

LONG TERM PROJECT

Course Title: Entrepreneurship

Instructor: Kelly-Murray

Assignment: Shark Tank

Time: (10-12 Days) All class blocks are 90 minutes

Objectives: For this assignment, students transform ordinary classroom objects into marketable and profitable products using only their imagination. They then research the market and potential demand for their product and conduct focus group tests. Next, they calculate costs of production and projected supply and demand of their product. The whole project culminates into a research essay and a final presentation. In the final presentation, students are required to bring in a prototype, advertisements, and displays and pitch their idea to a group of "sharks" (teachers) with the hopes of negotiating a deal. This project is intended to be completed over a period of 10-12 days concurrently with the supply and demand unit.

Standard(s):

BMA-ENT-4 Apply fundamental business concepts that affect business decision making.

BMA-ENT-6 Understand and apply the basic economic principles and concepts fundamental to entrepreneurship.

Learning Target(s)/"I CAN" Statement(s):

I can apply concepts of supply and demand, scarcity, opportunity costs, forms of economic utility created by business activities, distinguishing between economic goods and services, and explain the factors of production.

Student will complete the following task and documents listed below:

- 1. Market Research**
- 2. Factors of Demand**
- 3. Factors of Production**
- 4. Effects of Supply**
- 5. Pricing**
- 6. Company Valuation**
- 7. Company Logo/ Commercial/ Triptik Board (Optional)**
- 8. Prototype**
- 9. Final Essay**

Name: _____ Group Members: _____

Part 1- Market Research

Researching Demand for Your Product

Price	Quantity Demanded

1. Name of Product: _____ Utility (What is it for?): _____

2. Describe the market for your product: _____

3. Who are your competitors? _____

4. What makes your product different or better? _____

5. What is the sale price of your product? _____

6. What is the sale price of your competitor's product? _____

7. How much money can be made in this market? _____

8. Is your product trending right now? Do you think it will fly off the shelves or are there just a select few who might buy it? Explain:

9. Part of generating a demand for your product is advertising. Think of some ways to get your product's name out there.

10. Focus Group:

Select 6 possible price points at which you are willing and able to sell your product and record them in the "Price" column of the demand schedule at the top of this page. In one minute or less, advertise your product to your classmates. At the end of your pitch ask your classmates, by a show of hands, how many of them are willing to purchase your product at each price point. Start at the lowest price and move up. Record the data in the "Quantity Demanded" column at the top of this page. Once you've recorded your data, you are allowed to ask your classmates 3 questions about their connection to your product. Use this data to inform your next moves.

Examples:

"Jenny, I noticed you lowered your hand when the price increased to \$8/unit. Why were you willing to pay \$6.50 but not \$8?"

"What would you change about this product to make it work better for you?"

Part 2: Factors of Demand

Good for
Business

1.

2.

3.

4.

5.

6.

Bad for
Business

1.

2.

3.

4.

5.

6.

Part 3: Factors of Production

1. List the factors of production required to make your product. Indicate classification of cost using 'F' for fixed or 'V' for variable:

Capital (machines, office, factory, etc.)			Labor (how many workers, what will they do?)			Land (raw materials like steel, iron, crops, etc)			Entrepreneurship- brains, management		
Item	Cost	Fixed or variable	Item	Cost	Fixed or variable	Item	Cost	Fixed or variable	Item	Cost	Fixed or variable

2. Create a marginal product schedule (you can make up the data but keep it realistic)

# of Workers	Total Product	Marginal Product

According to your marginal product schedule, how many workers are you going to hire?

3. Create a supply schedule and curve below that reflects how much you are able and willing to produce at each price:

Sale Price \$	Quantity Supplied	Total Revenue	Cost of Production	Profit

Guiding Questions: what are the total costs of production? What are your fixed costs? What are your variable costs? What kind of capital and how much of it do you plan to have? What is your total revenue and total profit per year at various sale prices?

Part 4: What are some things that can affect your ability and willingness to supply the product or service?

