ENT 610

Managing Innovation and IP for Entrepreneurs

PROJECT

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Challenge area:

3D visualisation of things for a better understanding of concepts and making learning joyful

Technology:

Virtual Reality(VR)

Adoption maturity of VR:

Presently the VR technology is in a transition from early adopters to early majority. As far as VR in education is concerned, the technology is still in the innovators stage. Though there are instances of teachers using VR in classrooms, the number of instances is very small and more often than not it was to test how students would react to VR

Challenge:

"Learning as immersive as Gaming"

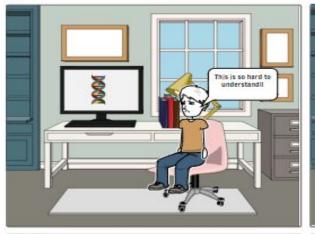
Sometimes learning gets hard and boring. Students have a hard time understanding things. Bringing VR into the picture opens the door for many possibilities which can make learning as immersive as gaming is.

Ideas:

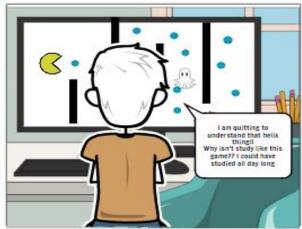
Reversal: By using VR enable students to perform experiments virtually whenever and wherever they want i.e labs come to students

Unification: By giving regular challenges and beautiful animations, gaming can be unified with learning

Storyboard:







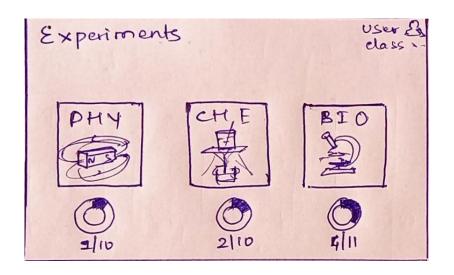


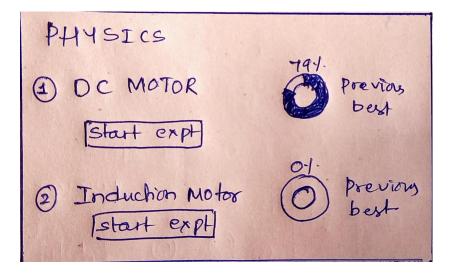




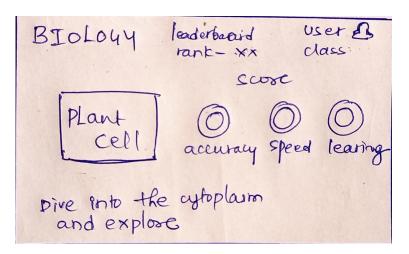
Paper Model

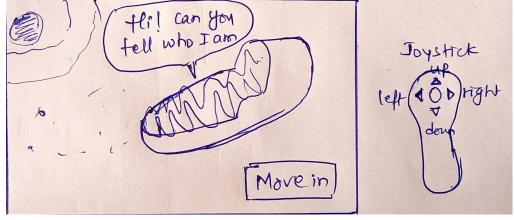
Idea: Labs come to students





Idea: Games unified with Learning





1-day low-cost experiment

Hypothesis: Learning is more effective and fun with VR

Activity: Get a VR set and download VR contents available in the internet. Meet students of different ages, explain them about VR and let them experience themselves and get their feedback

Success criteria: Students give feedback about if VR can make a difference in learning and if no why

Cost: VR set with joystick and headphone-3000 INR(can be borrowed also)

VR contents-freely available

Testing Prototypes feedbacks

• Deepthi (2nd year student in BE Biotech)

VR can make learning more effective with visualization. School kids will be very excited to learn with VR

Samarth (+2 Science student)

VR is good and can make learning fun by bringing game-like features. I have played VR games, and the issue with VR is that using VR makes eyes strain and this will be an issue for using VR for learning

• Usha (Science teacher at Sadvidya school Mysore)

3D Visualization can help students understand concepts better. Sometimes we teachers find it hard to explain some things and VR can come to help. But VR alone cannot go a long way, VR along with the traditional teaching methods can be a possibility

Learning

After testing the prototype, I found that VR in education is good idea but with some shortcomings. One issue is the eye strain problem To address this issue, we can think of blue light filters and likes. Other solution can be to change the technology from VR to MR(mixed reality=virtual reality+augmented reality). Augmented reality doesn't cause as much eye strain as VR Finally, the existing solution needs some refining and much more testing

with potential customers and other stakeholders