

LEARNING BY DOING MODELS TO TEACH UNDERGRADUATE ECONOMICS

Indranil K Ghosh, Saint Xavier University

ABSTRACT

There has been a lot of academic research about various teaching methods for economics courses. Rather than using traditional chalk and talk methods as a pedagogical tool, that have become less and less popular with students, academic research has started to focus on innovative teaching methods that could lead to more engaged students. Economics courses are also burdened with a reputation of being dry, boring, and too abstract with little real life applications etc. In this paper I describe an easy new tool that can be applied to make economics courses more interesting especially in business schools, as well as make it more application oriented. I describe a comprehensive project based learning approach for an introductory economics course and an international economics course, briefly review the course content and learning objectives and also provide some student feedback about the new technique used.

Keywords: Active Learning, Project Based Learning, Learning Outcomes, Teaching Economics in Business Schools.

INTRODUCTION

There has been a multitude of new thinking and research about various innovative teaching methods that can be used for economics courses both for undergraduates and for graduate MBA courses (see Becker and Watts (2005) and Becker, Watts and Becker (2006)). The traditional chalk and talk methods as a pedagogical tool in all subjects have become less and less popular as students become more and more demanding about teaching methods that are more in tune with the 21st century technological revolution. With a traditional “chalk and talk” pedagogical style, students tend to be less interested in the happenings of the classroom and more likely to let their minds wander. With the advent of smartphones and the use of laptops in the classrooms, students have every opportunity to tune out their professor and hop onto the internet where they can easily peruse the happenings of the day, catch up with their friends on Facebook, Twitter and other social media or could just carry on a text message conversation with their friends, some of whom might be sitting in the same classroom. In addition to this being problems for all courses, economics courses have the rather unsavory reputation of being dry, boring, impossible to understand, too math and graph oriented, too abstract with little real life applications etc. The last comment is especially galling as the principle ideas of economics have everything to do with business, and it is really not too difficult to come up with hundreds of

examples of applications of each economic concept. If you open the pages of any Business news website or periodical you will find a lot of events happening right then that demonstrate some application of an economic concept.

To counter this reputation it is important for economics instructors to make the subject appealing to students. While it is true that economics is a complex subject and teaching it to students, especially undergraduates, can be especially challenging, instructors have to teach students the subject in such a manner that they find interesting, relevant and able to be applied to real life situations. In this paper we suggest an alternate teaching tool to “chalk and talk” – learning by doing. This can be especially relevant where economics is taught in the business program and is an integral part of the business administration degree. The student is asked to be the owner of a hypothetical firm, and as the course progresses, the students have to analyze the effects of economic data and changing economic variables on the bottom line of their business. In this paper I describe the use of this teaching tool in a Principles of Microeconomics course and an International Economics course, and I use examples from the course material to illustrate the student learning goals. This project based learning method has been used twice (including the current semester) in an International Economics course, but in this paper I also provide a brief guide to using the method in a Principles of Microeconomics course. I also provide a brief survey about student perceptions about the pedagogical method being used here, and provide examples of similar techniques that can be used in other economics courses as well as economics courses that are taught in a non business school setting.

TEACHING ECONOMICS IN BUSINESS SCHOOLS

Economics as a course in Business Schools typically offers the exact same curriculum as in a Liberal Arts setting. The textbooks and all the support materials and test banks are essentially the same. However, students taking Economics courses as a Business Administration Major Core requirement or an Economics (or Business Economics) major within the Business School are exposed to a variety of other business disciplines like Management, Marketing, Finance, Accounting and Business Law. The pedagogy for all these different types of courses are naturally different but a closer look at some of the common teaching tools that are applied in these courses would indicate that they all use some kind of practical application that the students have to do themselves – get their hands dirty doing it, if you will. For example in a typical Finance course (the subject that is closest to Economics) a student could be participating in a stock market or futures and options game competing against other students, or use an excel spreadsheet to compute the finances of a company based on certain parameters. In a Marketing Course, a student would have to do a project based on the marketing strategy for a particular product or for a particular company. In a Management Course, the student may have to do a project on group activities and group dynamics, or making management decisions for a company or organization. In an Accounting Course students may be analyzing a real life case of an