Input Costs	Ex: you have a peanut butter factory but the price of peanuts has gone up. Your input costs are going to be higher.
Labor Productivity	Ex: Everyone you hired is lazy. You're producing at 25% capacity.
Technology	Ex: Instead of printing boarding passes, Virgin America Airline uses electronic boarding passes sent straight to your phone. People prefer this, Virgin America saves money on paper, everyone wins.
Government Action	Ex: President Obama puts \$90 billion into funding alternative energy companies- good for solar power energy companies!
Producer Expectations	Ex: It's tornado season and you're pretty sure your crops are going to be swept away. You decide to store your wheat in a granary just in case.
Number of Producers	Ex: Britney Spears thought she had a monopoly on being the only blonde producer of really bad music. However, Ke\$ha and other bad blonde musicians started springing up out of nowhere to produce music that was equally terrible. This was bad for Britney Spears.

Guiding Questions: What are some things that can change your supply? Do you have a patent on this product or does everyone have rights to this idea? Are you going to introduce any complementary products?

Part 5: Pricing

1. What is your equilibrium price according to the data you gathered from the demand schedule (see part 1) and your supply schedule?
2. What are you going to do when there are shortages? Surplus?
3. Are there price controls on your goods and services? Explain.
4. How much are your competitors selling similar products for? How will you compete?
5. What are your plans for lowering costs? Will you outsource labor? Move to a more strategic location?

Part 6: Company Valuation

Describe your experience building your company and developing this product(s). Do you really believe in it? Explain:

Do you feel ready to start your own business? What qualifies you to run it? How well do you know your industry? How do you think this business would do in the market?

Based on your research and the data you have collected over the past few weeks, what do you think your company is worth? You must justify your valuation. An arbitrary “I think it’s like a million dollar idea,” simply will not do. Think about your market size, growth potential, etc.

Negotiating a Deal: What type of investment do you want from the Sharks? How much money are you looking to get to start or expand your business? Do you want their expertise in the field? How much equity are you willing to give up for that loan?

Part 7: Company Logo/ Commercial/ Triptik Board (Optional)

8- Presentation Preparation

Presentation

In your groups, create a blueprint or 3D model of your product. Present your product and business model to a group of investors. You will have 2 minutes to present your idea and 3 minutes to negotiate a deal.

1. Pitch your product to the sharks (investors).

- 2 minutes to present your product. **MAKE IT JAZZY!** You must ask a Shark to invest in your business in exchange for something- equity, exclusive rights, patents, etc. (ex: I'm asking for \$20,000 for 5% of my company). Make sure you have an offer that is appealing to the sharks but at the same time going to allow you to keep as much equity as possible.

2. Know your numbers

- investors are going to want to know what is the cost of production per unit?

- what are you selling it for in retail? In wholesale? What are your profits?

3. What are your projected sales? _____

4. What retailers are you planning to work with? _____

5. Where are you getting your supply? Are you making it in America? Sending it overseas?

7. How are you getting the word out? What is your marketing strategy?

8. Do you have a *patent* on your product? (meaning do you own the technology behind your product?)

Part 9: Student Essay Sample

Student 1, Student 2, Student 3, Student 4
Period 1
Entrepreneurship

Online Teacher

Have you ever struggled with homework or a research project that was too difficult for even your parents or smartest friends to offer help? Do Yahoo Answers and Wikipedia just not give you the specialized homework help that you need? The Online Teacher is the answer to your problems! The Online Teacher is an online service that provides real time homework help from credentialed teachers and graduate students who are experts in their fields. Here's how it works: 1. go to the website and find your subject and grade level i.e. "Economics, 12th grade". 2. select how many hours of tutoring you would like to purchase i.e. "2 hours". 3. pay online 4. you can start your video chat and even share files with the tutor so that you know you're looking at the same thing. Don't have a webcam? That's okay! You can also chat using a dialogue box!

