CULTURE MAKES THE DIFFERENCE: The Discrepancy Between US Education and Chinese Education

Lili CUI

Department of Physics
Kansas State University

Directed by Professor Andrew G. Bennett
INTRODUCTION

Causation For Choosing This Topic

I must confess I believed, until I two months ago, the Chinese education system is a totally mistake. I do not like it and as far as I know, a lot of Chinese students hold the same idea like me. I asked several Chinese graduate students who are now studying in US if they are satisfied with their elementary and middle school year’s study, or say, do they think those studies benefit their future life. Their answers are all negative. I am sure that is just what the most Chinese people are thinking now days. I am not surprised by this result because I was belonging to them.

However I know now that the Chinese education system does have some good aspects after I read Ma’s book and engaged in the discussion with our classmates. The elementary and middle school teachers in China did a really good job. And I believe that this is a key reason why the Chinese students perform better than those of other countries in the elementary and middle school level. I also realize that the teacher factor can also explain why when entering to the college level, especially for the graduate level, US students do a better job than China students. Professors in US are more qualified than those in China. China college education follows a “hard matriculate, easy graduate” policy in contrast with US’s “ easy matriculate, hard graduate” policy. For Chinese students, it is hard to get into college, but as soon as you get into it, life just becomes so easy, 99% will definitely get his degree without any problem. That means the professor in China is not so strict as in US. Another reason for poor high education is that in China the relationship between college and research is not as strong as in America, that means the professor in university do not so much research work. They are just teaching, like the
middle school teachers, so they could not teach their students how to do research work and this is just what the student need in the college and graduate level.

I thought that the student’s conceptual development was a crucial issue in education area, now I changed: the teacher education is the area that I’d like to work on.

Based on those thoughts, my own interest in culture and its effects on teacher’s teaching, on students’ understanding has been a growing one. I feel that I have always been intuitively aware of the many different cultural groups and environments that existed around me. I have also understood the need to use the language and the understanding of the group in order to live within it or along side it.

I decided that I would be a better teacher if I knew how to deal with the cross-cultural issues involved in teaching and learning. I was aware that my teaching experience was limited and decided that I would need to study more and do some research which would help me to understand about culture.

In the following part, I will focus on the middle school level which is comparable to grade 7-12, science education which include mathematics, physics, chemistry etc.

**Brief Introduction of Chinese Education System**

Let me give a little introduction about the Chinese education system before any further discuss.
“Awake at six, morning exercises in the backyard, start school at 7:30, two hours for lunch, lessons until 4:30, followed by more exercise—this may not be the British teacher’s idea of working bliss, but it’s the standard routine for the schoolteacher in Nanchang. And it lasts for six days a week. Class sizes are a minimum of 40 in the primary school with some classes as many as 70; in the secondary sector (the Chinese Middle school) classes are between 40 and 50.” (Jerry, 1992)

The description is from a Western visiting scholar when he was visiting to the schools in Jiangxi Province. And this is exactly all the students were doing when they were an elementary and middle school student.

The period of schooling in China is six years for primary school and six years for middle school (three years for junior middle and three years for senior middle). Children usually enter the educational system at the age of six (or seven in some country area) and graduate in senior middle school at the age of 18.

In elementary school (grade 1-6), students study Chinese, mathematics and natural science. They begin to study foreign language, usually English at grade 5. After entering into middle school, beside Chinese and mathematics, they begin to study physics, chemistry and biology. As I mentioned in the middle term paper, there is the spiral way of study of physics in junior middle and senior middle school. Mathematics is not this situation; they are keeping learning new knowledge.

Uniformity is the biggest character in Chinese education system. Because of the uniform National University Entrance Examination (NUEM), which holds once a year, the syllabus and textbook, even the basic reference books are the same through all the country.
BACKGROUND

This paper is based mainly on the second half semester’s reading and in class discussion, inspired by Ma’s book, which we spend almost three weeks. I also benefit a lot from Schulman and Deborah Ball articles.

To compare with Chinese education system and US Educations system; to prove my idea that it is the culture that makes this difference, I searched a lot on Eric. The result showed that there are some papers dealing with the compare. Such as: “A Multimedia Comparison of Value Orientations between Chinese and American Elementary Textbooks”, “Student Attitudes toward Science Learning: A Cross-National Study of American and Chinese Secondary School Students”, “A Brief Comparison of the U.S. and Chinese Middle School Mathematics Programs”, “Cultural Context of School Science Teaching and Learning in the People's Republic of China”, and so on. But unfortunately, for most of them there are just abstract, I could not find the full text.

It seems to me most of the articles just compare from the angle of the student and neglect the importance of teachers and parents. As I mentioned in the introduction part, I feel the teacher education is very important. But this is still a blank area.