accounting problem in a company, while in a Business Law and Ethics course, students may be analyzing an ethics or legal and regulatory issues case study. In all these examples, undergraduate business majors are getting a chance to try out their book knowledge in a real life or semi-real life situation. The benefits of this type of pedagogical approach are obvious: students get a reality based feel on how to apply their knowledge in a real life situation and it also enhances in the mind of the student the material that they have learned in class. Obviously if the material learned in class proves to be important when applied to a real world business, a student will have a significantly higher incentive to be interested in the material taught in class. Of late, students, especially business and other professional school students have been focused on courses and curricula that provide maximum applications to the professional world.

Traditionally though, education in economics is usually accomplished using a lecture or chalk and talk format (See Becker and Watts, 1996). There has been however the beginnings of a constructivist approach to education, even economics education in the last couple of decades. This can take the active learning form of being project based or experience based – what is called experiential learning. Rather than being a passive listener, a student is challenged to be an active respondent. The argument for such involved learning can be found in Senge (1990), and Borg and Stranahan (2002) where they argue that a student remembers only a fraction of what they hear but remember a majority of what they do. Thus a project based learning method, or a team based learning method, or a real life experience based learning method could lead to a better understanding and retention of the subject matter than a traditional lecture method. As described in Hawtrey (2007) an experiential learning methodology could be as simple as students bringing a news clipping that has some relevance to a topic that has been taught in class, or could be a more complex assignment e.g. students voting about two competing macroeconomic theories (Neoclassical and Keynesian interest rate determination) and justifying their vote with a one sentence argument. The instructor responds to every student's argument, and the class results are presented to the entire class. Since everyone participated in the simple give and take between the instructor and students, the students feel more engaged and prove to be better learners. One of the more popular experiential learning modules that have been used in an Economics course are conducting market experiments (or international trade experiments) in class, where students choose to be a buyer or seller (or importer or exporter) and interact with their fellow students as part of a market exchange process.

THE LEARNING BY DOING PEDAGOGICAL MODEL

The pedagogical tool that I am describing here is a project based learning experiment. This innovation has already been used by me in an International Economics course that is part of the International Business concentration in the BBA degree. In this paper I provide a description of the course plan and learning activities for the students in the abovementioned course and also

provide a guide to applying the same pedagogical tool in a Principle of Microeconomics course. As I comment on later, this pedagogical tool can be easily applied to a variety of other courses.

At my current institution, economics courses are offered only in the business school, and while there is no Economics major, this approach can easily be modified to suit the curriculum of any economics course in a business school setting and in a liberal arts major setting as well. Typically upper level economics major students are looking for employment in business settings, so this approach with any modifications that the instructor deems necessary should be beneficial to the students. The course International Economics is typically taken by a student in one of their final 2 semesters at the college and is offered once a year. The students have previously taken the two principles of economics courses (micro and macro) as well as the rest of the business core since this course is part of the elective courses for an International Business major. The project is an individual learning experiment, rather than a group project. There are two main reasons why I have chosen an individual rather than a group project. Firstly, a group project involves group dynamics that may not always be easy to manage – there are always individuals within groups that tend to free ride on other group members work, and since this was the first time that I was trying this new pedagogical tool, I decided against making group dynamics an issue in the project. Secondly the number of students in this course is always small – in previous semesters they have ranged between 10 and 15. Bunching students into groups would limit the total number of projects that the students completed and would thus lead to a lesser exposure of different countries, economies, businesses and cultures that students would discuss in class. However a group project could be feasible for a larger class section and for an instructor that is willing to deal with some of the group dynamics issues.

The Principles of Microeconomics course can also have a similar structure, except it might be easier to have group projects. Typically the introductory course tends to have a large number of students that are distributed from a variety of majors across any academic institution. Thus depending on the mix of students, the instructor can creatively design the project that students participate in. In the description below, I assume that the course is being taught in a business school to business and non-business majors.

The description of a project based learning pedagogical tool in an International Economics course is significantly more detailed than the description of a similar type of pedagogical tool that can be used in a Principles of Microeconomics class. The reason for this is that this innovation has been used in the international economics course and is currently on its second semester of use. The use in a principles course is just a guide to any instructor that is attracted to the idea of having students actively apply their class based knowledge to a quasi real world setting.

