

Melissa Welz

EDTC 804 Global Issues in Educational Technology

Six Nation Analysis of 21st Century Competencies

Dr. Shamburg

December 3, 2022

Global education has advanced significantly throughout the course of the 21st century. The objective of educational expansion stays at the foreground even though a given nation's geographic environment, socioeconomic status, population, and culture could differ greatly or barely at all. One may identify where each country has excelled and where some still need improvement. Identifying is by researching and comparing such development methods from six different countries (Chile, China, India, Mexico, Singapore, and the United States of America).

Salient Features and Areas of Distinction Among Cases

Chile

Shifting the curriculum to better prepare students for the new age of learning in the 21st century is a crucial prominent aspect of Chile's education systems in transitioning to 21st-century policies. Chile's institutions are still distant from the pedagogical approaches required to promote an education for the twenty-first century and are not familiar with the intended goals of curriculum revisions. Additionally, it appears that there has been no change in pedagogical techniques at the school level that would be consistent with previous efforts at curriculum reform and evaluation. However, Chile's schools have incorporated critical thinking in their teachings even though their pedagogy techniques remain the same.

The importance of critical thinking is heavily emphasized in Chile's educational system. The promotion of critical thinking as opposed to rote memorization, demonstrates Chile's progress towards a modern educational system. Future educators learn the value of strengthening their critical thinking abilities rather than the specific topic in even the most fundamental teacher preparation courses.

When teaching reading and writing to second language learners, critical thinking is an essential component. Without this component, educators are unable to adequately consider the place of English in the global community, and our students must be aware of this as well. Critical thinking concerns the ability to think reflectively and judge skillfully, as to decide what information or communication is relevant in a given context (Gut, 2011). The ability to filter the amount of incoming data to formulate your own point of view is a key 21st-century skill (Dede, 2010).

Students in Chile are now being educated for the constantly evolving workforce of the 21st century thanks to critical thinking. “All in all, the focus moved from preparing for higher education to knowledge and skills for real-life within contemporary society” (Bellei & Morawietz, 2016, pp. 102). Students in Chile are now being taught critical thinking in their classes which will be of help and useful in our 21st-century society.

China

In the history of education, the country of China started off small and built up little by little. China also has a listed curriculum and an ongoing education plan. China understands that there is always a constant change that is needed in education. China is listed in PISA and the country has a high decent score in all subject areas. China supports Professional Development for teachers and is open for diversity. The 2018 PISA China scores are attached down below for reference. China’s scores ranked #1 from other countries that ranged from 551- 590.

Figure 1

Top 10 Scores – Mean Scores in PISA 2018

TOP 10 SCORES - Mean scores in PISA 2018					
READING		MATHEMATICS		SCIENCE	
China*	555	China*	591	China*	590
Singapore	549	Singapore	569	Singapore	551
Macau	525	Macau	558	Macau	544
Hong Kong	524	Hong Kong	551	Estonia	530
Estonia	523	Taiwan	531	Japan	529
Canada	520	Japan	527	Finland	522
Finland	520	South Korea	526	South Korea	519
Ireland	518	Estonia	523	Canada	518
South Korea	514	Netherlands	519	Hong Kong	517
Poland	512	Poland	516	Taiwan	516
OECD average	487	OECD average	489	OECD average	489

NOTE: *China is represented by four provinces: Beijing, Shanghai, Jiangsu and Zhejiang.

Even though China has top ranking PISA scores, the country is moving away from standardized exam results. China has a tremendous focus on character education that encourages creativity and critical thinking just like Chile. China has a nine-year mandatory education program and is divided into three years of junior middle school and 6 years of primary school, beginning at the age of six (Schleicher, 2020). Many students arrive to school around nine o'clock am and settle down between ten and eleven o'clock pm. Their entire day is devoted to classroom instruction and completing their homework for the next day. Even though critical

thinking is incorporated into their subjects, need for more 21st century activities should be implemented into their day.

However, there is frequently no time left over for engaging in extracurricular activities or enjoying social interactions with friends. “Due to low engagement of extracurricular activities, China students lack real-world problem-solving skills and have poor communication skills as a result of not participating in extracurricular activities” (Schleicher, 2020, para. 5). The majority of Asian pupils, whether they be Chinese or others, are strong only in theory. They are unable to compete with European students when it comes to using a skill they have memorized in real-world situations.

India

India’s education system is working toward its educational objectives and has significantly increased its level of development. The National Curriculum Framework (NCF) 2005 of India outlines the country's plans for implementing its 21st Century education initiatives, which include promoting economic growth and eliminating imbalances resulting from its historically repressive caste system and subjection of women. The curriculum encourages practical learning, critical thinking, and making use of the expertise of local experts from many industries (NCERT, 2005). The most intriguing feature of NCF 2005 is the way the curriculum uses India's many cultural traditions, art, and values-based material to encourage peace. The NCF 2005's rules are interpreted differently by different people, and there is a gap between the framework, the creation of assessments and textbooks, and teacher training.

