THE APPLICATION OF EDPUZZLE IN IMPROVING ACADEMIC PERFORMANCE

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Abstract

The purposes of this research were to: (1) To compare the academic performance of students in the experimental group and the control group using traditional teaching methods versus teaching methods primarily utilizing Edpuzzle. (2) To study the level of satisfaction among students in the experimental group and the control group using traditional teaching methods versus teaching methods primarily utilizing Edpuzzle. The population in this research comprises first-year students from the Faculty of Education, Suan Sunandha Rajabhat University, during the first semester of the 2024 academic year.

This study is a quantitative research study. The data were statistically analyzed by using percentage, mean, standard deviation and t-test. The results of the research were as follows: A comparison between pre-test and post-test scores revealed a statistically significant improvement in post-test scores at the .001 level. Student satisfaction with the use of Edpuzzle's interactive video application in teaching the topic of laws related to the teaching profession was very high overall.

Keywords: Edpuzzle, Improving Academic Performance, Satisfaction

Introduction

Education is a crucial tool in shaping individuals, society, and the nation. It serves as the primary mechanism for developing a quality workforce capable of living harmoniously with others amidst the rapid changes of the 21st century. Given its pivotal role in creating competitive advantages for nations globally, under a dynamic economic and social system, countries worldwide have placed significant emphasis on developing their education systems. This focus aims to enhance human resources to keep pace with shifts in both national and global economic and social structures while preserving national identities. In Thailand, considerable importance has been placed on educational management and the development of Thai people's potential and abilities, ensuring their skills, knowledge, and competencies meet the demands of the labor market and the country's development amidst external pressures from globalization (Ministry of Education, 2017).

In today's era, marked by rapid technological advancements, learners must grow alongside technology. The educational sector must adapt and respond to learners' needs by transforming teaching methods. Educators should employ diverse teaching strategies, integrating technology into learning processes, while learners themselves must adapt by acquiring the necessary knowledge and skills to use technology effectively as a tool for seeking knowledge. This adaptability is essential for learners in the 21st century (Siriwan Chatmanee, Rungreung, and Warangkana Thongnopakhun, 2013).

Interactive video media, which incorporates various types of questions within videos, allows students to answer these questions while learning and understanding the content independently. This interaction simulates the engagement between students and the material, fostering motivation for learning (Narin Nontamarn, 2018). Moreover, using interactive video media, educators can assess students' progress during the learning process and adjust teaching methods to suit the students' needs. Simultaneously, students can also make improvements

based on feedback. Currently, tools like Edpuzzle, which facilitate formative assessments and the creation of interactive video content, are particularly suited for flipped classrooms. In such settings, students prepare on their own outside the classroom using videos, and class time is devoted to activities rather than lectures (Wichai Puangroongroj, 2017).

Research on Edpuzzle, an interactive lesson-creation platform, reveals that it enables students to access lessons from any location and at any time using computers, mobile phones, or tablets connected to the internet. Teachers can create lessons by uploading their own videos or using videos from YouTube, and students learn through these interactive lessons on Edpuzzle. This platform enhances the learning experience by fostering interaction between students and the lessons, as well as between students and the teacher, through the embedded questions. These features distinguish Edpuzzle from traditional video-based learning, where students might passively watch without fully engaging with the material.

Research Objectives

1. To compare the academic performance of students in the experimental group and the control group using traditional teaching methods versus teaching methods primarily utilizing Edpuzzle.
2. To study the level of satisfaction among students in the experimental group and the control group using traditional teaching methods versus teaching methods primarily utilizing Edpuzzle.

Scope of the Research

1. Population Scope

The population in this research comprises first-year students from the Faculty of Education, Suan Sunandha Rajabhat University, during the first semester of the 2024 academic year. The research involved two classrooms, totaling 57 students.