Course Plan and Learning Activities: International Economics

In typical International Economics course the main learning activities would be Home Work Assignments based on the chapters and topics covered in class, as well as a couple of exams. At the end of the course, students would have to submit a project/paper about a country to trade with, a product to trade in and a very brief description of the tariffs and exchange rates. As is usual of many undergraduate students, by the time the project comes around at the end of the semester, students would have pretty much forgotten almost all of the earlier topics covered in the course i.e. about comparative advantage, tariffs, exchange rates and exchange rate determination. Hence, a project covering applications of all of these topics at the end of the semester would just mean a cursory glance at these and building a very sketchy case for the country and product chosen to trade in, as well as just a brief description of the tariffs and exchange rates. Thus the whole idea of applying what they learn is completely lost, and the learning goals of the course would not be achieved by most students.

In the newly designed course, I attempt to make the student learning significantly more real life application oriented, and as suggested in “Senge (1990), and Borg and Stranahan (2002)”, since students are actually applying their knowledge to a real life situation and are doing something on their own, rather than just listening to the instructor, they are more likely to retain the knowledge. While the project becomes the main focus of the course as a result of the changes, students are still tested on the material covered in class, through the use of online assignments. This is an addition to the course relative to the first iteration of the project based learning method. This change was based on student feedback, that I detail later, where the students were eager to test their knowledge of the materials in the text and the class lectures at least through an online assignment format. The recent prevalence and popularity of online course management systems like blackboard have thus opened up the possibility of using valuable class time to engage the students in more application oriented teaching and interactions. Students start out after the first class thinking about and formulating their project, they start to develop a United States based business that would import a product from another chosen country or export a product to another chosen country. As the course continues, the students complete several short papers and do presentations based on the papers. They submit assignments based on a description of the country chosen and its economic, geographical and political features, as well as a country risk analysis based on economic financial and political risk and a description of the cultural and social characteristics of the country and the effects of this on their business; a description of whether they are an importing or exporting business, as well as a justification of the product chosen for import or export applying the theory of comparative advantage; a description of the tariffs and other trade restriction for the product, or if there are trade treaties a description of them and so on. Students thus have a wonderful motivation – they are choosing their own country and their own product rather than either of those being handed out by the instructor. Thus a student who is environmentally conscious can choose to develop an

environment friendly product and choose to trade with a country that has a history of enacting environment friendly public policies. The papers and the presentations are a way for students to learn the practical applications of the topics covered in class. At the end of the class students submit a final project paper and present their project. The project is a cumulative sum of the papers done throughout the course with an underlying narrative running through it that the student has to make clear. The topics covered and the assignments are explained below. Each topic described below involves a written paper and an in class presentation on the topic. The final project and the presentation assignments are also shared briefly below.

The Global Economy

The course starts with the instructor providing a description of the global nature of business and a history of globalization, along with a brief description of performing a country risk analysis. Although students are expected to know about basic macroeconomic variables like GDP and Growth in GDP, Inflation and Unemployment by the time they enroll for this class, the topics are revised as part of the initial lectures. As part of the first assignment, students will learn to participate in the global economy. They will be the (hypothetical) owners of a firm that exports a product to a foreign country or imports a product from a foreign country. Students are free to choose their own country. However there were a few implicit constraints in their choice. Students were encouraged to choose countries that have a significant trading relationship at present with the United States. It was a constraint that students seemed to generally agree with, since choosing a country like Cuba or North Korea or certain African countries, with whom the United States has little or no trading relationships would defeat the purpose of actively applying the learning done in class to real life trading and international business situations. Also students were encouraged to choose countries that provide easy access to relevant economic data, as otherwise it would again defeat the purpose of the project. Once the students have chosen their country, they will research the economic, geographical and demographic statistics of the country they choose to do business with, and will also perform a country risk analysis that includes economic, financial and political risk. The assignments for this segment of the course are a 2 paged single spaced paper describing the country of choice and its geographical, political and economic characteristics, as well as a description of the country risk analysis. Students also present their findings to the class using appropriate presentation techniques i.e. power point slides.