And also those articles only compare from the surface level, for example Chinese students are much harder working. They did not realize the deeper reason that why Chinese students does this.

It is interesting to find the most of the authors have a Chinese name, probably because of language problem. I guess those people that have done research in this area are those who are cultivated in China and then pursue higher education in US.
My précis is *Culture makes the difference.*

All those difference between China and US is caused by the culture, or say, the conflict between western culture and eastern culture.

Then what is culture?

The definition of culture is often “understood” by researchers in different academic field as they carry out their studies. A classic definition of culture by Tylor is that it is the “knowledge, belief, law, moral, customs” which are passed from one generation to another within a particular society or group of people. He saw his field as one in which the workers’ primary role was that of compiling a “philosophy of primeval history”. Giroux’s understanding of culture is the one that is widely accepted in the education: “Culture is reduced to a type of monumentalize and the pedagogy through which it is expressed is organized around the process of transmission and the practice of moral and political regulation.”

To develop my theory, it is necessary for me to go over the history of China and Chinese education to give you a idea about China since China seems still a mystery place to most of the western countries including US.

China has a history more than 4000 years. Officially, it began from Xia dynasty at 2205 BC until to now. The Chinese did for many centuries live in a closed world with their own at the center. They developed a culture that had very little foreign influence for
many centuries and the Chinese had no contact with other nations at a similar level of
development.

China is being constructed around the centrality of Chinese affairs and strongly
defined by political and ethical values. The ethical or moral part of this worldview
encompasses 'relationships in societies and in the overall balance of world forces as well
as in the advance or retreat of Right.' Throughout the history of China, the Chinese ruler's
ability and continuing right to rule, be it emperor or government, was somehow
legitimated by the maintenance of the balance and harmony of these world forces.

China has three philosophies: Taoist, Buddhist and Confucian. Of these, Taoism and
Buddhism are religions. It is important to accept that Confucianism is not a religion.

The traditional purpose of Chinese philosophy is seen to be different to that of
Western philosophy in that it does not to seek to increase man's knowledge of facts, but
rather to elevate the mind and to seek for higher moral values. Confucian philosophy
undergirded traditional Chinese political thinking about government and rulers.
Government was assumed monarchical and modeled in family life. The ruler both
represented Heaven and a traditional father figure, and thus need to be treated with an
appropriate form of piety.

During the Zhou dynasty (1127-770 BC), education was largely governed by the
teaching of the moral codes and rites of Confucianism and the maintenance of the five
important social relationships contained within it. The goal of education was good
citizenship and the transforming of society through these relationships and the
establishment and maintenance of justice and good order.
The Chinese communist party was founded in 1921. A Marxist-Leninist requires a 'scientific' view of the state of the world and the definition of a standard or benchmark against which peoples and their beliefs might be measured. And this might be seen as contrary to a Chinese traditional culture. Mao Ze Dong seemed to have developed a method of holding in tension an ideologically Marxist worldview and a traditional Chinese one. His thinking was in some senses culturally very traditional.

From 1976 until the present, Chinese education system has been modernized to resemble that of the West, mostly copied from U.S.S.R.

Now the education objective is to revitalizing the nation by relying on science and education to meet the requirement of national economic and social development and make the overall objectives to promote social productive forces, increase comprehensive national strength and improve the peoples' living standards'. Other aims also included:

Nine years of compulsory education
Elimination of illiteracy
Development of scientific research
Reform in admission systems (China Org, 1998)

In summary, China is a unified national identity rather than a focus on individualism, with an understanding of, and pride in, cultural values. Within society, one would expect to find formal well-defined relationships and strict expectations of behavior.
DEVELOPMENT

How the particular culture influence school science teaching and learning in China, in my opinion, following is the most important two unique characters in Chinese education system:

Exam Pressure

For a long time ago, Chinese (Confucius) viewed schooling as a way to educate government officers. This led to the "Ke Ju" system in China. Since then, schooling became an official and glorious ladder to reach the top of society. It encouraged many ancient students and scholars from average or poor families to study diligently and consistently. Their energy might come from the beliefs that, "although studying anonymously for 10 years, once you are successful, you will become well-known in the world," and that "there are golden houses in books and there are beautiful girls in books."

Today, in China, education is still an important and effective way to raise one's social and economic status. Success in school, especially if one can pass the national university entrance examination, and then graduate from the university, means that he or she could expect a better career with security and high income. To many students from poor, rural areas, it becomes "a distinctive line which decides whether they wear straw sandal-leather shoes later in their lives."

