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Title AR Lab/Practical Simulation Book for Physics Chemistry & Computer Science

Author(s) Name Md Mustafizur Rahman; Arafat Ahmed; Md Abdullah Al Jubair; Md Ruhul Amin; Rafiul Hasan Bondhon

Contact Email(s) abdullah@aiub.edu

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Abstract

Practical / Lab AR Simulation book for physics, chemistry and computer science is an important part for practical simulation learning. For the development of the system/framework/Application on AR Simulation book, the Public





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University/Private University practical lab manuals, NCTB registered practical book as the case study for this study because there is often difficult to understand as well as trouble to interpret when viewing a Practical Simulation book's images. To overcome this problem there is a need to be further study how to reinterpret this problem with a better understanding using AR system/framework/Application. Students always have a problem to interact with the practical knowledge in their text-book. As a developing country, education system (for both public and private) and the quality of education in Bangladesh is limited.[24] The practical simulation is very costly in terms of buying the correct equipment. Sometimes the limited number of equipment is insufficient, as an example, the numbers of students in School/College/University with respect to the teachers or faculties. The ratio is not maintained. This study reviewed previous approaches of Simulation based AR system in education to identify drawbacks and strengths in Education base practical simulation. From the review of this study to engage students in more interactive way to learn their practical simulation in their domain of study. The goal is to implementing an Augmented Reality based simulation book where the proposed AR system will reduce the difficulties during practical work that most of the students are facing. This study proposes to design an Augmented Reality based framework for Simulation Book and thus the development of proposed AR system using the framework where the students can utilized the AR system with simulation book for their practical work effectively. This research/study is focused on the development of 3D/2D objects, audio-visual and interaction in Augmented Reality that allows students to understand the scientific practical solution with the proposed AR framework. This framework been conducted by a group of users through a survey. The study shows evaluation of how effective AR Practical simulation book in practical learning education. The evaluation on Practical/Lab AR simulation book is very much effective (overlays more information using AR) for a better understanding of practical lab simulation in comparison with the manual simulation books.

