Presentation Title: Growing Globally through a Diverse Supply Chain Student Body Population

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Addressing the challenges of instructing international students on local and national policy that influence purchasing decisions and supply chain management.

Supply chain management is a rapidly growing subject matter area at many universities. This dynamic area is being taught in business schools, technology departments and other specialized programs. Typical undergraduate supply chain management courses include learning modules in topics such as manufacturing planning, warehouse management, transportation and logistics. Graduate level supply chain management courses usually address higher order concepts and special topics such as purchasing decisions, federal regulations, public policy, global issues, supporting technologies, and complex business operation strategies. As global business opportunities and collaborations expand, American universities are experiencing an increase in the enrollment of international students. In the spring 2014 semester a graduate level supply chain management course was offered at a major university. The course enrollment was comprised of 18 students. Three of the students were United States citizens and remaining fifteen of the students hailed from 7 different countries. These differing backgrounds brought a diverse body of knowledge and experience to each class session. Explaining and discussing concepts such as; how U.S. government sanctioned subsidies and tariffs influence purchasing decisions and vendor selection, or the impact of global partnerships on the American workforce, was often challenging. This article explores the thought-provoking interactions between students, their peers and faculty when examining the way political policy affects the global supply chain.

Key words: fair, advantage, operating costs, labor source, labor union

The special topics course explored international supply chain management from an applied perspective. The starting point was the reading and discussion of the novel The Travels of a t-shirt in a Global Economy; An Economist examines the markets, power and politics of world trade by Pietra Rivoli, Ph.D. The travels of a T-shirt documents the manufacturing and lifecycle of a T-shirt beginning with the growth of cotton for the fabric, covering every necessary process from design to distribution, until the well-traveled garment reaches a resale store a donation bin.

This highly acclaimed novel has been used for the same graduate course in several previous semesters. Historically the class has been comprised of mostly American students and few international students. Consequently the recap of United States history,
domestic policy and political transitions presented in the book was widely understood from a common perspective. The unique class composition of 18 students from 8 different countries and various levels of knowledge about American history and politics created a noteworthy dynamic in class discussion.

The first few chapters of the book describe the cotton farming business and agricultural lifestyle for landowners, sharecroppers and hired hands in the late 19th century and the early 20th century. The remnants of the slavery period and its economic influences were apparent in the writing and easily understood by the domestic students. The history of slavery and the lingering impacts on the workforce, tax codes, cash subsidies and national agendas must be explained in great detail to many of the international students. As the farming US practices and profitability was discussed in terms of each time period described in the novel, students for various countries would compare and contrast the practices from their homeland. For instance, the students from China described not only the farming practices but also explained the government mandates and limitations of living a rural community. The challenge of leaving a farm and moving to an urban area was highly regulated and expensive to manage population growth and balance national resources in China. As each of the international students compared the agricultural history and environment to that of the United States’ the domestic students were informed in a way that was far more engaging than any book or video could have been. This rich exchange provided uncommon learning experiences to each student similar to a study abroad experience, however it definitely slow the pace of the course. Each chapter took longer to discuss and analyze from a supply chain management perspective. One special topic was the reverse logistics of the t-shirt and how recycling worked in this industry. The diagram below shows the key elements.
The students from India and China had completely different beliefs about the value of a ‘recycled’ t-shirt. In addition, depending on their status in their home country, the validity of supply chain topics took on special meaning.

The discussion on supply chain strategies and the rights of workers engaged the students at a cultural level. Additionally, the educational rights and policies across the globe gave students interestingly different viewpoints.

**United States**

Education in the United States is provided by public schools and private schools. Public education is universally available, with control and funding coming from the state, local, and federal government. State governments set educational standards and mandate standardized tests for public school systems. Private schools are generally free to determine their own curriculum and staffing policies, with voluntary accreditation available through independent regional accreditation authorities.

Education is mandatory until age 16 over an age range starting between five and eight and ending somewhere between ages sixteen and eighteen, depending on the state. This requirement can be satisfied in public schools, state-certified private schools, or an approved home school program. Education is divided into three levels: elementary school, middle or junior high school, and high school. Post-secondary education is divided into college and graduate school.
The Federal government maintains an arms-length relationship with the higher education institutions. Each state government regulates the operations and licenses into of the Universities within the state. In higher education, there is flexibility for students to choose some of the classes that they will take.

The government seeks to make education available to underrepresented and disadvantaged groups with policies like Affirmative Action and No Child Left Behind. In general, US students believed that they had opportunities to pursue any level of education, regardless of societal class or ability.

**China**

Education in China is a state-run system of public education run by the Ministry of Education and is strictly regulated. All citizens must attend school for at least nine years, known as the nine-year compulsory education, which the government funds. It includes six years of primary education, starting at age six or seven, and three years of middle school for ages 12 to 15. After middle school, there are three years of high school, which then completes the secondary education.

There are both public and private universities. In general, it is commonly considered that public universities especially those national ones are better than private universities. Students are selected based on a national examination and the acceptance scores required for public universities is higher than those for private. There is no flexibility regarding the classes that each student will take, as they are predetermined for each discipline. Students generally felt that their ability to pursue specific degrees was outside their individual choice.

**India**

Education in India is provided by both the public sector and the private sector, with control and funding coming from three levels: central, state, and local. Primary education is free and compulsory for children between the ages of 6 and 14. Secondary education covers children from age 14 to 18. The government has put a lot of emphasis for the secondary education system to include disadvantage groups of society. Besides the public school system, about 30% of children attend private schools. There is homeschooling to some degree, as the government does not interfere if someone decides not to send their children to school.

