Finlatics Investment Banking Experience Program Project 2

Education Technology Company

1. Among the five stages of the company life cycle, I believe the product of this education technology company lies in the ideation stage. In this stage, a problem is identified and a corresponding solution is formulated. This augmented reality app solves a problem many biology children are facing these days, the inability to visualize the organ systems. An augmented reality app that displays the live organs functioning aids students get a wholesome experience of learning and visualizing through their mobile phones.

   There are two guiding principles for an ideation stage, the product must act as an intellectual property and must be mass marketable. This tech driven product is a successful intellectual property for the company as it improved understanding in biology for a sample of students. Also, this product is catered towards the tech savvy Millennials and Gen Z and therefore has mass marketability potential. Although, this potential has not turned into reality due to lack of value communication. This demonstrates that the product needs funding and expertise to catch sight of its market before commercializing and finding the right product-market fit.

   SWOT Matrix

Strength	**Weakness**
• Improved knowledge retention • Provides interactive lessons • Creates robust learning cycle for students	• Not suitable for all instructors • Requires all students to have smart phones • Prolonged exposure to virtual environments can create excess cognitive load
Opportunity	**Threat**
• Suitable in education and training as well • Matches tech native Gen Z lifestyle	• Not suitable for all education institutes • Vulnerable to security threats and unauthorized access • High cost in maintenance

2. Augmented reality has taken over the virtual world by storm, ranging from gaming to social media to even education. One such neat AR gaming app that has gained a lot

of traction in recent times is Pokémon Go. As users walk around in the real world, they spot Pokémon on the game app and throw poké-balls at them to capture them. These virtual creatures are a product of AR. Similarly in the ed-tech app, the real time organ system movement displayed on the screen provides the AR element in virtual learning. The AR system may be revolutionizing the digital ecosystem but is still weighed down by several challenges.

Hardware Dependence

The primary resource for this app is a smartphone capable of functioning AR apps. For starters, not all students have a smartphone and therefore that may restrict the app's target market to middle and upper tier education institutes. Another problem that could be faced by the students is the difference in quality. Smartphones may differ from one another based on camera and screen resolution. This may hamper the quality of imagery in certain devices, resulting in uneven quality of learning and may reflect poorly on the app as a whole. One such example could be the filters provided by social media apps such as Snapchat. The filters highly rely on the quality of camera of the device and therefore do not function properly on certain devices leading to dissatisfied users. This hurdle could be overcome by targeting schools that provide their students with smart learning devices such as tablets or by building an option to pre-record the organ system functioning. This may allow the instructor to project the process in front of the whole class and thereby leading to a unanimous user experience.

Battery Drainage

The ed-tech app displays the organ movement of the person at whom the camera is directed. This requires the students to continuously use their cameras and screen to access and view data. This hog may up a lot of battery. In fact one of the biggest challenges Pokémon Go faced was the battery that was being eaten up by the camera, screen and GPS. A possible solution to this could be to allow students to change the resolution of the visual. This may allow students with poor battery devices to save up on their battery by comprising a little with quality.

Privacy Concerns

The biggest challenge this app faces is privacy intrusion. Cameras being pointed at an individual could not only make him conscious but also concerned about the safety of this data. For example, when a user stops using a snapchat filter, the data is completely erased unless a picture or a video was taken. Such measures must also be implemented in this app. A student should not be allowed to record and store the data, and in case it is recorded, the instructor should be notified. The app's focus is on providing momentary visualization and hence must not dissuade from its purpose.

Generating Revenue

Tech has become cost effective for users but the research and development that goes into developing it and maintaining it is very expensive. AR technology constantly updates using real time data and this needs to be consistently maintained. Due to this heavy cost structure, it may be difficult to generate revenue

through free applications using ads or premium packages. An optimal way to generate revenue could be to offer a paid app and subsequently give discounts and coupons to institutes that make it mandatory for its students.

3. A convertible note is ideal for the selected portfolio as it is still at its ideation stage. The perk of a convertible note is that the valuation of the start-up is thrown out of the window at least till the series A funding. This allows the start-up to align its objectives and start operating towards the bigger picture instead of immediately trying to bring in a large chunk of sales to impress potential investors. From an investor's perspective, this note acts as a shield against potential losses while still keeping faith in the product. Given that value communication is one of the biggest obstacles the company is facing, as an investor, I would create some stringent milestones for the company to achieve in order to lay a path to help their vision come to fruition whilst still protecting my investment.