Student records in public examinations are treated as the most important or even the only indicator of the quality of schools by the communities. In Liangyungang (my hometown), for example, there is a reward system for schools dependent on how many of its students pass the national university entrance examination and enroll successfully in
universities. If students within the community perform poorly on the public examinations, the head of the education department in the local government might be fired. If the performance of a school is much lower than expected, the principal of the school might be removed from his or her post. If the performance of students in a class is not as good as it should be, the class teacher might lose a part or even all of his or her bonus.

It is no wonder then that teachers also regard external evaluation as the most important criterion and place students' achievement, especially their marks on public examinations, as the most reliable and valuable indicator of successful teaching.

Zhang in his paper “The National University Entrance Examination and Its Influence on Secondary School Physics Teaching in China” gave a general examination of the Chinese National University Entrance Examination (NUEE) and the unusual influence it has on physics teaching in China. An assessment is made of the problems the NUEE has created for teaching secondary school physics, and the trends of the reform of the Chinese NUEE.

**Teacher As A model of Good Conduct And Learning**

Teachers are viewed as models of good conduct and learning for students in the Chinese tradition. One of the most outstanding scholars and educators in the Tang Dynasty, Han Yu, said: "What is a teacher? A teacher is the one who shows you the way of being human, teaches you knowledge and enlightens you while you are confused." Confucius emphasized the importance of the exemplary effects of teachers when he said "When the personal conduct of a man is upright, the people will be attentive even if he does not issue orders; however, if his personal conduct is not upright, even if he issues orders, they will not be followed." Confucius put his ideas into practice seriously and
successfully. He was honored as "a model teacher for ten thousand generations." His way of cultivating students by his exemplary role is regarded as a successful way of teaching and educating. Many science teachers in China today follow Confucianism unconsciously. They think that good teaching means not only educating students in terms of intellectual or academic aspects, but also in terms of conduct or moral aspects. Good teachers should not only perform well in teaching and learning, but also in other aspects of their lives. They should position themselves as models in both academics and conduct, both inside and outside the classroom, so that students may follow their lead and find the correct ways in their learning and development. (Gao, 1998)

With this conception of teaching, many science teachers in China prefer a 'parental directing' style in their teaching practice. Most of them are highly responsible and think that they should play a shaping and directing role in student learning. They expect students to follow their directions and achieve better. They see the importance of student-teacher interaction and students' independent learning activities, but think that everything in the classroom should be well organized and go as planned. They think that classroom learning is not the whole picture of student learning. In class students learn mainly from their teachers. But, after class, student learning should become more active. So teachers in class try to dominate most of the class time to provide students with good examples of learning.
APPLICATION

I want to mention here that since this article will be making generalizations for whole countries, it is important to realize that there are exceptions to the generalities. For instance, in the US, what may be true of an inner city school may not be true of a rural school; what may be typical of a northern schools may not be typical of southern school, yet there are certain generalizations which can be made of most US schools. In China, the schools along the Pacific coast are more typical of US city and suburban schools whereas China’s interior schools are more similar to US rural schools. Nonetheless, certain generalizations apply to most of China schools.

The graph below illustrates the basic factors that influence the study process. Compared with US, because those culture discrepancies and it result on education, the Chinese education system seems to stimulate every factor and so it is not surprising that the average math/physics test score is higher than US.

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Let’s discuss this table in detail:

**Chinese Students vs. US Students**

According to traditional Chinese culture, good education is the most important way to change a person's social position. The only way for evaluating a person's level of education was the feudal imperial examination. Although the test contents and structure have changed somewhat since then, the idea of a feudal imperial examination lasted for 1300 years until 1905. The major character of this system was such that we can say "one's life is determined by a sheet of test paper". Since the new Republic was founded in 1949, a modern NUEE system has been established. But for a time, especially after the so-called Cultural Revolution, the examination system was destroyed for nearly ten years. The NUEE system was resumed in 1977.

Because the government pursued a household registration policy in the People's Republic of China, it was hard for people to move from one place to another permanently, especially from the countryside to cities or towns. So, for many young people born in the countryside, to go to university becomes the best way to change their position. To young people born in urban areas, the explosion in population has reduced their chance of employment, and a university degree can guarantee them a steady job. Yet, nowadays in China, anyone who enters the university must pass the NUEE first. For that reason, young people, in both rural and urban areas, all attach great importance to the NUEE, so the pressure upon secondary schools to prepare them is greater.

For these reasons, the Chinese are much more motivated than US students. They spend more time on study and without any doubt, they get better result as well.
**Chinese Parents vs. US Parents**

Parents are very keen on the results of schooling, especially the exam marks of their children. Most parents in China will reward their children if they get higher marks on examinations, or will punish them for poor marks. Some of the parents even employed home tutors for their children during the last year of senior secondary schooling. All parents aim at improving their children's examination performances.

