is a typical representative of the transactive position, his ideas have also been very influential in the transformative position). The cognitive-rational mode of perceiving and understanding reality, preferred by the transmission and transactive positions, becomes only one of many ways when creating meaning schemes and acquiring knowledge, skills, etc. in the transformative position.

The spotlight is newly cast on intuition, experiential approaches to learning (which do not rely only on understanding phenomena through reasoning), spirituality, bodily knowing and sensing, or social action. Intuition and insight are considered “primary wisdom”, as Emerson (2009) called it. They are cultivated by means of meditation and contemplation.

A very similar distinction can be found in the works of Heidegger, who talks about rational, calculative thinking, and intuitive, meditative thinking. According to Heidegger (1996), being is revealed in things themselves, so rational thinking itself would be insufficient in order to educate fully. The transformative position is also connected with humanistic psychology, namely with Maslow and Rogers. While Maslow came up with the concept of self-actualization, Rogers was interested in how people in the helping professions can facilitate learning and personal growth.

Some of the principles of the transformative position can be traced to Rousseau (unfolding the inner nature of children) or to Fröbel (2001), who talks about living, self-conscious unity that can be recognized through faith, insight or observation of the human mind, as well as by the intellect. Other inspiring thinkers include Tolstoy (negative education was practised in his school in Yasnaya Polyana), Neill (with his movement of Summerhill schools), Kozol and Freire, who were concerned with social-change issues, and Steiner, whose Waldorf education combines scientific thinking and spiritual inquiry, believing that man and the universe are part of a common physical-spiritual linkage. Many others have also contributed to the development of the transformative position.

The interdisciplinarity of the transformative position combines self-actualization, self-transcendence, social involvement, and the physical, cognitive, affective and spiritual dimensions. Any teacher who is trying to employ transformative principles must first work on themselves, not only in terms of professional skills, but primarily in terms of their personal integrity, as their role is to facilitate educational processes. This works primarily when teachers are authentic, not pretending to be something they are not. Irwin and Miller (2016) proved how important the power of presence actually is (or more precisely, mindful presence). Mere presence, or being in the moment, becomes the foundation of learning for both the students and teachers, for the process of learning in transformative education is more than a two-way one. Both parties are interconnected, and they learn from each other and from the environment and situations in which they appear.

### 3 Holistic education

Holistic education is a broad concept, perceived as a whole paradigm (Miller, 1997). It is a broad educational concept that is inclusive, as well as humanistic and democratic, in its principles. Its goal is to help every person reach their highest innate potential while focusing not only on the person and their autonomy and freedom, but also on wholeness, and interconnectedness with other people and the environment. Even though it is difficult to define wholeness, influential authors such as J. P. Miller, R. Miller, S. Forbes, Y. Nakagawa, L. T. Rudge and others explain it as development, and finding a balance in the six aspects of every individual – intellectual, physical, spiritual, emotional, social and aesthetic. These six aspects should represent the wholeness of a person, and even though it is possible to create endless lists of more specific aspects, the above-named are recognized by most sources. Rudge (2010) also claims that holistic education is an eclectic and inclusive movement. Because of its eclectic nature, there are many approaches and methods within holistic education, and everyone who is interested in theory or puts holistic principles into practice places an emphasis on different aspects, namely those which are closest to their own understanding, and to the goals, of holistic education. Therefore, it is almost impossible to define holistic education.

In his emphasis on ultimacy and sagacious competence, Forbes (Forbes & Martin, 2004) combines the above-mentioned six aspects of wholeness with the aim of reaching the maximum potential.

Ultimacy consists of three dimensions – religious (becoming enlightened),<sup>1</sup> psychological (resembling Maslow's self-actualization), and undefined (aspects difficult to describe when describing the development of one's full potential). Closely related to wisdom, sagacious competence builds on the thoughts of Bernstein (1996), and it consists of six intertwined aspects – freedom (inner liberation), good judgement (self-governance and autonomy), meta-learning (understanding how we learn), social ability (using social skills to foster society), refining values (the development of character), and self-knowledge (learning about the nature of oneself).