   Milestone 1
   The two important categories for determining the value of this product would be institution tie-ups and usage per institute. The first milestone would test the concept's potential. Given that the prototype's sample has already had positive feedback, it is time to commercialise the product and find the right product-market fit. This would help the start-up understand whether the product's characteristics fit with the original concept. The parameters would be set as follows:

   Institution tie-ups: Minimum 5 medium to upper tier institutes.
   Usage per institute: Minimum 100 students (Grade 7 to 10)

   Milestone 2
   After the product has commercialised, the second milestone would be focused on expanding the market through aggressive tie-ups. The product has touched the water and is ready to dive deep into the market and grab its share. The parameters for adding new institutes would be set as follows:

   Institution tie-ups: Minimum 10 medium to upper tier institutes
   Usage per institute: Minimum 100 students (Grade 7 to 10)

   Milestone 3
   Tapping the market is not enough, the product must also stick in the market. Therefore, the following milestone considers multi-fold growth in the total number of students, driven by renewals from the first and the second milestone and additional institutes and students added in this period. This would indicate that the product has found its right product-market fit and has the potential to grow. The parameters for adding new institutes would be set as follows:

   Institution tie-ups: Minimum 20 medium to upper tier institutes
   Usage per institute: Minimum 100 students (Grade 7 to 10)

Milestone 4

Once the product has made a set presence in the market, it can aggressively work towards grabbing a higher market share and broadening their service package. This milestone would focus on the company's ability to maintain their system, penetrate the market and accelerate their service offerings. This can be done by advancing the technology for higher level students. The parameters for adding new institutes would be set as follows:

Institution tie-ups: Minimum 40 institutes (not restricted to medium to upper tier)
Usage per institute: Minimum 150 students (not restricted to grade)

Note: The company should reach the 4th milestone in approximately 5 years.

Initial Investment	Students added per milestone (optimally)	Total number of students (in 5 years)	Convertible Note Conversion Rate (%)
50,00,000	500	<500	**24%**
50,00,000	1000	**1500** - 501	**16%** - 23.9%
50,00,000	2000	**3500** - 1501	**10%** - 15.9%
50,00,000	6000	**9500** - 3501	**6%** - 9.9%

From the abovementioned, table, we have taken the total number of students on as the milestone. The initial investment that we are looking to make in the company is Rs. 50,00,000 and the time period of investment is 5 years. From the table, we can see that the respective conversion rates that are applicable to the investment and how they are range bound and based on the number of students that the app is able to have. In the first case, which is possibly the grimmest one – in case the company takes 5 years to reach the first milestone itself, the conversion rate would be 24%. In the second case, in case the company takes 5 years to reach milestone 2, the conversion rate would be 16%. In the third case, in case the company takes 5 years to achieve milestone 3, the conversion rate would be 10% and in case four, in case the company reaches the set milestone in 5 years, the conversion rate would be 6%. We have kept the conversion rates, rangebound in each of the cases as they would depend on the exact number of students that are onboarded in 5 years.

4. For an augmented reality app, the customer acquisition cost will be mainly driven by placing digital ads across a range of media to drive installation. Boosting social media posts, google ads and having a well-designed website can deliver a significant pay-off. Although, the primary cost the company may face is b-to-b costs like printing

brochures for students, sponsoring college events or providing promotional discounts.

$$\textbf{Customer Acquisition Cost} = \frac{\textbf{Total marketing expense in given period}}{\textbf{Number of customers acquired in a given period}}$$

Total marketing expense to achieve milestone 1: Rs. 7,50,000
Number of customers acquired till milestone 1: 500

$$\text{Customer Acquisition Cost} = \frac{7,50,000}{500}$$

Customer Acquisition Cost = Rs 1500

Customer lifetime value helps determine the value of the customer to the company. The customer lifetime value can be calculated using three variables – average value of customer's purchase, customer purchase frequency and time period of a customer's purchase. For this augmented reality app, the value of these variables will be as follows:

$$\textbf{Customer Lifetime Value} = \frac{\textbf{Average value of customer's purchase}}{\textbf{Time period of a customer' purchase}} \textbf{ x Frequency of customer purchase}$$

Price per 1-year subscription = Rs 600 per student
Average value of customer's purchase for = Rs 600
Frequency of customer purchase = 1
Time period of a customer purchase = 1 year

$$\text{Customer Lifetime Value} = \frac{600}{1} \text{ x } 1$$

Customer Lifetime Value for 1st year = Rs 600

Similarly, CAC and CLV for a span of 5 years would be as follows:

Avg Value of customer's purchase	No. of times a customer will purchase (Cumulative)	Time period of customer purchase	CAC	Total CLV	Net profit on customer
600	1	1	1500	600	-900
600	2	2	0	1200	-300
600	3	3	0	1800	300
600	4	4	0	2400	900
600	5	5	0	3000	1500

The company incurs a Rs 1500 acquisition cost per customer and earns Rs 600 per customer to achieve milestone 1. As shown in the table above, the company stops making losses year 3 onwards. This indicates that the business needs to keep a customer loyal for at least 3 years in order to make some profit on it.