Online education is a relatively new financial sector that has already grown into a \$60 billion industry. Studies show that more than 3 million Americans are enrolled in an online class as of 2013 and 80% of students use the internet every day for homework help.¹ There is a huge market for this type of business. To prove my model, I have tested it in a sample classroom of 36 high school seniors. I multiplied the quantity demanded by 1,000 to reflect my projected market. See the demand schedule below:

Price in \$/hour	Quantity Demanded
\$30	4,000
\$25	10,000
\$20	20,000
\$18	30,000

There are some factors that pose a threat to Online Teacher. Most students who can afford to use my service come from wealthier households who hire full time tutors and have no use for my service. I fear that the current recession may be a barrier to the expansion of Online Teacher. I also have a few competitors such as tutor.com, tutorvista.com, and Sylvan Learning that already established themselves as top web based tutoring sites.²

My investors would be delighted to know, however, that my service is far superior in many ways. First, these sites do not offer per hour, real time web based video chat. Secondly, my service includes homework help in all subject fields unlike the rest who only offer tutoring in math, English and science. The demand for education is inelastic and the market for online learning will always be there. I have already begun advertising via Facebook and Twitter. I have 1,200 likes on Facebook, 3,000 Twitter followers, and have interest in running Groupon deals this year.

The tutors are my only variable costs. I have enlisted the help of 100 credentialed teachers across the U.S. and 200 graduate students from top universities. These tutors are on call at various hours of the day willing to tutor online for \$15/hour. I can realistically manage about 20,000 hours of work per month from the

¹ http://usatoday30.usatoday.com/news/education/2009-10-04-online-degree_N.htm

² Google Search "Top Ten Tutoring Sites"

300 tutors. My only fixed costs include customer service, bandwidth and website maintenance because the tutors are required to have their own computer and internet connection. My internet service and hosting costs are \$45/month. I have hired two customer service representatives to work from home for \$1,500/ month each. They take care of all refunds, complaints, questions, etc. I have a background in web design and computer science so I can take care of site maintenance, while only paying annual hosting fees. See costs of production below:

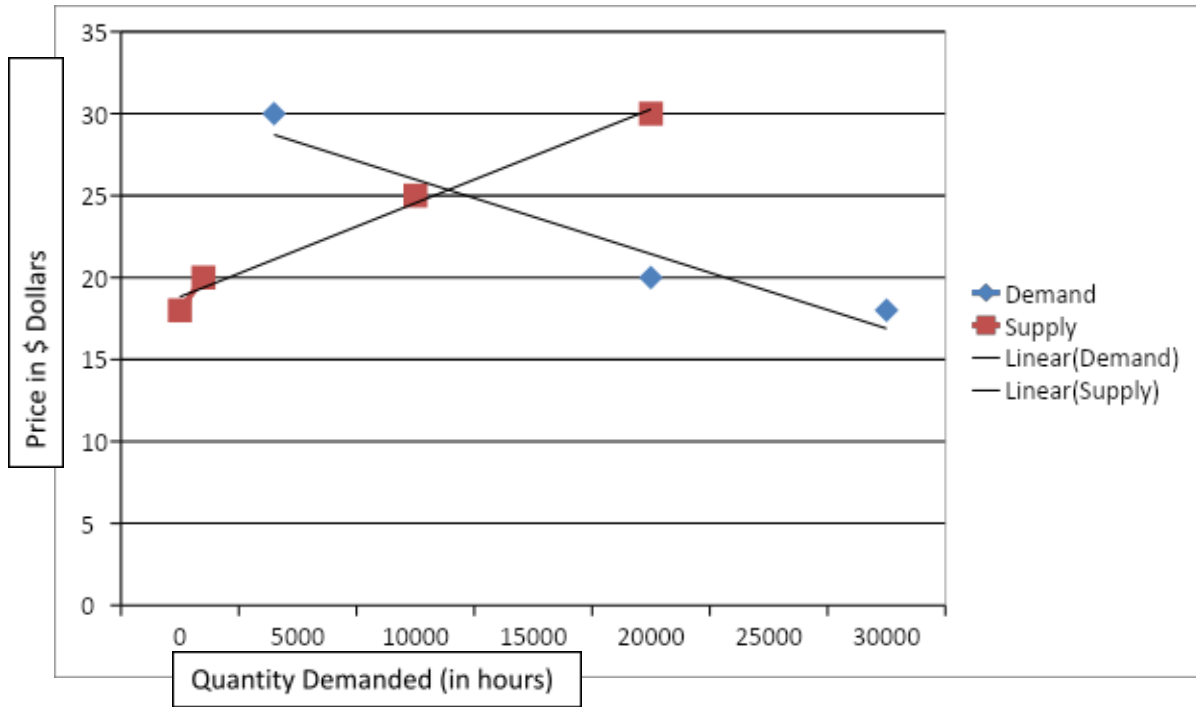
Costs	Amount
Bandwidth	\$45/mo (\$0.07/hr)
Customer Service	\$3,000/mo (4.46/hr)
Tutors	\$15/hour
Maintenance/Hosting	\$120/year (\$10/mo)