Though it may seem that ultimacy and sagacious competence are strongly achievement-oriented, it is important to note that this is simultaneously both true and untrue.<sup>2</sup> On one hand, every person should strive to reach their highest innate potential, which truly is achievement- (or more precisely "perfection-") oriented. On the other hand, achievement and goal-setting have to be in accord with the principles of holistic education, which are deeply rooted in the interconnectedness of phenomena, and in the awareness that every person is not a mere individual, but also a member of a local community – state – universe for which they should become responsible. The responsibility often springs from the religious background of each person. It has been noted that holistic education is eclectic in its principles, and therefore it may fit Western monotheistic spiritualities, as well as Eastern philosophies focused on non-being and disposing of the self. Miller claims that spirituality is the defining aspect of holistic education and has the power to "awaken students to a sense of awe and wonder."<sup>3</sup> This can involve deepening a sense of connection to the cosmos" (Miller et al., 2005, p. 2).

Miller considers the awakening of awe and/or wonder in students as the beginning of self-interest in education. If holistic education is to remain true to its principles of autonomy and freedom, taking responsibility for one's own education must be one of its premises. Only when students themselves become interested and deeply intrinsically motivated can they experience the numinous reality, and let awe and wonder direct their understanding. They then "must resist being restricted by the shallowness of the market mentality" (O'Sullivan, 2005, p. 70). Awe and wonder in this context become close to intuition or contemplation, two of many alternative ways of learning knowledge, skills or values in holistic education.

### 3.1 Fundamentals of holistic education

The roots of holistic education not only stretch through the history of Western thought (including ancient Greece), but they are closely linked to Eastern philosophical and religious traditions, as well as indigenous cultures (Arrows & Miller, 2012). Even though the roots are very broad, there are common principles, such as an emphasis on the person, and the creation of an identity intertwined with the community and the environment. The principles of holistic education were introduced in the mid-1980s, building upon the thoughts of Rousseau, Emerson, Thoreau, Pestalozzi, Fröbel, Steiner, Montessori, Dewey, Krishnamurti, Maslow, Illich, Freire, and many others. Even though the Western tradition of thinking is strongly present, and there is an emphasis on every individual reaching their highest potential, there has always been the influence of Eastern religious traditions and indigenous

<sup>1</sup> Forbes was influenced by Eastern philosophies and religious teachings; he was especially interested in Krishnamurti, and thus he explains his term "ultimacy" not only as "enlightenment" but also as "satori".

<sup>2</sup> A plausible comparison could be made to the Olympic motto "Citius (Faster) – Altius (Higher) – Fortius (Stronger)". Needless to say, this motto urges the athletes to perform at their best; however, it is important to note that this motto was uttered by Henri Didon, a Dominican monk who (together with de Coubertin) pursued moral beauty and the aesthetics of sport. These often overlooked aspects of sport reveal themselves primarily in the mastery of sports performance, in absolute giving-in to the performance of true winners.

<sup>3</sup> Awe and wonder are similar concepts as "engaged learning" in TE21. Once the student starts questioning the meaning of life, the laws of nature, human relationships and humanity itself, as well as all these burning issues, there might appear an inner motivation to further study, to exploring the principles in greater depth, and, as a result, the student becomes active (intrinsically motivated) in the whole process of education.

cultures<sup>4</sup> on taking individual responsibility for oneself. This is especially present in the spiritual aspect of holistic education.

Spirituality is not the only key issue of holistic education; for a lot of people it is the driving force of their behaviour, and is closely connected to the meaning of their life. The Western tradition of education has been strongly influenced by monotheistic religions (Judaism, Christianity and partly by Islam) and their goal of being saved – in Christian terms, entering the Kingdom of Heaven – whereas Eastern traditions of education mirror the principles of Indian, Chinese, Japanese and Korean sacred texts, pursuing slightly different concepts of enlightenment and entering nirvana (Buddhism) or moksha – escaping the cycle of death and rebirth (Hinduism), or creating a peaceful society (Chinese tradition). As Nakagawa explains: “contemporary holistic education is concerned with the aspects of *Being* and *Becoming* (evolution) of the universe; Eastern philosophy is concerned with the deeper aspects of *Non-Being*” (Nakagawa, 2000, p. 3).

In 1991, holistic educators – participants of the GATE conference (the Global Alliance for Transforming Education) – published an influential document called Education 2000: A Holistic Perspective (Flake, 1993), consisting of 59 articles describing holistic education. The most important principles are educating for human development, honouring students as individuals, learning through experience, freedom of choice (freedom of inquiry and expression), and educating for a participatory democracy, global citizenship, earth literacy, spirituality, etc. These principles explicitly proclaim democracy and individual freedom. So even though holistic education features principles of Eastern religious and philosophical traditions, it is deeply rooted in Western (namely American) democracy, and people who actively participate in holistic education should become guardians of democracy. Many principles (especially those connected to experiential learning) essential to holistic education are based on the ideas of Dewey, who thought that schools should present democracy as an ethical ideal, and thus people should actively participate in democratic processes. This activity should not be confined only to politics; it should be extended to business and public life as well (Kloppenberga & Westbrook, 1992).

