Abstract:

Augmented reality (AR) is an interactive experience of a real-world environment where the objects that reside in the real world are enhanced by computer-generated perceptual information, sometimes across multiple sensory modalities, including visual, auditory, haptic, somatosensory and olfactory. AR can be defined as a system that fulfills three basic features: a combination of real and virtual worlds, real-time interaction, and accurate 3D registration of virtual and real objects. AR can be combined in our education system. AR, in various ways, could grant students extra digital information about any subject, and make complex information easier to understand.AR technology has an ability to render objects that are hard to imagine and turn them into 3D models, thus making it easier to grasp the abstract and difficult content. This is especially good for visual learners and practically anyone to translate theoretical material into a real concept.

Problem:

Theoretical knowledge is not enough to obtain proper skills. Students shouldn't be mere listeners and passive observers. Through interaction, AR features could help perform a virtual practice – with augmented tutorials, digital modeling, and simulations, and acquire some experience in the end. When students read about a topic and then see how it looks or how it works in real life, they can understand it better. It increases their creativity and makes them more interested in that field. It is not a secret that motivated and engaged students will understand a subject better and learn faster.

AR is used widely in education in other countries of the world. But in Bangladesh it is not that popular. We can use this technology in our education field to make our students more creative, interested and motivated. They can acquire practical knowledge about a subject along with theory using augmented reality.

Solution:

Augmented reality in education will soon affect the conventional learning process. AR has the potential to change the location and timing of studying, to introduce new and additional ways and methods. Capabilities of Augmented Reality technology may make classes more engaging and information more apprehendable. Nowadays 80% of young people own smartphones. So the solution is to make educational Augmented reality apps for android phones.

We will make an android app which will make an AR book for kids for their primary education. Real time 3D objects will pop up when they open the app on that book related to that topic.

Procedural method:

The app will be made on a computer software unity 3D. The 3D object will be modeled using another computer software Blender. The app will apply a computer vision algorithm on the book, detect the object, then the related 3D object will pop up on the selected place on the android phone's camera.

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