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## Learning by Example: Standardized Testing in the Cases of China, Korea, Japan, and Taiwan

Osman Ozturgut

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## Introduction

Kandel (1881–1965) is the most widely recognized leader and founder of modern comparative education. He asserted that the direction of education in democratic nations ought to be “borrowed and adjusted” within the cultural context of each nation. He further argued that, “so many of the problems in education are today common to most countries; in their solution certain common principles . . . are involved; the practical outcomes may, however, differ because of differences in tradition, in social and political principles, and in cultural standards”(Kandel, 1936, p. 401). As Kandel (1933) suggested, the problems and purposes of education have in general become somewhat similar. It is therefore important to learn from the experiences of other cultures and nations.

Our nation is currently experiencing an educational reform in its increasing emphasis on standardized testing system. The phenomenon of standardized testing is not new and unique to our nation. It is being practiced around the world, especially in East Asia (more specifically, China), since 605 A.D. It is therefore important to look at the examples from other countries and learn from their experiences. In this paper, the author will identify some of the issues with standardized testing and its future impacts by analyzing the standardized testing practices in China, Korea, Japan, and Taiwan.

## Significance

As iterated earlier, standardized testing is not a new phenomenon. The Chinese have been using it for centuries. Ancient Greeks have tried it for centuries since 5<sup>th</sup> and 4<sup>th</sup> BC. There is no evidence that they have become successful in educating their children through an imperial or elitist testing system. However, the impact of standardizing the education on a nation is significant. This is not only true for not being able to cultivate creative and innovative youth and thus a society, but also has significant impact on the economy as well. Examples from China, Korea, Japan, and Taiwan may help justify and clarify the direction we are heading in educating our nation.

## Brief History of Standardized Testing

We can trace the roots of the standardizing testing back to ancient China where, government jobs were assigned according to the scores of tests, mainly with questions about Confucian philosophy and poetry. This Imperial examination system, formally started during the Sui Dynasty in 605 B.C., consisted of military strategy, civil law, revenue and taxation, agriculture, geography, and the philosophical works of Confucius and his disciples. They designed tests for various levels of assignments within the government. Each degree required a more specific content knowledge.

In Ancient Greece, Socrates had used a system where he tested his students through dialogue. There were not necessarily right or wrong answers but creation of more dialogue and a higher knowledge was the purpose. Essay type tests were favored over multiple choice methods. With the Industrial Revolution, children were led to a more formalized schooling system where they were forced to study a

set curriculum. Increasing number of students in schools created a need for a more practical systems and standardized testing became a standard practice.

Psacharopoulos and Tassoulas (2004) explain that according to a Greek legend, “Procrustes was a robber in Attica. He had an iron bed on which he forced his victims to lie. If the victim was shorter than the bed, Procrustes stretched him by hammering or racking his body to fit the bed. If the victim was taller than the bed, the robber mutilated the body to the bed’s dimensions” (p. 250).

## **Rationale**

We cannot predict the future without looking at the past. In this case, other than the weaknesses of a system where students are assigned grades, instructional tracks, and granted admission based on their scores, it is important to analyze the issue of further impact on the future of our children and the country. Extensive reliance of standardized testing to help our schools and children has not been the best practice over the years. In contrast, the heavier our reliance on testing, the more we stay behind in our comparisons with other countries in terms of our success with formal schooling of our children.

This emphasis on standardization further led to creation of SAT in 1926 as the Scholastic Aptitude Test, and then later ACT in 1956 (American College Testing) as alternatives and competitors. We now see a growing trend in the popularity of standardized testing where the schools have to follow the guidelines identified in the No Child Left Behind (NCLB) Act of 2001. The NCLB Act mandated annual testing of students to demonstrate the improvement in their literacy and math skills as well as other core competencies.

Such testing systems do not necessarily produce valid and reliable scores, but also hinders the work of our teachers and administrators. Once their pay becomes tied to producing students with higher scores in such tests, we mainly become a nation of test-takers with a need for increasing skills in test taking. Our schools will not necessarily be able to cope with this change when educating the future generations of our nation. Therefore, it makes sense that we look at some examples from around the world where the standardized testing has the most influence in how a nation is shaped.