### 3.2 Holistic education and transformative learning

Transformative learning is not exactly the same concept as the transformation position introduced by Miller and Seller (1990). The transformation position is more of a concept that combines holistic education with the principles of interconnectedness upon which Miller and Seller built their own curriculum. Transformative learning is usually associated with adult education. Its goal is the process of perspective transformation (of problematic frames of reference) in terms of self-understanding, belief and behaviour (Mezirow, 1997). Such processes should result in learning which is more inclusive, reflective, open, and emotionally able to change.

However, when transformative learning blends with principles of holistic education, the processes of transformation may extend to many other dimensions and may even be suitable for the education of any age group. Transformative learning is mostly associated with Mezirow and his work “Transformative dimensions of adult learning” (1991), but the same principles are already present in Freire’s “Pedagogy of the oppressed” (1993), first published in Portuguese in 1968, and Kolb’s “Experiential learning: Experience as a source of learning and development” (2014), first published in 1984. As principles of holistic and transformative education aim at a deeper understanding of self, which in itself is an organic part of the whole universe, the ultimate goal is not only self-development, but also personal responsibility for the societies and environments that we live in. Willingness to take responsibility springs from an individual’s understanding of the world, in holistic education usually

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<sup>4</sup> One of the most important academic beacons of holistic education is the Ontario Institute for Studies in Education (OISE) at the University of Toronto, Canada. This institute is well known for combining education and research in indigenous studies. Holistic education has greatly benefitted over the years from this close connection, primarily thanks to publications by Miller (2019; Arrows & Miller, 2012), who has written extensively on the topic.

represented by cognitive, physical, spiritual, emotional, social and aesthetic aspects. Such a broad and open mindset is the key factor in the creation of “how meaning schemes shape one’s actions, while making learners’ subjective self-perceptions objective and accessible for self-reflection” (Papastamatis & Panitsides, 2014, p. 78).

### 3.3 Holistic educator – pedagogue – teacher

The English language prefers not to use the word pedagogue, because pedagogy is only one of the academic-scientific branches of education (excluding, for example, adult education); however, it helps to remember the etymology of the word. The word pedagogue comes from the Ancient Greek παιδαγωγός (paidagōgós) and is a blend of the words παῖς (paîs, “child”) and ἀγωγός (agōgós, “guide” coming from ἄγω (ágō), “lead”). Pedagogue in later antiquity was an educated slave who used to supervise primarily non-slave boys when they were not learning liberal arts from teachers (διδάσκαλος – didaskalos). The main purpose of any pedagogue was to be there for the boy. Any “teaching” was subsequent, yet the pedagogue was responsible for a child’s behaviour and moral training (Yannicopoulos, 1985). Such qualities are best acquired thanks to methodical socialization (Helus, 2015) carried out by the pedagogue, whose authenticity is proved in words and actions.<sup>5</sup> All these aspects needed to be in accord if the results of children and young people’s upbringing and socialization processes were to be successful.

Any educator who wishes to apply the principles of holistic education should consider the cognitive, physical, spiritual, emotional, social and aesthetic aspects of every individual as equally important. However, this does not mean that every aspect should receive the same amount of time and attention in the educative process. Every person and every student displays different talents and qualities, and the goal of every holistic educator is to help the person reach their highest potential. An individual approach is thus absolutely necessary.

Teachers applying the principles of experiential and holistic education must find a balance in their relationships (“being with” or “being close”) to the students. Teachers are no longer the bearers of truth; they are guides or facilitators, and in some situations even leaders or role models. An ideal of the relationship between student and teacher can be seen in Buber’s (1970) “I-Thou” relationship, in which they are both partners in a dialogue, are both subjects (not objects) of educational processes, and both become responsible not only for themselves, but also for the environment and the whole of society.

