LUCID TEACHING – Education in Metaverse

Saravana Muthu Kumar S, Saravanan S, Suraj R Prasad, Surenthar J

INTRODUCTION

In the landscape of education, where the traditional roles of teachers and students have long been established, the need for innovation becomes apparent. Enter "Lucid Teaching," a groundbreaking project that aims to transform the educational experience for students transitioning from their mother tongue-based schooling to an English-medium higher secondary education. The conventional approach to education often involves passive learning, where students absorb information without a deep understanding of the content. "Lucid Teaching" seeks to address this by introducing immersive experiences that go beyond the confines of textbooks and classrooms. The project recognizes that experience is the most effective teacher, and it endeavours to create a learning environment where students don't just absorb knowledge but live within the worlds of authors' imaginations.

The primary objective of "Lucid Teaching" is to assist students who face challenges in understanding English during higher education. By leveraging cutting-edge technologies such as Blender for 3D content creation, Unity Engine for immersive environments, Photon Voice for real-time communication, and Oculus for virtual reality, the project creates a dynamic platform for experiential learning. Through this innovative blend of technology, students can explore, interact, and truly experience the subjects they study. The virtual environment, aligned with curriculum objectives, not only facilitates language transition but also nurtures a deeper understanding of concepts.

OBJECTIVE

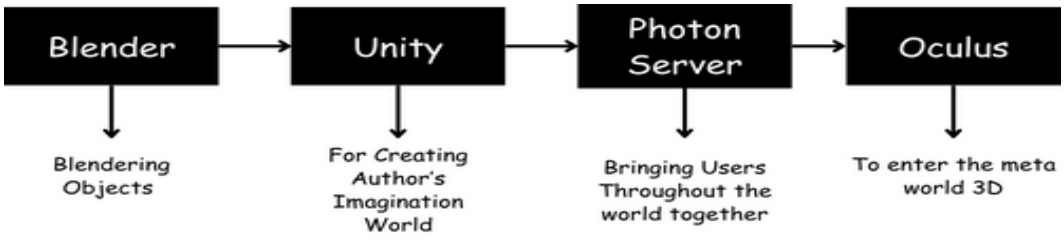
The objective of "Lucid Teaching" is to bridge language comprehension gaps among students transitioning from mother tongue-based education to English-medium higher secondary education. Through immersive experiences created with Blender, Unity Engine, Photon Voice, and Oculus, the project aims to enhance understanding and retention by allowing students to explore and interact with educational content in a 3D virtual environment. The goal is to make learning more engaging, intuitive,

and accessible, thereby empowering students to overcome language barriers and excel in their higher education.

As said before "**Experience is the Best Teacher**",

We can **E**xperience, **E**xplore & **E**ducate Ourself

MODULES DESCRIPTION



3D Content Creation (Blender):
This module involves the creation of visual elements, objects, and environments described in educational content using Blender. 3D models are designed to accurately represent concepts and scenarios from the curriculum, enhancing visual engagement.

Immersive Environment (Unity Engine):
Unity Engine is utilized to build an immersive 3D environment where students can explore and interact with the educational content. Objects and scenes from Blender are imported and aligned in Unity, creating a cohesive virtual space for learning.

Communication Integration (Photon Voice):
Photon Voice is implemented to facilitate real-time communication within the virtual environment. This module enables collaborative learning, allowing students to discuss and share insights while immersed in the educational experience.

Virtual Reality (Oculus):
The project incorporates Oculus VR technology to provide an immersive and interactive learning experience. Students can use VR headsets to navigate the virtual world, making the educational content more engaging and memorable.

WORK PLAN

TASK	DURATION	START DATE	END DATE
Requirement gathering	2 weeks	27-12-2023	09-01-2024
Objects Blending	4 weeks	10-01-2024	06-02-2024
Creating Environment as per Author Description	5-6weeks	07-02-2024	19-03-2024
Server Establishment	4-5 weeks	20-03-2024	23-04-2024
Testing and execution	18th week	24-04-2024	30-04-2024

BUDGET:

This project involves mainly usage of hardware products: PC, hard disk, Oculus - Meta Quest 2 and software requirements: Blender, Photon Voice, Unity Applications.

REQUIREMENTS	ESTIMATED PRICE
Oculus-Meta Quest 2 (Development-period Rent)	7500
Total	7500

Conclusion

"Lucid Teaching" represents a transformative leap in education, challenging traditional boundaries to create an immersive, experiential learning journey. By harnessing the power of 3D visualization, virtual reality, and real-time communication, the project strives to make education not just informative but truly engaging.