Finlatics Investment Banking Experience Program Project 2

***Education Technology company*:**

1). Among the 5 stages of the company life cycle mentioned in the module, I believe that the company chosen falls in the ideation stage. The main things to look at in a company to identify whether it is in the ideation stage or not are its intellectual property and Mass Marketability. This tech-driven product is a successful intellectual property for the company as it improved understanding of biology for a sample of students. This product has its niche of students studying biology and is also helpful for tech-savvy Millennials and Gen Z therefore we can say there is a mass marketability opportunity for the product.

In the ideation stage, the company should identify problems around our surroundings and try to tackle them in the smartest way possible using technology. 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. As a result, improve their academic performances, which is evident through the idea testing done by the company.

Understanding SWOT Matrix:

STRENGTH ➔ The process for students is completely online. ➔ Improved knowledge retention. ➔ Creates a sustainable learning cycle for students and also benefits the company repeatedly. ➔ Provides interactive lessons.	***WEAKNESS*** ➔ Not suitable for all instructors and institutes. ➔ Compulsory for students to have smartphones to access the app. ➔ Prolonged exposure to virtual environments can create excess cognitive load.
OPPORTUNITY ➔ Suitable in education and training as well. ➔ Opportunity to expand its services to engineering students. ➔ Opportunity to collaborate with All India medical institutes for research etc.	***THREAT*** ➔ High cost of maintenance for the app. ➔ Not suitable for all education institutes. ➔ Vulnerable to security threats and unauthorized access.

2).
Augmented reality (AR) is **an enhanced version of the real physical world** achieved through digital visual elements, sound, or other sensory stimuli delivered via technology. Augmented

reality is used in many apps 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.

Lack of Augmented Reality App Design & Development Standards:
Standards are something of a universal language for a software application. It is one of the ways to secure its compatibility and contribution to the overall development of the technology. At the moment, this is the thing that is under construction for Augmented Reality.

The reason is simple - it's too soon. The technology is too new, and it is still coming to its own both in hardware and software terms (despite "technically" being around for a while.)

So what's the problem? Without standards, every augmented reality-related project is a thing of its own barely compatible with the others. That complicates the process of unifying solutions to the greater whole which makes the overall development of the technology much slower than it could have been if everyone had been on the same page.

However, the implementation of technical standards is a question of time, and its adoption will signify the final stage of establishing the technology as a real deal.

Battery Drainage issues:
The ed-tech app displays the organ movement of the person to whom the camera is directed. This requires the students to continuously use their cameras and screen to access and view data. This may consume a lot of battery. 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.

Hardware issues:
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 the uneven quality of learning and may reflect poorly on the app as a whole. 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's functioning. This may allow the instructor to project the process in front of the whole class and thereby leading to a unanimous user experience.

Security & Privacy Issues with Augmented Reality:

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.

Revenue generating business model:

It is helpful for customers to use the app for free from the app store but revenue generated from ads and premium package would be not sufficient to run the business. For any AR related company the technology is constantly updating and maintaining the app consistently is a costly work, So the 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 to use the app.

3).

Convertible note is preferable for PE investors for the selected portfolio as the company is at its Ideation stage.The benefit 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(as it is hard to determine the valuation of the startup in its early stage).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 no.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.

1st Milestone:

The two important criterion 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 12).

2nd Milestone:

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 12).

3rd Milestone:

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 12).

4th Milestone:

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).

Initial Investments	Students added per Milestone	Total No.of students in 5 Years	Convertible Note Conversion rate
50,00,000	500	<500	25%
50,00,000	1000	1500-501	17% - 24.9%
50,00,000	2000	3500-1501	11% - 16.9%
50,00,000	6000	9500-3501	7%-10.9%

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 25%. In the second case, in case the company takes 5 years to reach milestone 2, the conversion rate would be 17%. In the third case, in case the company takes 5 years to achieve milestone 3, the conversion rate would be 11% and in case four, in case the company reaches the set milestone in 5 years, the conversion rate would be 7%. We have kept the conversion rates, rangebound in each of the cases as they would depend Linearly 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 payoff. 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.

$$Customer\ Acquisition\ Cost\ = Total\ Marketing\ Expence\ in\ given\ Period\ /No.\ of\ customers\ acquired\ in\ a\ given$$

Total Marketing Expences to achieve Milestone 1: Rs: 8,00,000
No.of Customers Acquired till Milestone 1: 500

Customer Acquisition Cost = 8,00,000/500

Customer Acquisition Cost = Rs: 1600

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:

$$\text{Customer Life time value} = \frac{\text{Average value of Customer's Purchase}}{\text{Time Period of a customer's Purchase}} \times \text{Frequency of Customer's Purchase}$$

Price per 1-year subscription = Rs 700 per student
Average value of customer's purchase for = Rs 700
Frequency of customer purchase = 1
Time period of a customer purchase = 1 year

Customer Life time value = 700.

Customer Life time value for 1st year = Rs:700

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

Average 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**
700	1	1	1600	700	-900
700	2	2	0	1400	-200
700	3	3	0	2100	500
700	4	4	0	2800	1200
700	5	5	0	3500	1900

The company incurs a Rs 1600 acquisition cost per customer and earns Rs 700 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.