## 4 Singapore and its education goals

Singapore is a well-developed and highly competitive economy. Without any natural resources, it has decided to develop and prosper even further by investing in education and attempting to become a country with a highly qualified population, one which is prepared to tackle future problems. In order to succeed in this task, the government formed a tripartite partnership consisting of the MOE, NIE and schools. The MOE pursues the following vision: “For Singapore to become a country of thinking, reflective and committed citizens who will contribute towards continued growth and prosperity of the nation, and will become creative thinkers, lifelong learners and leaders of change” (Tan et al., 2017a, p. 51). The key factor on the path to reaching this challenging goal is the creation of a Teacher Education Model for the 21<sup>st</sup> Century (TE21) that includes character development and employs the principles of holistic education.

In the following paragraphs, the emphasis will be on values and social issues, which (at least in theory) should be the very core of the whole education system in Singapore. However, it should not be forgotten that Singaporean society is a highly competitive one; many of the stakeholders (especially

<sup>5</sup> This is the very same principle as the one in TE21 that talks about character development and internalization of values, all of which can be “taught and caught”.

parents of students) primarily value excellent test results (Rajandiran, 2021, p. 75), so an emphasis on development of the whole person cannot root out the fear of failure. Competition among students and schools led to a recent ban on school rankings, and the number of tests has even been reduced in the name of holistic education and its principles. Education should not prepare students for tests, but rather it should prepare them for life and provide a quality education. Moreover, Ng (2020) argues that holistic education should bring engaging and joyful learning, which will result in better student well-being.

#### 4.1 Teacher Education Model for the 21<sup>st</sup> Century (TE21), in general

There are only a few certainties in the contemporary world, and one of them is the fact that the world and society, in general, are constantly changing. This became the driving idea of educational strategy in Singapore, which is also in a constant state of progress and change. According to the architects of the Singaporean education system, education for constant change starts with teacher education. Teachers who are able to meet the challenges of today's world have to be the brightest minds<sup>6</sup>, and not only be professionals in their field of interest and in their teaching skills, but also morally coherent, with a character that has been shaped in accordance with Singaporean values, and ready to lead, care and inspire (Tan et al., 2017a). Leading, caring and inspiring places great moral demands upon the teacher. Singaporean TE21 believes that values can be both taught and caught. Teachers are encouraged to teach skills or competencies connected to values, moral standards, and desired habits. If they are to be adopted by the students, they have to be experienced and practiced by the teachers first. Teachers are also trained to use a wide range of techniques or approaches to awaken the students' curiosity, as well as their lust for exploration and further studies, and to trigger various learning processes. These include experiential, participatory, inquiry, image-rich and connected "designs" (Chua & Chye, 2017).

TE21 applies the principles of holistic education, and therefore the whole system is a dynamic one. It is an approach that is contextualized in Singaporean society. Rajandrian (2021) mentions email correspondence with Low and Tan, who explain that freedom through individual rights is the goal of Western education systems, but at the same time the Asian context is present in TE21, and thus the goal of education is freedom through the group, family and local community. In Singapore, collective welfare, community harmony and the good of society is prioritized over the individual. While holistic education as an approach to education developed in the West, its philosophical fundamentals suit Eastern value systems very well (Lee et al., 2014).

The development of the holistic education system requires not only precisely formulated goals, in the form of 21<sup>st</sup>-century competencies (21CC), but also the means to reach these goals effectively. One of these means is experiential learning. Since assessing the results of this approach is rather complicated, the NIE has developed 21<sup>st</sup>-century skills-assessment methods. Rajandrian (2021) points out that this new approach to education system is not only about new assessment methods, it is about a cultural shift, which takes time. For this reason, it is difficult to evaluate the outcomes of the changes that have taken place in the past 10 years.

#### 4.2 Values concerning learners, teachers and communities

TE21 introduces the V3SK Model, the abbreviation stands for Values, Skills and Knowledge (Tan et al., 2017b), which is supposed to summarize the essential prerequisites teachers have to master if they want to "teach" the full extent of holistic education. Values are at the core of the whole model and are looked at from three different perspectives. The TE21 Report by the NIE (2010) distinguishes V1 – Learner-Centred Values (empathy, belief that all children can learn, commitment to nurturing the potential in each child, valuing of diversity), V2 – Teacher Identity (aiming for high standards, an

<sup>6</sup> Only the top 30% of all students qualify to apply, if they want to become teachers, and less than 50% of those who apply make it past the selection interview (Tan et al., 2017a).

inquisitive nature, further learning and improvement, adaptation, resilience, ethical conduct, professionalism), and V3 – Service to the Professional Community (collaborative learning and practice, building apprenticeship and mentorship, social responsibility and engagement, stewardship). Knowledge and skills are similarly identified so that the educational goals of TE21 can be set precisely. As ICT has become an integral part of education in Singapore, the skills include communication and technological skills, along with social skills and the development of emotional intelligence.