Comparative Advantage and Resources

The second part of the course deals with the theory of comparative advantage: trade in products, specialization both complete and incomplete, as well as the role of resources and the Heckscher Ohlin theorem. Students will understand and research the products they should export

or import based on the theories of comparative advantage and abundant resources. Data on the US exports and imports to each country are researched from this official website of the US Census Bureau: http://censtats.census.gov/naic3_6/naics3_6.shtml . After researching the exports and imports of the United States with respect to the country of their choice, the students will decide whether they want to be an exporting firm or an importing firm, and also choose the product that they will export or import. They must justify the markets that they are going to sell their products in, based on the country they choose and the income of resources in that country. Students learn about the growth of the middle class in China and the dearth of appropriate white collar jobs for college educated youth, which could impact the distribution of income and thus the demand for certain types of products. Thus, standard trade theories can be applied in practice to provide students an opportunity to learn the theories by choosing the products to trade in.

Trade Policy

The third part of the course deals with the theory of tariffs, quotas and other restrictive trade policies and their impact on the products and prices as well as the welfare effects of such policies. Students will apply their knowledge of tariffs, quotas and other trade barriers and research actual tariffs and other trade policies of the countries and products that their firm will have to account for. For students importing a product into the United States they will research the tariffs and quotas using the Harmonized Tariff Schedule published by the United States Government. This is available at (among other sites): <http://hts.usitc.gov>. For students exporting a product from the United States to another country they will research those countries' tariffs using known sources on the internet, for example the following source of information published by the US Government: http://www.export.gov/logistics/eg_main_018142.asp. They will also learn about regional trading agreements like NAFTA, depending on the country they choose.

International Factor Movements

The fourth part of the course deals with labor and capital migration. Students learn about the effect of immigration as well as the effects of capital mobility across the world. Students will investigate labor and capital movements between the US and the rest of the world, and analyze the impact of the mobility of labor and capital on their business. Students also learn about multinational companies and outsourcing and the role of society and culture on business, with an example based on the operation of McDonalds in India and the differences in their product and service based on the cultural and religious characteristics of India.

Exchange Rates, Foreign Exchange Markets and Monetary Policy

In the last part of the course, students learn about exchange rates and calculations of exchange rates, as well as the effects of an appreciation or depreciation of a currency on the imports and exports of a country. Students will apply their textbook knowledge of exchange rates to provide the current exchange rates between the United States and the country they choose to do business with, and provide graphs and tables of exchange rate fluctuations in the near past. These are available at a multitude of business and foreign exchange websites, e.g.: <http://www.oanda.com/convert/fxhistory>. Students learn about spot and forward rates, exchange rate risk and the operation of hedging to minimize the risk. Students apply this knowledge by demonstrating a hedging example for their business. Students also learn about the role of monetary policy in exchange rate determination and inflation and foreign exchange markets to analyze the impact of changes in exchange rates on their exports and imports. They will be able to understand the differences between fixed and flexible exchange rate countries. They learn about an example from China and the role of the Chinese Central Bank in keeping the Chinese currency fixed against a basket of foreign currencies and the US dollar and the resulting effect on price levels in China. They also read about examples of increases in coffee prices in Columbia and the effect on the import of coffee to the United States as well as the impact of inflation in China on trade between the United States and China. Students will also study the domestic monetary policy of the countries that they are doing business with and be able to form expectations of exchange rates.

During the course of the semester students research and apply each of the above topics to their business and write short papers and present their findings. As a final project, students will be able to present their complete findings and analysis to the class. This research paper documents the students learning using their experience of participating in the semester project. Thus the final presentation and paper are not just a cut and paste version of the shorter papers and presentations that were done throughout the semester. Students have to provide a meaningful narrative for their final project and be able to relate the different aspects of international trade and finance.