## **Case of China**

China has the longest history of standardized testing in the history. Imperial Examination can be traced back to the Western Zhou Dynasty (11th century BC-771 BC). Its origins extend back to Han Dynasty (260 BC-AD 220) with Sui Dynasty (AD 580-618) implementing it. Formal establishment was during Song Dynasty (AD 960-1279). During Ming (AD 1368-1644) and Qing (AD 1644-1911), these examinations were highly regulated and promoted. Until 1905, it was the common practice (Niu, 2007). The traditional education system was devoted to the study of Confucian classical texts for the Imperial examinations. Prospective candidates learned definite rules of conduct which they applied, on appointment as officials, to the concrete conditions of everyday life. Both clan and state schools were designed to train youth for the Civil Service Examinations, and Imperial rulers did not envisage the extension of a general education system to a wider public.

Despite a short period of Communist rule since 1949, Confucian ideology is still a strong force in the People’s Republic of China (P.R.C.) today. Taking the family as a model for society at large, Confucianism is basically authoritarian, emphasizing hierarchical principles and status differences.

Mao accepted the basic Marxist principle that education is part of the superstructure of society and infrastructure of economy. He further believed that education was a propaganda tool of the ruling class and served its interests only. He had solid grounds for his belief. In feudal China, 90 percent of the population was peasants, but education was controlled by the landlords, and the ideology within the educational system represented that of the landlord class. Mao argued that in a socialist society, education should be turned to serve the interests of the workers and peasants.

The educational system was to create individuals that were both “red and expert” (Kwong, 1997, p. 48). Redness referred to the possession of the Communist outlook. It was the duty of the educational system to instill into the young political awareness through strengthening their ideological and political work. Therefore, both students and intellectuals should study hard. They should study Marxism, current events, and political problems, which will then help them make progress both ideologically and politically. “Not to have a correct political viewpoint is like having no soul” (p. 44). After the establishment of the Republic, he saw the aim of education as socialist construction. His emphasis shifted from nationalism to socialism: “Our educational policy must enable everyone who receives an education to develop morally, intellectually, and physically and become a well-educated worker imbued with socialist consciousness” (Tse-tung, 1935, p. 459).

Education, in this sense, was a way to create conformist citizens with strong emphasis on national identity through a national curriculum. In today’s China, students must prepare for “Gaokao”, the multi-level national test to enter colleges. Their scores will determine if and where they will study and what they will study. It is not necessarily what they would want to study but rather an aggressive competition to enter a college, whatever the major is, and graduate with a diploma to be further able to compete for government jobs.

Chinese leaders are encouraging the creation of a more innovative and creative youth. They are encouraging public schools to provide a more liberal education preparing student for global leadership roles. And the U.S. is going towards an elitist and backward education system where conformist citizens are validated and rewarded. In the case of China, author’s assumption that standardized testing will lead to a national curriculum where the products (students) will be conformist and easy to control is confirmed. Additionally, with China’s social, cultural, and linguistic diversity, the assumption that these tests are biased is confirmed as well.

Another significant impact of standardized testing is the involvement of private citizens in the education business. Mok (2009) explains that when the Chinese government realized that the state alone could not keep up with the increasing demand for higher education; it allowed non-governmental institutions to get involved. These institutions are the last resort for the Chinese students who cannot pass the National College Entrance Examination. Admission criteria for such institutions are rather relaxed, therefore, attracting significant number of students. However, with the increasing tuition fee of such institutions, economic burden on the parents is significant, also adding to the inequality of access to education, promoting an elitist system.

### **Case of Korea**

The traditional Chinese education system has been highly influential in shaping the educational system of South Korea (Korea). Teachings of Confucius have been the central theme. Confucius believed in an ideal society where harmony was the ultimate goal. With its strong emphasis on harmony and unity,

Korean education system is very much geared towards these two themes. Right after the separation of North Korea, South Korean curriculum has been redesigned to place more emphasis on these themes. One purpose of Korean education thus the standardized testing is to promote the national identity.