The architects of TE21 claim that values are the driving force, the paradigm of the whole education system (Tan et al., 2017a). Singaporean education is well known for its excellent academic standards; however, according to the Programme for International Student Assessment (PISA) initiated by the OECD (2018), the students are much more afraid of failure than in most countries around the world (only Macao, Hong Kong, China and Japan scored similar figures to Singapore). Ng (2020) argues that the move towards holistic education principles brought a substantial change in the attempt to move away from an examination-oriented system.

### 4.3 Relationship- and character-building through service learning

TE21 aims to be a student-centric, values-driven education system. It intends to promote the three aspects of breadth, depth and length, which are supposed to match the principles of holistic education with the vision of the Singaporean government, embodied in 21CC that are to be delivered through two programs – the Applied Learning Programme and Learning for Life Programme (Tan et al., 2017a). Breadth is concerned with valuing children and discovering their interests and talents; it is a broadly inclusive and holistic-education-based approach. Depth focuses on deep values, deep foundations for learning, and an individual commitment to Singapore and its society. Length promotes the need for lifelong learning and learning for life.

Quality teaching goes hand-in-hand with building relationships among students, and also between teacher and student. A good teacher not only teaches, but is also sensitive to the needs and interests of the group and of individuals. One of the ways of fostering relationships is experiential education, which is considered by many (Cranton & Roy, 2003; Flake, 1993; Hutchison & Bosacki, 2000; Mahmoudi et al., 2012) to be one of the most effective approaches when applying the principles of holistic education. Experiential education brings the educational process closer to the real lives of students by making it attractive and joyful, but it can also allow them to effectively learn from previous mistakes, and let them face their fears or weaknesses. The teachers have to be prepared to create such learning situations – or at least know how to act when something happens – and they must intervene. The TE21 uses several methods to prepare future teachers to (re)act appropriately in various situations.

One of the most interesting ways to foster relationships with the students and the local community is service learning. In the eyes of the creators of TE21, service learning is closely related to character-building; it also fosters civic responsibility and a lifelong civic commitment, and it provides a chance for future teachers to gain experience, skills and competencies of a kind they would probably not have attained otherwise. The Singaporean system offers two programs for service learning. The first is Group Endeavours in Service Learning, based on engaging the local community. The second is the Youth Expedition Project, offered to teachers who wish to serve abroad (Tan et al., 2017a). Service learning is organized in groups of 16 to 20 people coming from different demographic backgrounds, and it lasts up to two semesters (Tan & Soo, 2019). The project is chosen by the student, and it is always mentored by someone from the academic staff who assesses the students, both as individuals and as a group.

D’Rosario, Tan and Avila (2017) list various types of services the students may choose from, in order to meet their own preferences and the needs of the local community. The services include taking positive action – improvement of a situation they care about, or promoting awareness of a certain issue that needs more attention in the community, or inspiring and influencing others to make a difference within a social topic they are interested in. All these social activities foster social cohesion

(teachers better understand the situation of various kinds of people), often create working opportunities, and to some extent prevent social unrest.

#### 4.4 Professional Practice and Inquiry course and introduction of the e-Portfolio

The Professional Practice and Inquiry course was introduced to help pre-service teachers formulate their own teaching philosophies. This course “intends to provide a space for pre-service teachers to identify and reflect on the values of teaching and learning that will scaffold their future classroom experiences” (Rajandrian, 2021, p. 70). In order to achieve such a goal, the NIE introduced the e-Portfolio, an electronic platform in which the pre-service teachers record their newly gained competencies, views, experiences, etc., which helps them not only to meet the standards set by the Graduant Teacher Competencies Framework but also to interweave theory and practice. Such a process inevitably leads to a clearer revision of their teacher identity. Teachers who are used to working with the e-Portfolio are encouraged to use similar principles with their students. The students’ portfolios can be consequently used for formative assessments, which fits very well within the framework of educating the whole person.

## 5 Conclusion

The goal of the article was to show how the principles of holistic education may lead to slightly different outcomes when adjusted to the needs of Singaporean society. The article explained the three positions, with an emphasis on the transformative position (which characterizes holistic education), the interconnectedness of phenomena, and the importance of teacher authenticity. Teaching just by being authentic meets the TE21 practice of passing on values, which can be taught and caught. Teachers become facilitators or guides who not only give, but also receive a lot from the students and the environment. Holistic education is an eclectic approach, so to a large extent it allows anyone who wishes to use its principles to tailor it according to their needs. Singapore is no exception, and even though some principles are slightly altered, and other principles are not fully applied, it is an inspiring attempt to incorporate holistic education into the education system.