Course Plan and Learning Activities: Principles Of Microeconomics

The logistics and strategy for pursuing a similar kind of pedagogical innovation in a Principles of Microeconomics course is somewhat different than in an International Economics course. This course is the introductory course in economics so it makes sense for instructors to follow their normal lecture patterns as well as the normal in class and homework assignments and the exams. Since it is one of the two introductory economics courses, it is important that students first learn the important concepts of economics and then attempt to apply these concepts to an application setting. Thus in this course, the project would be expected to be much smaller

in scope and constitute a much smaller proportion of the overall grading for the course. Keeping in mind the smaller scope of the project instructors can limit the number of topics that they use in the project. The instructor can choose from these topics as they may deem appropriate for their class. Once again students can form a hypothetical business (in a group or as individuals as the case may be), choose a product or service that they would like to produce and sell and be exposed to real world applications of the topics below.

Supply and Demand

After learning about the concepts of supply and demand as well as market equilibrium and the changes in equilibrium prices due to changes in supply and/or demand conditions, students can apply this learning to their business. Students do an expected market survey and try and predict supply and demand changes for their product based on past historical data. Once students figure out the expected changes, they can figure out the expected effect on their product and their business and try and formulate a strategy to enhance the position of their business based on the expected market changes.

Elasticity

For a business, this is one of the most important topics that are taught in a microeconomics class. After learning about the basic concept of elasticity and the differences between elastic and inelastic goods, students also learn the relationship between price of a product, revenues and elasticity and are able to apply these concepts to pricing of products. Once students learn these concepts, they can look at their business and the product they are selling and try and figure out if the product is elastic or inelastic in demand based on whether the product is a necessity or luxury, whether there are many substitutes, and also whether it is a relatively expensive or inexpensive product. They can also use this analysis to figure out appropriate strategies of price changes to increase revenues, and also figure out the pricing power that their business has over the consumers.

Productivity and Costs

Again this is a critically important topic in a principles of microeconomics class especially when related to businesses. Students learn about the concepts of marginal product and average product as well as fixed and variable costs and marginal costs. Once they learn the concepts they can apply them in their businesses. They can out how their labor and capital decisions affect the productivity of workers, they are able to know the difference between short and long run production in their business and they can estimate the fixed and variable costs for

their particular businesses. They can also do hypothetical calculations of total costs, total revenues and profit maximization points for their businesses.

Market Structures

Another important topic that is taught in Principles courses – here students learn about the different market structures and their characteristics as well as their profitability and pricing power for firms in these market structures. Thus as an application students can figure out the specific market structure that their business and product operates in, as well as formulate strategies to appropriately manage the business and sell the product to maximize profits. Students can also suggest strategies to move into more profitable market structures, for example suggest merger strategies to reduce competition or suggest product differentiation strategies to gain pricing power.

Resource Markets

Students learn about resource markets, demand and supply in these markets as well as the equilibrium price of resources. They can thus apply these concepts to strategize about the wages and the price of capital and raw materials that their business will pay, as well as develop expectations for future prices of these resources.

Based on the availability of time, apart from these core concepts in a principle of microeconomics class, some extra topics could also be used for the project based learning experience, for example: Government Interventions into Markets, Externalities and Property Rights, Imperfect Information, and International Trade. However given the large amount of material that is usually covered in these classes as well as the time set aside for assignments and exams, it is unlikely that there will be a lot of time left over to appropriately interact with the students with respect to their project – thus in most instances it probably would be advisable for instructors to stick with the basic core concepts and their applications outlined above. Also for students this is usually their first or second class of economics so it would probably be better to stick to short and simple applications of the core concepts and avoid more complex problems, as this would lead to overwhelmed and eventually uninterested students, thus defeating the purpose of this exercise.

LEARNING OUTCOMES

The primary objective of the current pedagogical tool used in the International Economics class is for students to learn how to apply the theories of international trade and international finance to a real life business venture. Thus they become intimately familiar with the country of their choice as well as the product of their choice. They are able to remember

economic and financial characteristics of this country. Part of the reason for having the project run concurrently as the topics being taught in the class was that the students get to apply their text based learning to a real world situation of their choosing at the exact same time as they are learning the topics. However, during the course of the semester they also learn something equally valuable - they each learn from the other students and their choices of a unique country and a unique product. This secondary learning is obviously quite valuable, since they are quite busy with their own projects and it would be very difficult for them to go out and research every different country. But they are able to listen to and analyze their classmates' presentations and thus absorb a lot of information about the economic structures in all these different countries. This was the primary reason that I chose to go with individual projects rather than group projects. It gave the opportunity for the class to listen to presentations about 11 countries and 11 products rather than, say, 5 countries and 5 products. This obviously enriched the class learning experience.