The sample group for this research consists of 58 first-year students from the Faculty of Education, Suan Sunandha Rajabhat University, in the first semester of the 2024 academic year, divided into two classrooms. From this group, 28 students from one classroom were selected through simple random sampling, using the classroom as the sampling unit.

2. Variable Scope

The independent variable is the teaching method using interactive video lessons through Edpuzzle.

The dependent variables are the academic performance in the subject "Moral, Ethics, Code of Ethics, and Teachers' Spirituality" under the topic "Laws Related to the Teaching Profession," as well as the level of satisfaction with the teaching method utilizing Edpuzzle's interactive video lessons.

3. Time Scope

During the first semester of the 2024 academic year.

Research Methodology

1. Research Methodology

This study is a quantitative research study.

2. Research Steps

The researcher developed research tools, including Edpuzzle teaching materials, an achievement test, and a satisfaction survey for students regarding the use of interactive video applications through Edpuzzle in the learning process.

3. Data Collection

The researcher explained the teaching method using Edpuzzle's interactive video application and administered a pre-test on the topic of laws related to the teaching profession to the sample group, with a testing duration of 1 hour.

The researcher conducted a lesson using the Edpuzzle interactive video application for a total of 4 hours.

After the experimental teaching session, the researcher administered a post-test on the topic of exponents, with a testing duration of 1 hour.

The researcher then had the students complete a satisfaction survey regarding the use of Edpuzzle's interactive video application in the learning process.

The collected data were analyzed.

4. Data Analysis

Quantitative Data Analysis

4.1 Data from the pre-test and post-test on learning achievement were analyzed using a dependent T-test statistic, with hypotheses tested via a computer software program.

4.2 Satisfaction data were analyzed for averages and standard deviations, based on criteria for interpreting average scores as follows (Boonchom Srisa-ard, 2002):

4.51 - 5.00: Very high
3.51 - 4.50: High
2.51 - 3.50: Moderate
1.51 - 2.50: Low
1.00 - 1.50: Very low

Qualitative Data Analysis

Qualitative data were analyzed based on suggestions from the satisfaction surveys regarding the use of Edpuzzle's interactive video application in the learning process.

Statistics Used

Basic statistics were used to assess learning achievement scores and student satisfaction with the use of Edpuzzle's interactive video application on the topic of laws related to the teaching profession among first-year students. The data were analyzed using the following formulas:

Mean
Percentage
Standard deviation

Hypothesis testing to compare pre-test and post-test scores using dependent T-test statistics with a computer software program.

Research Results

Learning Achievement

The learning achievement on the topic of laws related to the teaching profession, assessed through the use of Edpuzzle's interactive video application among 28 first-year students, showed an average pre-test score of 14.50 and a post-test score of 18.00. A comparison between pre-test and post-test scores revealed a statistically significant improvement in post-test scores at the .001 level.

Student Satisfaction

Student satisfaction with the use of Edpuzzle's interactive video application in teaching the topic of laws related to the teaching profession was very high overall (Mean = 4.81, S.D. = 0.63). When analyzed by specific aspects, the highest level of satisfaction was found in the

appropriateness of the time allocated for each learning activity (Mean = 4.62, S.D. = 0.68), followed by overall satisfaction with the learning activities (Mean = 4.52, S.D. = 0.83). Other notable aspects included the teacher's encouragement for students to exchange knowledge and accept the opinions of their peers (Mean = 4.35, S.D. = 0.74), the relevance and modernity of the learning content, which was accessible anytime and anywhere (Mean = 4.34, S.D. = 0.74), and the learning method's effectiveness in helping students better understand the material (Mean = 4.30, S.D. = 0.65).

Discussion

The use of Edpuzzle's interactive video application in teaching benefits students who are unable to attend class or those who wish to review the content after class. It allows them to study at any time and from any location. If students do not understand certain parts of the lesson, they can rewatch or pause the video, seek additional knowledge, or note their questions to ask the teacher or classmates. This method helps students improve their academic performance.

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