The alterations of the holistic education principles used in TE21 may include holistic education’s emphasis on learning responsibility for oneself, one’s family, local community or nation, and the universe. This universal anchor fosters individual responsibility for democracy, while TE21 places in the centre the needs of the individual, of the community and of Singapore and its society – not of democracy itself, but of Singapore and its society. This slight but substantial difference can also be seen in the fact that the publications of Tan (the former director of NIE and a significant personality in the development of TE21) often quote Confucius. The Chinese traditions of Taoism and Confucianism favour a stable society, which is preferable to preserving democracy (which can be very unstable and to some extent unpredictable). Quoting Confucius is also interesting in light of the religious adherence of the Singaporean people. Sources such as Lin (2021) show the following figures about the religious beliefs of Singaporeans: Buddhism 32%, No religion 20%, Christianity 19%, Islam 15%, Taoism 8%, Hinduism 5%.

Teacher Education Model for the 21<sup>st</sup> Century (TE21) in Singapore attempts to employ principles of holistic education. As a result the teachers do not focus only on academic excellence, but also on creativity, arts, awareness of the physical and bodily self. This approach also strengthens the relationship towards the environment.

It is clear that the situation in Singapore is unique, and its democracy is a singular one. Every education system reflects the policy of the state, and Singapore is a perspicuous example. The foundations of

TE21 are, on one hand, based on the latest research in education and, on the other, are a political product of MOE and NIE, which work in very close cooperation. Authors of studies and articles on TE21 claim that their system is very pragmatic and unencumbered by any philosophical tradition or religion, but they avoid any mention of politics, with the exception of social, and sometimes economic, issues. The political control over the education system raises the question whether it would be possible to publish an academic paper critical of TE21 or the whole system of education. It might not be forbidden to publish a critical paper, but there might be strong auto-censorship among academic staff in Singapore. However, this is just speculation. It has been mentioned that the Singaporean understanding of democracy and individual well-being differs slightly from the Western one, and so the emphasis on collective welfare, harmony, peace and stability might outweigh individual disagreement. Perhaps this can be demonstrated by Poon's claim that there is unity of vision and mission among teachers, school leaders, union leaders, NIE educators and researchers and policy makers at MOE, who, despite having different views, all work towards a shared vision of moulding the future of Singapore (Low et al., 2011, p. 18).

More serious alterations of the holistic education principles in TE21 seem to fit within the way well-being and happiness are dealt with. Academic materials describe TE21 as a path leading to creativity and success (together with the internalization of values and character-building), and resulting in well-being or happiness, but holistic education introduces all these aspects of life all at once – there is no causality.

Miller et al. (2005) claims that the importance and central role of spirituality is what distinguishes holistic education from other (whole-person-oriented) educational approaches. Time for reflection, meditation or contemplation is a natural part of holistic education. However, one of the most comprehensive academic sources – Teacher Education in the 21<sup>st</sup> century: Singapore's evolution and innovation (Tan et al., 2017b) – talks only about reflection and does not mention meditation or contemplation at all. The absence of meditation and contemplation connected with intuition suggests that despite a great effort to provide a wide scale of impulses (Chua & Chye, 2017), most of the learning is still happening on a cognitive level.

Even though the number of tests and traditional assessment methods has declined significantly in recent years (Ng, 2020), students in Singapore are still under a great amount of stress, fear of failure and pressure to succeed. Many of the latest sources claim that the importance of succeeding at tests is a relic of the past that has been instilled in the minds of many stakeholders (Rajandrian, 2021; Reimers & Chung, 2019; Tan et al., 2017a). Even though the system is theoretically permeable, and the students with low results who end up in the lowest-ranking classes have an opportunity to move up the ladder, in practice it is very difficult – not only because of the fact that everybody is under the same pressure, but also because of early selection, which undermines the less successful students.