India also established the National Curriculum Framework in 2005 to meet the accumulated difficulties of the past, the existing circumstances, and the future needs for developing India in a globalized twenty-first-century world. (Natraj et al., 2016). This gave more

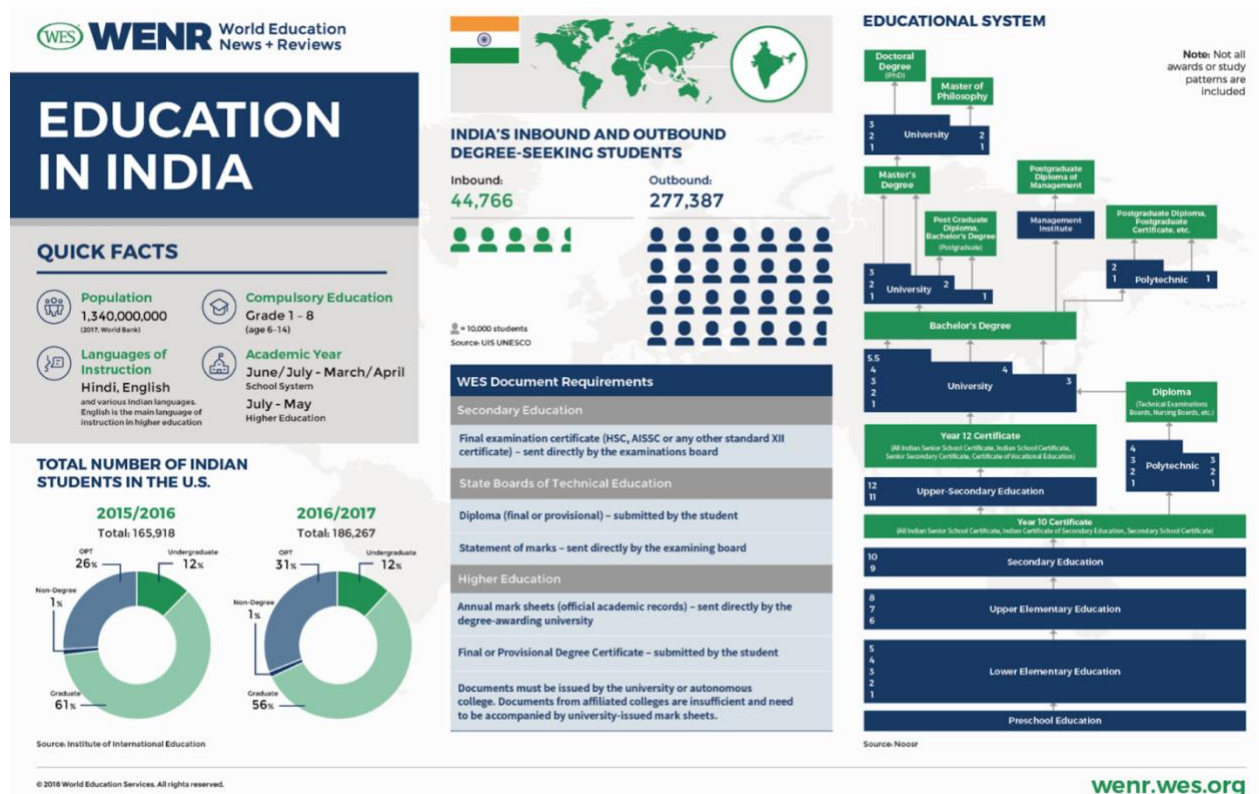
focus on entrepreneurship and career-focused education for all students. This also gave more of an opportunity to thrive in the world upon completing one's education. "All children were seen to have the right to an education, especially those from underprivileged and poorer communities" (Natraj et al., 2016, p. 161). This straightforward, sensible, and evident position has brought India's education system into the twenty-first century and ought to be adopted by all nations.

India's schools are also highly populated and are growing more and more every day. The number of girls in schools has risen almost exponentially when compared to 20th century. This motivates the younger females in Indian families to keep getting their education. In the WENR 2015 study, school dropout rates have decreased significantly. India's schools have now become more innovative in their approach towards imparting education. They are embracing use of technology.

However, much work is needed for better quality of teachers, student teacher ratio, and infrastructure in India's public schools. India also needs more teachers in their educational schools. There are not enough qualified teachers to fill the number of open posts, leading to the teacher shortage. Particularly in areas that serve students from low-income families, there are not enough teachers who are both qualified and motivated to teach. For the standard of instruction that students get, the shortfall has significant repercussions. India also needs faster educational reforms in their country. A chart from WENR is attached below. There are more education statistics written for India's educational system.