Korean government spends more than 3.5% of GDP on primary and secondary schooling and despite the substantial government expenditure; households additionally spend about 40 % of their income on private tutoring. Korea's education system is designed around a competitive entrance examination system, also called *ipsi-jiok* (entrance examination hell). Through this system, students have to compete to enter into better middle and high schools. However, with the emphasis on testing and the fierce competition to enter good high schools and colleges, the role of public schools is being minimized within the current education system and the role of *Hagwons* (a private, for-profit, school-like learning institution) is increasing. According to Korea Ministry of Education, Science, and Technology (2011), there are currently 5,892 private educational institutions of the total 19,865 educational institutions. The number of students studying at these private institutions constitute almost % 40 of the total students in Korea. This is a significant number and worth consideration mostly because of the higher tuition fees charged by these private institutions.

A 1997 survey indicated that in Seoul, 82% of elementary, 66% of middle and 59% of academic high school students received tutoring. In rural areas, proportions were 54%, 46%, and 12%. (Paik, 1998; Yoon et al., 1997). In 1996, parents spent an amount which was almost 150% of the government's budget (Asiaweek, 1997, p. 20). These private institutions do not necessarily replace public institutions but rather provide supplementary education for testing purposes. In short, trust for public schools is decreasing and inequality in access to education is increasing. And the nation is paying for it.

Korean government, also with the pressure from parents paying enormous amounts for private tutoring for test-preparation, responded with an (school) equalization policy. According to this policy, individually administered test were abolished and students are randomly assigned to schools without a specific score as long as they passed the nation-wide examination (Kim and Lee, 2006). Hwang (1999) had also stated that the Korean government had been enforcing the autonomy of individual schools and reduce the academic emphasis and uniformity. In this sense, Korea is moving towards a more decentralized education system where access and equality have been issues within the education system. They are moving towards a more individualized education system, still with a nation-wide testing system but more focused on the individual needs of the students.

Korea is attempting to equalize its education system with various reforms. Government and parents are paying for the supplementary education, simply because of the necessity for test-preparations. Public schools are lacking credibility and teachers are surviving through private tutoring. *Hagwons* are becoming more of a replacement than supplementary programs and filling the hole in the education system. Children of affluent families are receiving better education than the ones who cannot afford private tutoring or any other form of after-school programs.

Japan is continuing its reforms by learning from other countries. Once an exemplary global model (even to China when China sent students and scholar to study the Japanese model in 1905), it is now lacking even the most basic structure in its elementary and secondary schools. Nationalism and patriotic feelings are stronger than ever but it is not a global model but a nation needing a global model itself.

## **Case of Japan**

Japan's entrance examination system is designed around the teaching of Confucius as in China and Korea. Students are required to pass an entrance examination for secondary schools and high school students must pass a more rigorous entrance examination for college and universities. These examinations are based on a national curriculum with textbooks approved by the Ministry of Education.

In order for a Japanese high school student to gain admission into a good university or to have a good job after graduating from high school, they need to supplement their education through attending supplementary programs. These programs, also called *juku*, are private programs with high tuition rates. In the recent years, private colleges and universities have appeared and their admission criteria are not only the scores of these standardized national university entrance examination but they have defined interviews and other supporting material as part of their admissions decisions. However, these private colleges and universities also charge higher tuition fees as *jukus* and inequality increases. A 1993 survey found 24% of elementary pupils and 60% of secondary pupils attending *juku*. Another 4% received tutoring at home. Nearly 70% of all students had received tutoring by the time they had completed middle school (Russell, 1997). Furthermore, attendance at elementary-level *juku* doubled between 1976 and 1993 (Bray, 2007).