The structural changes that have been introduced in Singapore in recent years show greater interest in the holistic education of students. These changes include “the Programme of Active Learning (PAL) and an increased emphasis on PE/Outdoor Education (specifically, Outdoor Experiential Learning), Arts, and Music (PAM) at the primary education level, and the Applied Learning Programme and Learning for Life Programme (ALP/LLP) at the secondary education level” (Tan et al., 2017a). The new emphasis suggests an attempt to focus not only on academic excellence, but also on creativity, arts, and awareness of the physical self; it strengthens the relationship to the (natural) environment, etc. Not only are the newly gained competencies in these fields impossible to assess in the traditional way, but they also send a clear message to the whole society that it is not just the purely cognitive aspects of learning that are important.

Any serious model based on holistic education cannot be limited to the school environment and cannot be adequately assessed by ranking systems (including PISA or TIMSS), as holistic education is more of a whole paradigm. It is very complicated to express in the written form of a model. Even though the

TE21 still shows signs of imperfection, it certainly is an inspiring example, and refining it for the specific needs and environment of other countries around the world would be challenging, yet beneficial.

### Declaration of conflicting interests

The author proclaims that this is an original article, unpublished previously in the present form, and not submitted for publication elsewhere.

### References

- Arrows, F., & Miller, J. (2012). Holistic and Indigenous Education: A dialogue. *ENCOUNTER: Education for Meaning and Social Justice*, 25(3), 44–54.
- Bernstein, B. (1996). *Pedagogy, symbolic control, and identity: Theory, research, critique*. Taylor & Francis.
- Buber, M. (1970). *I and thou, translation with a prologue "I and you" and notes by Walter Kaufmann*. Charles Scribner's Sons.
- Chua, B. L., & Chye, S. (2017). Nurturing twenty-first century educators: An EPIIC perspective. In O. Tan, W. Liu, & E. Low (Eds.), *In Teacher Education in the 21<sup>st</sup> Century: Singapore's evolution and innovation* (pp. 59–76). Springer.
- Cranton, P., & Roy, M. (2003). When the bottom falls out of the bucket. *Journal of Transformative Education*, 1(2), 86–98. <https://doi.org/10.1177/1541344603253928>
- D'Rosario, V., Tan, S. Y., & Avila, A. P. C. (2017). Building character and citizenship through service learning. In O. Tan, W. Liu, & E. Low (Eds.), *Teacher Education in the 21st Century: Singapore's evolution and innovation* (pp. 233–252). Springer.
- Dewey, J. (1997). *Experience and education*. Touchstone.
- Emerson, R. W. (2009). *The essential writings of Ralph Waldo Emerson*. Penguin Random House.
- Flake, C. L. (1993). *Holistic education: Principles, perspectives and practices. A book of readings based on "Education 2000: A Holistic perspective"*. Holistic Education Press.
- Forbes, S. H., & Martin, R. A. (2004, April 12–16). *What holistic education claims about itself: An analysis of Holistic schools' literature* [Paper presentation]. American Education Research Association Annual Conference, San Diego, California.
- Freire, P. (1993). *Pedagogy of the oppressed*. Continuum Publishing Company.
- Fröbel, F. (2001). *The education of man*. Amer Traditional Toys.
- Heidegger, M. (1996). *Being and time*. State University of New York Press.
- Helus, Z. (2015). *Sociální psychologie pro pedagogy*. Grada.
- Hutchison, D., & Bosacki, S. (2000). Over the edge: Can holistic education contribute to experiential education? *Journal of Experiential Education*, 23(3), 177–182. <https://doi.org/10.1177/105382590002300310>
- Irwin, M., & Miller, J. P. (2016). Presence of mind. *Journal of Transformative Education*, 14(2), 86–97. <https://doi.org/10.1177/1541344615611257>
- Kloppenber, J. T., & Westbrook, R. B. (1992). John Dewey and American democracy. *The American Historical Review*, 97(3), 919. <https://doi.org/10.2307/2164912>
- Kolb, D. (2014). *Experiential Learning: Experience as the Source of Learning and Development*. Pearson FT Press.