Figure 2

WENR World Education News and Reviews – Education in India Statistics



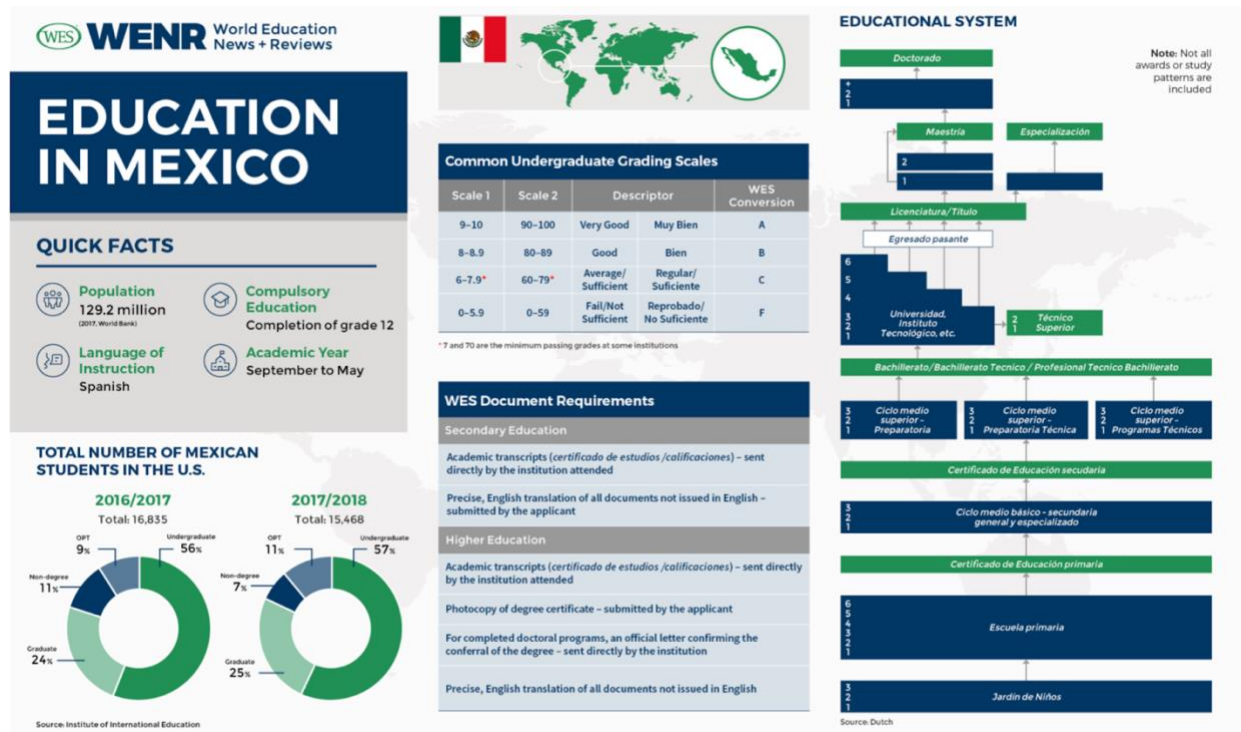
Mexico

In order to transform Mexico's broad and complex educational system and better equip students to meet the challenges of the 21st century, the Mexican government initiated a comprehensive educational reform in 2012. Mexico has a national curriculum. According to PISA's information, Mexico is the country with the largest absolute change in mathematics performance with a 33 score-point increase between 2003 and 2009. Even though Mexico's scores improved, there is a youth unemployment that is a much significant problem in the country. The unemployment rate is twice as high as that of the country's working-age population. Mexico is always trying to implement their education system. However, major work is needed in their

government. A chart from WENR is attached below. There are more statements written for Mexico's educational system.

Figure 3

WENR World Education News and Reviews – Education in Mexico Statistics



Singapore

Singapore has a listed curriculum and an ongoing education plan just like the country of China. Singapore understands that constant change is needed in their curriculum. This country is listed in PISA and has high decent scores in their overall subjects. They include professional development for their teachers and are open for diversity.

Singapore stands out from the other countries because of the elimination of class distinctions. The way the new reforms moved away from the importance of standardized testing was the same in all other countries mentioned. In this case, there isn't a complete shift, but that's

where the trajectory points. The abolition of the ranking system in Singapore promotes the mental health of the students and prevents them from becoming depressed if they perform less well than they had planned. Thomas Guskey states, “Determining class rank does not help students achieve more or reach higher levels of proficiency. With the possible exception of the top-ranked student, class rank does nothing to enhance students' sense of self-worth, their confidence as learners, or their motivation for learning” (O’Brien, 2014, p. 63).