Higher education is comprised of both public and private institutions. Students may enroll in a university after passing the Higher Secondary Examination. India's higher education system is the third largest in the world, after China and the United States. Some institutions in India have been acclaimed for the higher education standards in certain disciplines, such as Engineering. However, there is a significant number of private institutions that are not accredited or recognized, and current legislation is not strong enough to initiate legal action against them.

It is well known that there is a correlation between the education level and economics of a country. Education also helps define the quality of living. For years, the US has been a
worldwide leader in competitiveness and good portion of this success has been based on the educational policy and education quality. However, according to a report by the Center for American Progress, in recent years the US has fallen behind regarding educational achievements compared to competitors as China and India, who have invested significant amount of resources to improve their education strategies have a better prepared workforce. The report cites that two of the major issues facing the US is the high percentage of children that get no early childhood education and the elevated high school dropout rates, and the lack of a national strategy to increase and maintain enrollment.

On the other hand, China has put in place a strategy based on early childhood education, including financial support, with the aim to significantly increase enrollment by 2020. Their goal is to continue with an education focused economy to prepare the workforce to lead these industries where the US has traditionally led the competition.

India, likewise, has implemented an education strategy that focuses on making investments increase enrollment and high school graduation rates, by building hundreds thousands of new elementary schools, training teachers all around the country and providing economic support to millions of children. Both countries seem to have realized the importance of keeping enrollment up, funding early education and have high quality educators.

The report suggests that the US government is aware of this increased competition and the need of ramping up its educational strategy. However, accomplishing this goal is heavily dependent political will to make the required changes.

The Supply Chain class composition of international students with just three US students definitely changed the dynamics of class discussion. Typically, when we discuss the use of farming subsidies to grow the cotton industry, US faculty and students don’t typically consider the effect that government subsidies have, perhaps unfairly, on the international farming community. As companies become more and more global, a recognition and understanding of the world as a whole enterprise changes the discussion of supply chain strategy. For example, when we discussed fair labor tactics, and working conditions of factory workers, the US students were generally appalled at the strategies of some companies operating in China. Those companies used forced housing, long working hours, and several tactics that US students found untenable. The Chinese students had a different perspective. In their opinion, the city jobs were a better alternative for the Chinese workers than the previous opportunities the workers might have had in the country. Again, cultural differences, lifetime experiences, and empathy towards other countries changed the Supply Chain Management class discussions immensely.
Along with the time requirements to explain the cultural, educational and political norms from the American perspective, the challenge of presenting controversial information without showing bias was important. An example of this phenomenon was a vibrant class discussion concerning labor unions. In order for the students to have a realistic view of today’s labor unions, the history and purpose of these once powerful institutions had to be explained. Today’s labor unions and union workers are vastly different from the unions of 1940 and Rosie the riveter.

Cultural concepts associated with a global supply chain required a vast amount of discussion time for each student to garner a true understanding. As the cotton and fabrication of the t-shirt moved off of the shores of the United States the lines of questioning changed as did the students that asked each question. The students from Indian and the Pacific Rim countries contributed to the conversation from a point of strength with first-hand knowledge of the benefit of the receiving exported labor requirements. These students and their families had witnessed the industrial growth and development of a “Third World” nation.

Environmental policies and national regulation was debated on a few occasions. The Environmental Protection Agency (EPA) policies and requirement for compliance adds significant cost to manufacturing in the United States. The absence of regulations for the environment, labor factions and other civil concerns allows off shore manufacturers to produce at a much lower costs. This major difference in economic landscapes prompted further discussions between the students about the theories of “competitiveness” and “fairness” in a global sense. Students that hailed from Singapore had a different definition of “fair” in the business world than students that were reared in Peru.

This view of fairness extended to the students perspectives on education and workforce development. The cost of college in Peru is non-existent. Higher education is free in Peru verses the rapidly escalating cost in the United States. Hence workforce development and employee training has a totally different meaning and associated costs to manufacturers in Peru. The Chinese students whose college career and occupation choices were determined by testing and government designation possessed a very different view of training than the American students you who exercise their freedom of choice in every aspect of their lives. All of the students in this diverse supply chain management class listened intently as students from various countries shared their views on various cultural topics and business practices.

Conclusions:
The challenges in teaching this diverse composition of students created opportunities for great reflection for the students and the instructors. This class was team taught by two female instructors with strong manufacturing backgrounds including management level industry roles, consulting experience and academic credentials at the terminal level. The two instructors differed in their approach to
the classroom. They often presented in a “tag team” or “good cop v bad cop” method to show methods of divergent opinions and practices within the subject matter area.

There were several unanticipated benefits that emerged from the diverse composition of the class. This group produced excellent final projects. The vast backgrounds and levels of academic preparedness created and entrepreneurial vibe in the classroom. A certain level of competitiveness emerged as students from similar global regions formed project teams. It is unknown whether the team formations were based on conscious selectivity or ease of communication via native tongue. A few of the interactive projects are still be used to attract new students to the supply chain management major. Two the projects are moving from the concept to implementation. These students are starting businesses and making an impact.

REFERENCES


Rivoli, P. (2004). The Travels of a T shirt in s Global Economy; An Economist examines the markets, power and politics of world trade.