- Lee, D. H. L., Hong, H., & Niemi, H. (2014). A contextualized account of Holistic education in Finland and Singapore: Implications on Singapore educational context. *The Asia-Pacific Education Researcher*, 23(4), 871–884. <https://doi.org/10.1007/s40299-014-0189-y>
- Lin, C. (2021, June 16). *20% of Singapore residents have no religion, an increase from the last population census*. CNA. <https://www.channelnewsasia.com/news/singapore/census-2020-more-residents-no-religion-15023964>
- Low, E. L., Joseph, J., Atienza, J., Chng, S., Hui, C., & Lam, A. (2011). *Paving the fourth way: The Singapore story*. National Institute of Education, Singapore (NIE). <https://nie.edu.sg/docs/default-source/nie-research/paving-the-fourth-way-pdf.pdf?sfvrsn=2>
- Mahmoudi, S., Jafari, E., Nasrabadi, H. A., & Liaghatdar, M. J. (2012). Holistic education: An approach for 21 Century. *International Education Studies*, 5(3), 178–186. <https://doi.org/10.5539/ies.v5n3p178>
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. Jossey-Bass.
- Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education*, 1997(74), 5–12. <https://doi.org/10.1002/ace.7401>
- Miller, J. P., & Seller, W. (1990). *Curriculum: Perspectives and practice*. Copp Clark Pitman.
- Miller, J. P., Karsten, S., Denton, D., Orr, D., & Kates, I. C. (Eds.). (2005). *Holistic learning and spirituality in education: Breaking new ground*. State University of New York Press.
- Miller, J. P. (2019). Appendix: To name the world: A dialogue about Holistic and Indigenous education with Four Arrows and Jack Miller. In J. P. Miller, *The Holistic Curriculum, Third Edition* (pp. 219–236). University of Toronto Press. <https://doi.org/10.3138/9781487519506-016>
- Miller, R. (1997). *What are schools for?: Holistic education in American culture*. Holistic Education Press.
- Nakagawa, Y. (2000). *Education for awakening: An eastern approach to holistic education* (Vol. 2). Foundation for Educational Renewal.
- National Institute of Education, Singapore (NIE). (2010). *A Teacher Education Model for the 21<sup>st</sup> Century (TE21): A report by the National Institute of Education, Singapore*. [https://www.nie.edu.sg/docs/default-source/te21\\_docs/te21\\_executive-summary\\_14052010--updated.pdf?sfvrsn=2](https://www.nie.edu.sg/docs/default-source/te21_docs/te21_executive-summary_14052010--updated.pdf?sfvrsn=2)
- Ng, P. T. (2020). The paradoxes of student well-being in Singapore. *ECNU Review of Education*, 3(3), 437–451. <https://doi.org/10.1177/2096531120935127>
- O’Sullivan, E. (2005). Emancipatory hope: Transformative learning and the “strange attractors”. In J. P. Miller, S. Karsten, D. Denton, D. Orr, & I. C. Kates (Eds.), *Holistic learning and spirituality in education: Breaking new ground* (pp. 69–78). State University of New York Press.
- OECD. (2018). *Students’ self-efficacy and fear of failure*. <https://doi.org/10.1787/888934030591>
- Papastamatis, A., & Panitsides, E. A. (2014). Transformative learning: Advocating for a holistic approach. *Review of European Studies*, 6(4), 74–81. <https://doi.org/10.5539/res.v6n4p74>
- Rajandiran, D. (2021). Singapore’s Teacher Education Model for the 21<sup>st</sup> Century (TE21). In F. M. Reimers (Ed.), *Implementing deeper learning and 21<sup>st</sup> century education reforms* (pp. 59–77). Springer. [https://doi.org/10.1007/978-3-030-57039-2\\_3](https://doi.org/10.1007/978-3-030-57039-2_3)
- Reimers, F. M., & Chung, C. K. (Eds.). (2019). *Teaching and learning for the twenty-first century: Educational goals, policies, and curricula from six nations*. Harvard Education Press.
- Rudge, L. T. (2010). *Holistic education*. LAP Lambert Academic Publishing.

- Tan, J. P., Koh, E., Chan, M., Costes-Onishi, P., & Hung, D. (2017a, February). *Advancing 21<sup>st</sup> century competencies in Singapore*. Asia Society, Center for Global Education. <https://asiasociety.org/sites/default/files/2017-10/advancing-21st-century-competencies-in-singapore.pdf>
- Tan, O., Liu, W., & Low, E. (Eds.). (2017b). *Teacher Education in the 21<sup>st</sup> Century: Singapore's evolution and innovation*. Springer. <https://doi.org/10.1007/978-981-10-3386-5>
- Tan, S. Y., & Soo, S. H. J. (2019). Service-learning and the development of student teachers in Singapore. *Asia Pacific Journal of Education*, 40(2), 263–276. <https://doi.org/10.1080/02188791.2019.1671809>
- Yannicopoulos, A. (1985). The pedagogue in antiquity. *British Journal of Educational Studies*, 33(2), 173–179. <https://doi.org/10.1080/00071005.1985.997370>



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