Japan's education system is on the brinks of failing. Even though Program for International Student Assessment (PISA) scores rank Japan among the highest (surprisingly, after Finland in some years), Japan's education system owes its current success to the West (more specifically the U.S.). U.S. education system was borrowed through establishing decentralized administrative system and local school boards. Reforms of the 1980s aimed at fostering the creativity and innovation while also starting a discussion on the effectiveness of a national curriculum and standardized testing. That is, educational borrowing has produced important benefits for Japanese education and society in general. Japanese education as a result of learning from abroad is being restructured and brought under scrutiny. It is apparently significant to understand this phenomenon because Japan once was a global model for its education system. Ranking among top performers in math and science in international test such as PISA and Trends in International Mathematics and Science Study (TIMSS), Japan is now looking at other countries to reform its education system. Standardized testing has been a tool for neoconservative educational interventions that enforce patriotism, nationalist history teaching, national tradition and culture, and law and order in schools. Hunter (1989) explained that this is achieved through using standardized testing to produce the skills required by the state and instill the value the state deems desirable and appropriate.

Japan has been struggling with the fact that its youth is losing the national identity and pride, despite the emphasis on a national curriculum. With the opportunities globalism presents, they are reacting to the ideas that a national curriculum intends to instill in them. Japanese government is responding to the needs of its citizens by working on education reforms *The Model for Japanese Education in the Perspective of the Twenty-First Century* outlined by the Japanese government in 1996 is an example of this. They intend to incorporate more international elements and more educational opportunities for students with specific skills and interests.

### **Case of Taiwan**

After fifty one years of Japanese occupation, Taiwan was returned to China in 1945. Since then, there have been various attempts to reform the Taiwanese education system. After 1945, Chinese

authorities tried to change the education system that was established and formalized by Japan. This initiated the attempts to adopt an education system similar to the one in China. The rationale was that the Taiwanese should have the same opportunities as the people of China.

These attempts did not necessarily reform the education in Taiwan but emphasized the role of standardized testing. It was necessary to emphasize a nationalist curriculum to instill the young minds of Taiwan the notion of a country, a nation, the mainland China. In 1949, Chiang Kai-Shek government relocated to Taiwan. Since then, educational objectives based on morals, democracy, and science are emphasized and included in the nation's curriculum.

Since then, the emphasis on standardized testing, thus national curriculum had detrimental effects on the country's economy. It is true that, as a young government, creating a national identity is significant, but with a significant impact on the nation's future generations. In 2009, Taiwan spent 4.94% of its GDP to public education and 1.57% of its GDP to private education (Education in Taiwan, 2010/2011). This was a consequence of its dependence on supplementary education programs as a result of standardized testing. They argued that supplementary education provides citizens with an alternative way to achieve their educational goals.

Taiwan's struggle to form a national identity is causing a failure within the society. It is not an external pressure but the nation is facing a threat through its younger generation. Students show less interest in academic work, demonstrate less persistence, and are more inclined to take shortcuts through various means, as supplementary programs. In 1996, Taiwan had 4,226 tutoring centers with over 1.5 million students. There are various unregistered centers and the numbers attending such centers are unknown. More than 80% of senior high school students receive supplementary tutoring, creating a pressure on the economy, parents, students and the society in general.

However, like China, Korea, and Japan, the Ministry of Education launched a Reform Action Plan, outlining the policies that emphasize pluralism and equality in education. They adopted the policies of diversity and tolerance while rebuilding a learning environment that will help the students excel in academic while respecting the students' individual potential (Education in Taiwan, 2010/2011).

## **Assumptions**

This paper assumes that the expansion of standardized testing will have further cultural, economic, political, and social impacts on a nation's future. Schools use standardized testing scores to group students in instructional tracks, to identify learning disabilities, to promote, to guide the curricula, and to set a baseline for college admissions. The purpose of such a system is to provide accountability within an education system and in a way to evaluate teacher and institutional effectiveness. One of the original reasons for the introduction of mandated standardized tests was to reduce the effects of patronage (Madaus, 1991). After reviewing the consequences of the standardized testing systems in four Asian nations, author's assumptions are:

- 1) *Standardized testing leads to a national curriculum.* States and the Federal Government will not be able to keep up with the diversity within the schools and curricula, therefore, request a national curriculum. Federal Government will benefit from a national curriculum. Establishing and maintaining control within the education system and the society can be achieved through a national curriculum. This is not only an issue for students but also for teachers and administrators both in K-12 and higher

education. It will create a uniformity and standardization of teacher and educational leader preparation. National Committee for the Accreditation of Teacher Education (NCATE) standards are widely accepted and promoted throughout the United States. Such tests, as SAT and ACT create and promote the need for further standardization of educational requirements and qualifications. The No Child Left Behind (NCLB) Act of 2001 will further cause a curricular conformity and reshaping of how we train teachers.