An article by Chen (2001)—“Parents' Attitudes and Expectations Regarding Science Education: Comparisons among American, Chinese-American, and Chinese Families” gave a good answer to this question. He examined attitudes of both parents and students toward science education among the three cultural groups. It was found that both Chinese parents and students had more positive attitudes toward science education than did Americans. Attitudes of Chinese-Americans appeared to show influences of both their Chinese heritage and American culture. Overall, attitudes were positive toward science education.

**Chinese Teachers vs. US Teachers**

Under the great pressure of public examination, some school science teachers in China view teaching as a process for accomplishing the institutional targets so that the students pass examinations and become qualified for further studies or careers. Teachers feel that students should not only be motivated by intrinsic interest in the subject matter but also be more energetic in achieving the targets set for their learning. Therefore, teaching is not only a process of knowledge delivery, but also a process to lead students to achieve the set goals.
Because teachers in China was regarded as the model of good conduct and learning, Chinese teachers’ concern for their lack of status in society and what they saw as ‘low morale’ in the profession. Teachers’ salary is in the middle level of China, $150 a month. However, this must be seen in the context of a society where a lunch costs 50 cents and a good Chinese cola about 12 cents. Few people, it seems, will earn more than about $250 per month (except the taxi-drivers). The teachers’ concern is more about position in society and conditions of work than remuneration—perhaps the concern is aggravated by the allocation of teachers to jobs within a province by the government.

However teachers in China still enjoy their job, even if they regularly face large class sizes that are usually 50-60. The overriding memory is of row upon row of pupils eager to learn, extremely polite and attentive, and incredibly industrious,

Interesting note here: I remember many people in key positions are physics/mathematics-educated. These included principals of school, vice-presidents of the university.

**Chinese Textbook vs. US Textbooks**

Jiang (1995) see this as the comparison as “Diversity selection textbook vs. Unified textbook”. He mentioned that for the past few decades, China primarily used unified textbooks to define the mathematics for which the Chinese students would be taught. It is clear this is caused by the NUEE. But because the US curriculum decisions are made at the state and local levels the US never used a unified set of textbook.

In addition to using textbooks, for the sake of NUEE, the Chinese also use many supplementary materials and outside-class reading materials written by mathematicians
and experienced mathematics teachers. In contrast to US there is limited number of supplementary materials. Jiang argued, “Limited use was made of resources beyond the textbook for either content or teaching method.”

Bao (1998) especially wrote a paper named “A Multimedia Comparison of Value Orientations between Chinese and American Elementary Textbooks.” Which examines how values education is taught in Chinese and American elementary schools and what values are advocated in Chinese and American elementary textbooks. Differences in attitude, content, method, and outcome are analyzed in the context of social and cultural backgrounds. It is concluded that American textbooks tend to emphasize personal rights, freedom, identity, and the constitutional heritage, while the Chinese educational system uses the Five-Love principles (i.e., love for the country, love for the people, love of work, love for science, love for socialism/leaders) to teach their children. A description of how the author used Asymmetric ToolBook II 5.0 (a software construction set that teachers can use to develop teaching projects) and Microsoft Power Point to present this research in a multimedia environment is provided, including discussion of overall design of the presentation, readability of the screen, importing digital images, avoiding screen clutter, logical reasoning vs. the non-linear nature of multimedia presentation, and navigation control.

**Big Class vs. Small Class**

Most of the class size in China is about 50-60. Why then, the class sizes so large? The answer seems to lie in the acceptance that class teaching is almost always didactic-if a secondary teacher is giving a lecture to 30 students why not give it to 50? The reasoning seems to be that this is an efficient use of staff time and that didactic methods are
effective, well proven and supported by the extremely cheap standard textbook. “Less stress, more knowledge, no problems”

The large class size is caused by the large population in China. It is supposed to be a not nice factor in education because then not all the students will get even attention from the teacher. However, as argued by one of my classmates, in small class, more time is spent to be nice, however less time concentrate on subject.

This can be reflected by a personally communication with a Chinese teacher. “I would like to spend more time on student activities such as group discussion, but I can't because of limited time and large class size. I need to cover the syllabus, but there is so much in it. I have to face more than 50 students, and it is very difficult to keep them involved in activities and at the same time keep the class in order and make sure that everyone is on task. But I think the outlook of a class is not most important. However is the students' attitude that is most important. If the students are interested in the content and the way you present it, if you challenge your students every now and then, if students think actively in the direction that you show in the lecture, in a word, if the students do not passively accept what you say and think positively, they can still get a very good result in a large class.”
IMPLICATION

It is because the culture difference between China and US that caused the different student’s performance in elementary and middle school level. It is not practical to adjust the culture to change the situation in US. However I think there is one way and the only way to change this situation—to enhance the communication among US teachers and between US teachers and other counties’ teachers.

REFERENCE