My fixed costs of production amount to **\$3,055/month** making my cost per unit **\$19.53/hour**. The supervision and maintenance of this website is a lot of work. Sometimes, I ask myself “Is it even worth it?” For the right price it can be. Below is the schedule of what I am willing to supply (my own blood, sweat, tears, and time) at each price per month:

Price	Quantity Supplied (per month)	Revenue	Cost of Production	Profit
\$30	20,000 hours	\$600,000	\$390,600	\$209,400
	10,000 hours	\$300,000	\$195,300	\$104,700
	1,000 hours	\$30,000	\$19,530	\$10,470
	0 hours	0	\$3,045	-\$3,045.00
Price	Quantity Supplied (per month)	Revenue	Cost of Production	Profit
\$25	20,000 hours	\$500,000	\$390,600	\$109,400
	10,000 hours	\$250,000	\$195,300	\$54,700
	1,000 hours	\$25,000	\$19,530	\$5,470
	0 hours	0	\$3,045	-\$3,045.00
Price	Quantity Supplied (per month)	Revenue	Cost of Production	Profit
\$20	20,000 hours	\$400,000	\$390,600	\$9,400
	10,000 hours	\$200,000	\$195,300	\$4,700
	1,000 hours	\$20,000	\$19,530	\$470
	0 hours	0	\$3,045	-\$3,045.00
Price	Quantity Supplied (per month)	Revenue	Cost of Production	Profit
\$18	20,000 hours	\$360,000	\$390,600	-\$30,600
	10,000 hours	\$180,000	\$195,300	-\$15,300
	1,000 hours	\$18,000	\$19,530	-\$1,530
	0 hours	0	\$3,045	-\$3,045.00

There are no visible factors that can possibly change my ability to supply this service. Labor productivity will never be an issue in this business. I can choose from so many graduate students who would jump at the chance to make \$15/hour at their own leisure. I also don't know anyone who wouldn't love the opportunity to work from home to answer customer calls for a few hours per day for \$1,500/month. I have a

highly skilled and well-educated work force. I also don't see technology or input costs being a factor either. My internet service from Comcast is locked in for two years so those costs can't increase for a while and I am well versed in all technologies that can help me maximize profits. I also have the government on my side. In 2009, President Barack Obama pledged \$500 million in funding for online courses and materials to be spent over the next decade.³ If I can prove my business model, I can apply for those funds to help expand Online Teacher.



Looking closely at the projected market demand and supply curve above, the equilibrium price for Online Teacher is \$25/hour. At that price, I can generate \$250,000 in revenue. With all that money, I can hire more people who can possibly increase my total product and create new complementary products.

There truly is need for a service like Online Teacher. Students all across the U.S. need that extra hour of homework help and somewhere out there is an investor who can help make it happen! I believe that with excellent customer service, quality online tutors and smart marketing, this business could really take off. I plan to offer a 5% equity stake in my company for a \$20,000 investment. I know my company is worth a lot more but in my current, broke state, it's a cut I am willing to take.