2) *Standardized testing leads to a national curriculum where the products (student) will be*

*conformist.* Nation-states utilize national curricula and uniform education system to control the masses. If government designs and controls the curriculum, determines the score for the best-educated student, it will be able to control the minds of its citizens. This is in one sense helpful in maintaining the nation-state, carrying the nation further, creating a national identity, and instilling patriotic and civic values in the minds of the children. In Foucault's (1984) words:

The examination combines the techniques of an observing hierarchy and those of a normalizing judgment. It is a normalizing gaze, a surveillance that makes it possible to qualify, to classify, and to punish. It establishes over individuals a visibility through which one differentiates them and judges them. That is why, in all the mechanisms of discipline, the examination is highly ritualized. (p. 197)

However, creation of a nation with a set curricular system where every individual is tested on the government mandated knowledge for one reason or another, innovation and creativity will become lesser values to be learned and practiced.

3) *Because of the emphasis on testing, the demand for supplementary programs (i.e. after-school programs, private tutoring) will increase.* There will be more programs providing supplementary tutoring for standardized test. Therefore, the "Education for All" will no longer be valid and it will be that further education is only for the privileged. Only the parents that are able to afford such test-preparation programs will be able to send their children to better high schools and colleges. Elitism will prevail within the education system. This will impact the social structures but with the additional expense on such programs, families will struggle to manage their lives while incorporating such expenses into their income.

4) *When supplementary programs become necessary to pass the tests, schools will no longer be interested in educating our children but simply focusing on the test scores.* With the increasing role of the supplementary programs, their accountability will be reduced down to only keeping the students safe in schools until it is time for them to attend these programs. Only the students with more affluent parents will benefit from such services, and the public schools will be left with students in low-socioeconomic category. An elitist education system will be created and promoted with minimal or no accountability for the schools.

5) *Standardized testing is and will further be biased.* Standardized tests ignore race, gender, disability, culture, age, class, and linguistic differences. With its social, cultural, political, and economic structure, such tests, standardized tests in diverse nation-states are unreliable. These tests are structured with outdated educational theories. These theories assume that cognition and learning can be structured in a way that it is isolated and de-contextualized from the actual situations (Resnick & Resnick, 1989). Furthermore, standardized test lack instructional and curricular validity (Linn, 1987;



Wiggins, 1989). These tests not only ignore the realities we live in, they also widen the social, cultural, and educational gap within the nation.

## Conclusion

In all these four nations, government controlled examinations remain important but their influence has been declining. Tests are no longer crucial to providing further educational and career opportunities. United States is one of the few nations going back to standardized testing when countries with the most history with it are struggling to get out of it. Standardized testing does not necessarily provide accountability for student failure because of its disregard for cultural, social, gender, and linguistic biases in its format. When the government controls the curriculum and the education, it controls the future. Innovation and creativity become less desired characteristics but test-taking skills become more valuable. It creates education elites while increasing the gap in social and economic inequality. China, Korea, Japan, and Taiwan are few of the many nations that are struggling because of the lack creativity and innovation in their schools.

Standardized testing leads to creation of a national curriculum. National curriculum gives government more control over what is being taught and by whom. Then, with a government designed culturally, socially, politically, and economically biased curricula, the role of formal schooling decreases, thus creating a need for supplementary programs to prepare the nation's students for the tests. These supplementary programs create an elitist society, reducing the level of creativity and innovation within the nation's schooling. With an elitist education system, the emphasis on standardized testing increases. It is a cycle difficult to stop or intervene because of its complexity already engrained in the society. These educational policies are "particularly important expressions of social power in that they convey the values of authoritative actors and institutions whose particular forms of knowledge about the social world are reflected in these texts" (Ball, 1990, p. 17).

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