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A Virtual classroom teaching environment using a lightboard

By

Akisa Doreen

Supervisor: Mr. Matovu Davis

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DECLARATION

I, Akisa Doreen do hereby declare that this Project Report is original and has not been submitted for any other degree award to any other University before.

Signature ..... Date 04/09/19

Name ... AKISA DOREEN

Bachelor of Science in, (BU)

Department of Computer Engineering

Busitema University.

APPROVAL

This Dissertation Report has been submitted with the approval of the following supervisor(s).

Signature ..... Date: 04/09/19.

Name ..... MATOVU DAVIS .....

Department of Computer Engineering

Faculty of Engineering

Busitema University.

LIST OF ACRONYMS

IDE Integrated Development Environment

LDR Light Dependent Resistor

RAM Random Access Memory

ROM Read Only Memory

IOT Internet of Things

GSM Global System for Mobile Communication.

SQL Structured Query Language

DEDICATION

I dedicate this report to my lovely mother ISAPU GRACE for all the endeavors in order to make me what I am, and also to my friends for their continued help and encouragement in my studies.

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ABSTRACT

This project is to create a Virtual Classroom teaching environment using a lightboard. Virtual classroom is an alternative way to attend classes rather than physical classes. The Virtual Classroom is a collaborative teaching tool to assist the students to learn in an interactive manner. It aims to complement the efforts of teachers to integrate technology into their classrooms and link the students to the Internet in educationally productive ways and provide them a stimulating, positive and enjoyable environment to study. The virtual classroom consists of multi-features such as a lightboard to enhance the live video classes, log in and register button, chatroom, download or upload learning materials/ assignments. Nowadays, there are many students who may want to attend a course that probably is not available in their own country or states. Not only the students, this situation may occur among the lecturers especially the international lecturers. They are facing obstacles which involves costs and time. A virtual classroom is a brilliant idea to overcome this problem. The objective of this project is to create an alternative way to attend classes. Other than that, the virtual classroom is built as an interactive teaching tool which involves administrators, lecturers and students. As it is an online web application, the virtual classroom can provide an online learning experience to registered students. This project will be using HTML, CSS and JavaScript to design interfaces and features of the virtual classroom, WampServer to develop the databases of students' information and PHP for server-side programming.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND

Knowledge is the most important factor of production, next to labor, land and capital. The effective Knowledge Management in education is important for, increasing the quality and efficiency of education and research [1]. The role of knowledge for understanding innovations, technical change, development, and the coordination of all related activities in the economy can hardly be underrated and unless it is trivialized by the assumption of perfect information, i.e. by assuming that all agents command flawless knowledge on everything relevant to their decisions. As the research on innovations and technical change has demonstrated, the creation of new knowledge and the way it diffuses throughout the economy are of overriding importance for explaining productivity growth and the improvement of vital sectors in a country [2].

Knowledge transfer often involves human interaction. The most efficient way of transferring knowledge is giving people time to meet and talk to each other [1]. However, a number of Knowledge transfer challenges are being faced by people of Uganda some of which include; Geographical distance and/or language barriers in an international company, Limitations of information and communication technologies, Poor training or mentoring programs among others.

Information technology has provided a medium for teaching and learning therefore contributing to the flexibility in course delivery. ICT has also played a vital role in providing distance education very effectively. It provides online delivery of course content and thus providing effective distance education [3]. Various forms of technologies have been introduced in Ugandan institutions to minimize some of the challenges in knowledge transfer for instance, use of lightboards, web-based learning, computer-based, virtual classrooms and content delivery via e-networks. The benefits of the Virtual Classroom include amongst others: Flexibility and Convenience, Keeps People On-the-job, Cost Saving, Interaction and retention, Teamwork, Bringing teams together, Post-Course Reinforcement, On-line Reference Materials [4].

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