³ http://usatoday30.usatoday.com/news/education/2009-10-04-online-degree_N.htm

Student 1-

I wrote the introduction and paragraph 3 (supply) for this group essay. Also, I created the model of the product that we are using in our presentation to the sharks.

Student 2:

I wrote paragraph 2 (demand) of the essay and was also in charge of gathering everyone's paragraphs and compiling them into one coherent essay. I did a lot of editing. I also contributed a large part of the research to this project.

Student 3:

I helped student 4 write paragraph 7. I also helped come up with the idea for our product. I was pretty much the group leader.

Student 4:

I wrote a bulk of the essay- paragraphs 4, 5, 6 and 7 in exchange for not having to talk when we're up there presenting.

Shark Tank Rubric - SHARKS

Name(s) _____ Score _____

	Developing 1-5	Proficient 6-15	Exemplary 16-20	Comments & Total Score
Organization, Mechanics, & Timeliness	Introduction is unclear or fails to capture audience attention Presentation is confusing with limited supporting details Vocabulary is limited Presentation is late Length: Less than 3 minutes	Introduction states purpose Presentation is organized and sequential with some supporting details Closing provides a basic summary of most of the major points Vocabulary is appropriate to the topic Presentation on time Length: 3-4	Introduction captures audience attention and gives a clear statement of purpose Presentation is well organized, sequential, and well supported by detail Closing provides a through summary of all the major points Demonstrates a rich vocabulary appropriate to the topic Presentation is on time Length: 3-5 minutes	
Content	Important information is missing, or there are few supporting details Presentation seems to convey only limited understanding of the topic Main points are not clearly stated	All information is relevant to the topic Information is complete with basic supporting details Increases audience's knowledge of the topic Information conveys understanding of the topic	Information is complete and well supported by detail Presentation conveys deep and thorough understanding of topic Speaker's main points are logical and persuasive	
Presentation	Student did little to no speaking Clarity of speech is uneven, delivery is halting Limited evidence of creativity Speaker is not completely sure of topic Limited eye contract with audience	Both speakers talk but one person might dominate. Good speaking voice; recovers easily from speaking errors Speaker is in command of the topic Good eye contact with audience throughout most of the presentation Presentation aids are appropriate to the topic	Speaking parts are equally distributed. Strong, clear speaking voice Speaker conveys confidence in talking about the topic Excellent eye contact with audience throughout presentation Use of physical gesture and facial expression conveys energy and enthusiasm	
FINAL Decision Handout	Not turned in or incomplete TWO reasons not given to support decision. Understanding of	Handout complete TWO reasons given for each program that may or may not show complete understanding of	Handout complete TWO or more specific reasons given for each program that show understanding of programs	

	programs not clear	programs		
Research turned in	Not turned in or incomplete	Handout complete, turned in on time Questions listed for each program Pro/Cons may or may not show understanding of programs	Handout complete, turned in on time Thoughtful questions listed for each program Pro/Cons show understanding of programs	
Visual Layout/Commercial	Display creates a neutral reaction and may be somewhat unclear or somewhat unprofessional. It only brings about mild curiosity as it is viewed	Display creates a positive reaction and is professional. It brings about interest and curiosity as it is viewed	Display creates a “Wow, this is amazing” reaction and is very professional. It brings about awe and wonder as it is viewed	
Prototype-Construction	The invention does not look neat but is constructed fairly well.	The invention looks somewhat neat and somewhat constructed well. (Has some professional looking components but not all)	Invention looks neat and well constructed. (professional looking)	
Demonstration Strategy	The strategies used to present the invention and convince the audience of its quality and effectiveness are <i>somewhat effective</i>	The strategies used to present the invention and convince the audience of its quality and effectiveness are <i>effective</i>	The strategies used to present the invention and convince the audience of its quality and effectiveness are <i>highly effective</i>	