The course also nicely aligns with the overall learning goals of the business major. As anyone teaching in an undergraduate (or graduate) business program is aware, accreditation agencies are very particular about students satisfying the learning goals that have been set for the major. Also in recent years there has been a marked shift towards getting knowledge about globalization and the economic and cultural effects of the global society into the curriculum not just for business degrees but almost all degrees. This course aligns with the basic learning goal of the business major: Graduates have functional business knowledge as well as employ critical thinking and analytical skills. Moreover, the following learning goal of the major is also satisfied – Graduates have a multicultural and global perspective; in particular they demonstrate knowledge of the international business environment, the influence of globalization on business and society and the role of diversity (social, cultural, economic and political) on businesses.

Students have four basic learning outcomes from each of the topics that were discussed above. They learn about the specific material in class and are able to understand the theories; they research that topic for their specific country and product, are able to find the information that they are looking for and are able to analyze the impact of the information on their business; they present their results to the class and are able to appropriately convey the information and strategies of their business and formulate cohesive arguments to defend their particular strategies; and they write a paper about the particular topic that they researched and are able to satisfactorily communicate in writing. Thus it is not just a course where the students learn topics, memorize and then forget once they are done. They have to satisfactorily complete all four segments of the learning process.

There were a few instances of surprising learning outcomes that students realized themselves. For instance one student chose Columbia as the country and ended up doing a substantial amount of research about the free trade agreement between the United States and Columbia that is currently in the legislative process, presenting in great detail all the issues surrounding the debate. Another student chose China as the country, and also presented in detail

the agreement currently signed between the United States and China regarding the agricultural exports from the US to China. A third student chose Brazil as the country, and found out from the source given above that Brazil's tariffs keep changing daily. The student ended up calling the 800 number listed on the resource and spoke to a representative of the Brazilian government who explained the particular tariff rate that the student was interested in. All of these examples point to learning by the students that goes far beyond anything that is expected from a learning model built solely around the text book and lectures. All of this provided valuable experience for the students about real world events and their economic impacts on businesses.

Similar learning goals can be satisfied for a Principles of Microeconomics course. Usually this is the first or second course in economics that the students take, and thus the learning goals are about grasping the core concepts and being able to apply them in real world situations. This project based learning approach should nicely align with both of these goals. Students are also required to research certain topics and be able to apply the results of the research towards better understanding the course material. Once again this project based learning approach can tie in nicely with that goal. Once this course is taught, there are likely to be a few positive surprises about student learning outcomes, just as was described above in the international economics course.

RESULTS OF SURVEY ABOUT STUDENT ATTITUDES TOWARDS PROJECT BASED LEARNING

As part of the pedagogical change, I decided to conduct a survey about the attitudes of the students toward this new method of learning in the international economics course. The survey had mostly qualitative or descriptive questions rather than numerical or quantitative questions. So, rather than ranking the course from good to bad or providing a number from high to low about the efficacy of learning in the course, the survey asked the students to describe what they liked and did not like about the course and also explain if the course provided them with a better learning experience than a traditional lecture and assignment format. Students were asked to remain anonymous in their comments, and care was taken to ensure that the instructor (I) did not get to see the response sheets that the students were turning in. It is not a critical part of the analysis, but I wanted to provide anonymity to the students in order to get the best and most honest feedback from the students. Not only would it help in analyzing the efficacy of the current pedagogical tool but it would also provide a basis for making improvements to the course for the next time it is offered. In order to provide a base for the comparison with respect to previous pedagogical techniques used, students were provided a brief description of the old teaching format (i.e. it consisted of lectures and assignments were homeworks, exams and an end of the semester project). They also seemed familiar with the lecture and assignment format from some of the other classes that they took, and they seemed especially aware of the standard nature of the assignments and exam formats that they had encountered in some other classes, thus improving