China and Singapore’s education system is similar and connected in several ways. They have clear goals on school reform and put an emphasis on strategic studying in academic subjects. Both countries have high scores on the PISA results. They also have a strong impact on reforming education in the economic, political, social state of the world through character education. They both know that education changes and they need to reassess all the time. More extracurricular activities are in much need for China and Singapore as well.

United States

In the United States history of public education, Massachusetts became the first state to offer public education. The United States offers alignment of curriculum to the 21st content standards including technology, social emotional learning and critical thinking skills (Reimers & Chung, 2016a). The United States educational system heavily relies on standards, benchmark objectives, and assessments in the educational classroom. This hold’s accountability, as well as determines overall achievement for our goals in each school (Reimers & Chung, 2016a). This has been criticized for its excessive emphasis on evaluation outcomes, which are used to measure aspects that are more qualitative, as well as for making up a small fraction of all national efforts (Reimers & Chung, 2016a).

Furthermore, teachers must understand all objectives, assessments, and curriculum of the given goals. Teachers in the United States also teach real world problem solving, technology skills, and critical thinking to their students. The United States education system also to this date utilizes standardized testing in our schools. Even though educational institutions still keep score of these tests, teachers are not afraid to steer away with just test scores alone to pass students.

Similarities of Educational Trajectories

There are significant similarities between the educational trajectories of China, Chile, Mexico, India, Singapore, and the United States in the twenty-first century. Reformation and critical thinking were the dominant themes in these case studies. Business/finances, politics, and education were three areas where reformation was evident. But each nation has distinctive characteristics that set them apart on their own in the race to develop teaching and learning for the twenty-first century.

The emphasis on high-stakes testing was apparent in each country as each nation developed its educational programs, teacher preparation, and curriculum. The government agencies used this focus as a means of improving the educational system while holding institutions accountable and establishing goals for learners, educators, and leaders. An objective has begun to disappear as educational systems now prioritize career preparation for learners over simply performing well on standardized tests.

The need for critical thinking and career preparedness in education was a recurring topic in some of the countries. Education systems started to place more significance on critical thinking as they began to distance themselves from the emphasis on standardized testing. Research backs up this focus on critical thinking. “According to research studies, companies place a great priority on individuals who have the ability to think critically” (Auld, 2019, p.159). They seek

employees who are capable of problem-solving, decision-making, and appropriate action. “An Australian study from 2015 found that in just three years, young graduates' requirement for critical thinking skills surged by 158%.” (Auld, 2019, p. 160).

There are several systems that recognized the link between professional oriented education and the expansion of its economy, while some systems saw this as an opportunity to catch up to other nations. All in all, the need of developing learners' critical thinking skills in order to prepare them for the future emerged repeatedly in each instance.

References

- Bellei, Cristián & Morawietz, Liliana. (2016). Strong Content, Weak Tools. Twenty-First-Century Competencies in the Chilean Educational Reform.
- Dede C. (2010). Comparing frameworks for 21st century skills. In Bellanca J., Brandt R. (Eds.), *21st century skills* (pp. 51–76). Bloomington, IN: Solution Tree Press.
- DeGannaro, T. (2022, August 8). Education in China: The Good, The Bad & The Big Opportunities. *China Marketing Insights*. <https://www.dragonsocial.net/blog/education-china/>
- Gut D. M. (2011). Integrating 21st century skills into the curriculum. In Wan G., Gut D. M. (Eds.), *Bringing schools into the 21st century* (pp. 137–157). Dordrecht, the Netherlands: Springer.
- Monroy, C. (2019, May 23). *Education in Mexico* [Infographic]. WENR World Education News and Reviews. <https://wenr.wes.org/2019/05/education-in-mexico-2>
- Natraj, A, Monal, J, Contractor, J, & Agrawal, P. (2016). *Chapter 5: Twenty-first century competencies, the Indian national curriculum framework, and the history of education in India*. Harvard Education Press.
- NCERT. (2005). National Curriculum Framework – 2005. New Delhi: NCERT.
- O'Brien, A. (2014, March 26). *Rethinking class ranking*. Edutopia. <https://www.edutopia.org/blog/rethinking-class-ranking-anne-obrien>
- Reimers, F, & Chung, C. (2016c) Introduction: A comparative study of the purposes of education in the twenty-first century. In F. Reimers & C. Chung (Eds.). *Teaching and learning for*

the twenty-first century: Educational goals, policies, and curricula from six nations. (pp. 1-24). Cambridge MA; Harvard University Press.

Schleicher, A. (2020, February 8). *PISA 2018 Insights and Interpretations* [Fact sheet].

SchoolReviews. Retrieved December 2, 2022, from <https://schoolinreviews.com/pisa-results-published-in-dec-2019-which-countries-score-the-highest-and-why/>

Trines, S. (2018, September 13). *Education in India* [Infographic]. WENR World Education News and Reviews. <https://wenr.wes.org/2018/09/education-in-india>