AR APPLICATION REVIEW

From the reviewed literature, I began to piece together the adherent potential of AR for teaching and learning purposes, while carefully factoring in the limitations and constraints brought on by limits of available technological resources and current development.

To further proceed in my research, I searched out available AR software developed specifically for learning and education. I did my search using search engine – google, using keywords such as AR, Augmented Reality, learning, Education, etc to narrow my search to only AR softwares developed specifically for learning and teaching. During this search, I came across an AR tool developed for learning mathematics by a math teacher called Burgess Jeffries (link here). His application enabled the visualization of mathematics pre-calculus problems using a graph model with points situated on all axis (x,y and z). He also visualized a plane at take off, showing the angle of elevation from the aeroplane and the ground. Both models where manually created using an online mathematical learning tool called Geogebra (link here). To view the graph visualization as an AR experience, users would then log on to the wesbsite from their iOS-enabled mobile devices. During his demonstration, Burgess noted that the goal of using AR in mathematics was to capture the attention of learners and arouse interest by bringing textbooks to life. Burgess AR tool became of interest for me, because of its approach to visualizing an abstract subject like mathematics. Taking his work and previous research into consideration, I wanted to develop a working prototype that would integrate key themes of Burgess' work such as visualization of abstract mathematical concepts, and centering the users enhanced learning experience around interaction (Ref #11 and Ref #4).

In the section following, I will be covering the design approach towards actualizing my AR project. Discuss will focus on design practices and the reasons behind these choices. Furthermore, I aim to demonstrate through contrasting existing works by Burgess’ AR mathematics application and available research, a novel way to engage with users through interaction.