Online Augmented Reality Mathematics Application

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Abstract : Mathematics has been there for over 4000 years and has been one of the very first educational topics explored by human civilization. Throughout the years, it has become a complex study and has derived so many other subjects. With advancements in ICT, most of the computation in mathematics is done using powerful computers. In many different countries, the children in primary and secondary schools face difficulties in learning mathematics, and this has many reasons behind it, one being the students don't engage much with the mathematical concepts hence failing to understand them deeply. The objective of this system is to help the students understand this mathematical concept interactively, which in return will encourage the love for learning and increase thorough understanding of many concepts. Research was conducted among a group of samples and about 50% of respondents replied that they had never used an augmented reality application before. This means that the chances for this system to be accepted in the market are high due to its innovative idea. Around 60% of people did recommend the use of this system to learn mathematics. The study also showed several challenges in an educational system, including but not limited to lack of resources which was chosen by 30% of respondents, the challenge to read from textbooks (34.6%) and how hard it is to visualize concepts (46.2%). The survey question asked what benefits the users see using augmented reality to learn mathematics. The responses that were picked the most were increased student engagement and using real-world examples to understand concepts, both being 65.4% and followed by easy access to learning material at 61.5%, and increased knowledge retention at 50%. This shows that there are plenty of issues with an education system that can be addressed by software applications; now that the newer generation is so enthusiastic about electronic devices, it can actually be used to deliver good knowledge and skills to the upcoming students and mitigate most of the challenges faced currently. The study concludes that the implementation of the system is a best practice for the educational system especially leveraging a new technology that has the ability to attract the attention of many young students and use it to deliver information. It will also give rise to awareness of new technology and on multiple ways it can be implemented. Addressing the educational sector in developing countries using information technology is an imperative task since these kids studying now is the future of the country and will use what they learn and understand during their childhood will help them to make decisions about their lives in the future which will not only affect them personally but also affect the whole society in general.