

**FACULTAD DE INGENIERÍA**

Escuela Académico Profesional de Ingeniería de Sistemas e Informática

Tesis

**Web Application for Use In Companies in the  
Internal Training Process of Their Personnel**

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Para optar el Título Profesional de  
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Huancayo, 2023

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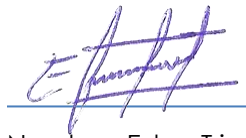
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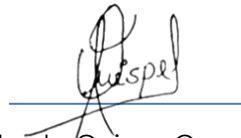
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# Web Application for use in Companies in the Internal training process of their Personnel

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**Abstract**—The times after the pandemic, are causing many changes in the way companies are trying to train their staff, virtualization is one of the main factors that make possible to fulfill this mission, at first many companies hired training services in order to maintain their training standards. In this paper present a customized web application for a company, where the intention is to demonstrate that companies can develop their own platform for courses and to customize their courses and independence in the management of the courses, the results show that it is possible to develop and implement such systems, as well as the level of satisfaction by workers as well as compliance with the proposed courses.

**Keywords**—Training, Application, Training, Development, Programming.

## I. INTRODUCTION

Reviewing the literature, we found works related to the need to train workers to improve their performance in their work, within the various works reviewed we found as a common feature, the use and application of technology, the application of technology has grown considerably because of the pandemic of covid 19 [1]. Not only the massive use of technology has caused the pandemic, but also the students have been affected in its various manifestations, such as school children, university students, and adults [2]. One of the technologies that is being used more frequently is related to virtual reality, which is added to the classic technologies used in educational processes, such as cell phones, mobile applications, computers with web systems, among others [3]. These technologies are not only being applied to improve the educational experience of students, it is important to analyze these effects related to teachers to improve the experience in the teaching process [4].

All methodologies and techniques developed in the educational processes are measurable through two possible indicators, the first one related to the grades obtained, which corresponds to the level of learning, and the second one related to the perception related to the degree of satisfaction of the course, where the methodology, materials and other characteristics of the courses are evaluated [5]. Not only the degree of satisfaction of the students is measured, but also the degree of satisfaction of the teachers with the use of the educational platforms [6].

We found works related to evaluate the difference between traditional classes with classes using the digital environment, so we can check the adequacy of the new digital methods [7]. Within these new technological tools we find the artificial

intelligence techniques to increase the degree of integration of new techniques, as well as the progressive adaptation of these technologies for the benefit of educational processes [8]. These new technologies are being adapted more rapidly in educational programs related to the teaching of technology and engineering [9]. Among the various technologies, the most widely used are mobile applications, web applications, virtual reality, augmented reality, among others [10].

In this sense, the organization where we will demonstrate the use and application of the development, in the area of the company is the NGO dedicated to the planning and execution of projects, which requires that its employees are trained, for this feature the web application will be implemented, applied to the training processes of the employees of the NGO.

To better understand the MVC pattern, let's consider a hypothetical web application for managing a bookstore.

**Model:** In our example, the model represents the data and business logic of the application. It encapsulates the bookstore's entities, such as books, authors, and customers. The model is responsible for managing the database interactions, performing CRUD (Create, Read, Update, Delete) operations, and enforcing business rules. For instance, we could have a Book model with methods like createBook(), getBookById(), and updateBookStock().

**View:** The view component deals with the presentation and user interface of the application. It defines how the data is displayed to the users. In our bookstore application, the view would include HTML templates, CSS stylesheets, and JavaScript code for rendering the bookstore's web pages. For example, we can have a view that displays a list of available books, showing their titles, authors, and prices.

**Controller:** The controller acts as the intermediary between the model and the view. It receives user input from the view, processes it, and updates the model accordingly. It also determines which view should be presented to the user based on the requested action. In our example, we could have a BookController that handles actions like adding a new book, updating book details, or processing a customer's order. The controller interacts with the model to perform the necessary operations and then selects the appropriate view to display the results.

The flow of the MVC pattern in our bookstore application would be as follows: When a user wants to search for a book, they interact with the view component by entering search criteria. The view then sends this input to the controller. The