the validity of their comments regarding the comparison of teaching methods used. The students gave back pretty detailed comments and opinions about the project based learning that they experienced. The student comments were also made a lot richer by the fact that not all the comments were completely positive. On the positive side, students liked the idea of applying their knowledge that they gathered in class to a real life project. They felt that exams and such like assignments usually forced them to cram and completely forget the topics after the exams were done. A project on the other hand was more exciting and provided an incentive to retain their knowledge. Also students appreciated the block by block building technique that the assignments (papers and presentation) forced upon them – they felt it led to better retention of knowledge, especially since the final project was a combination of all the blocks built. Students also found it useful that each person was asked to choose a different country and different product, thus leading to a lot of learning from each other. Each person had a unique country and product and although there were more than one country chosen from the EU which implied similar currency and monetary policy prescriptions, it did not detract from the learning since the countries and its economic and financial characteristics were different. This did provide some positive learning experience about the nature of economic common markets. On the negative side, a student had the opinion that home work problems or quizzes and exams in addition to the project could add to the learning experience because it would provide students with assignments that would test their knowledge in a more formatted and controlled way. This was actually an excellent suggestion since the only gap in the learning outcomes presented above seemed to be in the area of testing students' knowledge about the subject matter directly. Thus there has been an appropriate addition to the assignments for the next time the course has been offered - to have short online home works that test this very aspect. Also students felt that some more complex topics like trade strategies or business strategies as well as an analysis of competitors and their strategies would provide a more complete educational experience. These would be worthwhile additions time permitting, but it also suggests that the standard International Business class was unable to provide the student with this knowledge.

EXTENSIONS TO OTHER COURSES

This new pedagogical technique was applied to the course International Economics that is part of the international Business concentration in the BBA degree. However some of the techniques could be easily applied to other economics courses that are taught as part of a Business degree or even as part of a Liberal Arts degree. For example in this course, the emphasis was on operating a business in the international environment using the tools of international trade theory, international trade policy and international monetary theory and policy. This emphasis on operating a business makes sense as students pursuing a Business degree usually have working in the business world for a firm or operating their own business as part of their career plans. Since they have an International Business concentration it is only

natural that they would think of working in a company that has significant international business exposure or at some future point operating their own business with international exposure. However for a similar course as part of a Liberal Arts BA or BS degree, the course could have a project that looks not only at the business operations side but also the public policy side. Thus the project could involve deciding an optimal tariff based on the welfare effects, an application that would be pretty meaningless to a student that is part of an international business firm; or they could look at the benefits and costs of environmental regulations in an international setting. A similar structure could also be used for an Economic Development course, where students learn a lot of similar topics regarding trade, international finance and less developed economies.

Similarly for Macroeconomics course knowledge of unemployment, inflation, growth, and the effect of fiscal and monetary policies on interest rates, prices and output can be used to optimize business decisions. With all of these applications students will get a chance to look at real life applications of basic economic models rather than just going over the class lectures, power point slides and text to prepare for an exam. They will thus be more engaged and retain more of the knowledge that they gain in class when they are asked to apply it in a real life business situation or a real life public policy decision making process. It should also be noted that the entire course in any economics topic does not need to be project based, as explained in the description of the Principles of Microeconomics course above.

CONCLUSIONS

In this paper we have provided a pedagogical tool that can be used to better educate students of economics especially those that are in business schools and graduate with an undergraduate business degree. The tool is not a new one in that it has been used in other business disciplines like Management, Marketing and Finance. The idea is to use a project based learning method, where students choose a business that they would operate in an international setting, choose a country that they would like their firm to do business with, analyze the product that they would like to import or export based on the theory of comparative advantage, analyze the market for their product, analyze the impact of trade policies in the respective countries on their product and hence their firm's bottom line, be aware of the currencies in the two countries and the exchange rate between them, analyze the fluctuations in the exchange rates and be able to manage the risk of such fluctuations, be aware of inflation rates and analyze the effect on their firm, and use the theoretical effects of monetary policy to approximately predict inflation and exchange rate fluctuations for their countries in question. Thus they get a pretty complete picture of the role of international economics on an international business and are able to comprehensively apply the tools of international trade and finance to come up with optimal solutions for their firm. This project based learning tool is not restricted only to economics courses taught in the business school but can be easily modified and changed to suit the needs of a liberal arts student as well.

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