**ABSTRACT**

*Distance Learning is a web-based environment that allows students to participate in live teaching and learning events without the need to travel. The aim of the study is to develop a Web Base System for Distance Learning using Federal Polytechnic Ede as a case study. In achieving this aim, the following specific objectives were laid out as follows to design an application that will, provide alternative way of attaining education, facilitate the development of information technology, enhance examination and certification of students thereby improving the standard of education, reveal the use and technology of wireless network to the user, proffer solution to students whom because of nearness to institute and are unable to acquire knowledge that they need, and provide students easier way to acquire any of the Federal Polytechnic Ede certificates without been in the institute or with less difficulty. The methodology adopted in this study is the object oriented analysis and design methodology (OOADM) which is a technical approach for analyzing and designing an application or system by applying object throughout the software development process. The programming language used is HTML, CSS, C#, MONGODB and JQUERY. The reason why web programming languages was used is because, it is platform independent and it is a web based application. This project will be of benefit to: organizations and students, and lecturers. This study will be of immense benefit to researchers who intend to know more on this study and can also be used by non-researchers to build more on their research work. This study contributes to knowledge and could serve as a guide for other study. The expected result is a Distance Learning System that will bridge the communication barrier between students learning and lecturer teaching in a Polytechnic Environment.*

**CHAPTER ONE**

**INTRODUCTION**

* 1. **Introduction**

Distance learning is a way for students to access and learn at a university of their choice, either in person or remotely. It can include a mix of face-to-face instruction, online courses, and learning with print and computer-based materials. This means that many students will be e-learners for at least part of their education, using resources such as e-mail, online materials, and computer-based training and instruction. This chapter will provide an overview of the background and purpose of the study, including the problems being addressed, the aims and objectives, the significance of the study, the scope of work, and any limitations. It will also define any technical terms used in the study.

**1.2 Background of Study**

Distance learning is a way of delivering education remotely, which allows students to learn at their own pace and in their own environment, without the constraints of a traditional classroom setting. It involves the separation of teacher and learner in terms of location, with students having more control over their learning and communicating with their instructors through various forms of technology such as email, video conferencing, and online discussion forums. There are two main types of distance learning systems: online and offline. Online distance learning, also known as a virtual classroom, is a type of learning system in which students work independently and communicate with their teachers and other students online. Offline distance learning, on the other hand, is a multi-campus system in which a university or polytechnic establishes multiple campuses that may be centrally controlled or decentralized.

Education is a process that promotes lasting changes in behavior and helps to preserve, maintain, and improve cultural values, standards, and knowledge. In developing countries, education plays a vital role in promoting innovation and passing on current understanding to future generations. It serves as a platform for introducing people to various organizations, providing skills for daily tasks, leisure, and teaching sound ethics for the benefit of individuals and society. Overall, education is a platform for younger generations to understand their cultural heritage and actively contribute to the development and advancement of society. Historically, education has been delivered in physical classrooms with standardized and regulated classes of students and teachers.

This traditional method of education has consequences for both teachers and students. For example, education is typically only available to those who can physically be in a classroom and follow the instructor at a specific pace. However, the rapid population growth around the world and various educational systems in different regions have presented challenges to this method of education. There is a lack of sufficient human and material resources to meet the needs of the growing population.

Due to the increasing number of school-aged residents in many areas, only a small percentage can be admitted to traditional classrooms. This has led to a high student-teacher and student-classroom ratio, which can be less effective for teaching and learning. As a result, the field of education has become an attractive area for the application of computing systems, particularly since the late 1960s when computers were first introduced into classrooms. Information technologies such as computer-aided instruction, computer-aided learning, research packages, project monitoring, and computerized libraries have been used in education. With the advancements in mul