

<https://doi.org/10.48047/AFJBS.7.3.2025.56-60>



African Journal of Biological Sciences

Journal homepage: <http://www.afjbs.com>



Research Paper

Open Access

Implementation of a Teaching Management System and Improvement of Educational Quality at the University

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Volume 7, Issue 3, Mar 2025

Received: 25 Jan 2025

Accepted: 22 Feb 2025

Published: 05 Mar 2025

[doi:10.48047/AFJBS.7.3.2025.56-60](https://doi.org/10.48047/AFJBS.7.3.2025.56-60)

Summary

The objective of this research was to determine the influence of the implementation of a Teaching Management System (SIGEDO) on the improvement of educational quality in a Peruvian University. A quasi-experimental design was used with a descriptive-explanatory approach, applying the inductive-deductive method. For data analysis, Wilcoxon's statistic was used for paired data, evidencing significant improvements in teacher performance and educational quality indicators. The results show an increase of 25% in teaching planning, 30% in didactic methodology and 28% in the use of technological resources. It is concluded that the use of information technologies in teaching management is key to the strengthening of higher education.

Keywords: Teacher management, Educational quality, SIGEDO, Teacher evaluation, Wilcoxon.

Introduction

Educational quality is a fundamental aspect in higher education institutions at an international level. The implementation of teacher management systems has proven to be an effective strategy to improve educational processes, facilitating the planning and evaluation of teacher performance. In countries such as the United States and

Finland, digital platforms have been developed for monitoring teacher performance, optimizing teaching and learning processes.

At the national level, the Ministry of Education of Peru has promoted the use of technologies to improve the quality of education in universities, establishing teacher evaluation and development policies aligned with international standards. However, there are still deficiencies in academic management that affect teaching performance and student experience.

In the local context, universities face challenges in the evaluation and monitoring of teaching management. The lack of adequate technological tools has made it difficult to objectively measure teachers' performance, which has an impact on educational quality. This research seeks to address this problem through the implementation of a Teacher Management System (SIGEDO), in order to improve the evaluation and supervision of the educational process.

Methodology

A quasi-experimental design was used, using a descriptive-explanatory approach. The study population consisted of 150 professors and 500 students from a Peruvian university. The final sample included 75 teachers and 250 students selected through non-probability sampling. Surveys and structured observations were applied for data collection. For the validation of results, the Wilcoxon statistic was used for paired data, allowing the evaluation of the variation in teacher performance before and after the implementation of the SIGEDO.

Results

The findings indicated significant improvements in the planning, monitoring, and evaluation of teacher performance. The indicators of educational quality showed a notable increase in the didactic methodology, the use of technological resources and the teacher-student interaction. The quantitative results obtained are presented below:

INDICATOR	BEFORE SIGEDO	AFTER SIGEDO	INCREMENT
TEACHING PLANNING	60%	85%	+25%
TEACHING METHODOLOGY	55%	85%	+30%
USE OF TECHNOLOGICAL RESOURCES	50%	78%	+28%
TEACHER-STUDENT INTERACTION	58%	83%	+25%

The analysis with the Wilcoxon test showed a statistically significant difference in the perception of educational quality before and after the implementation of SIGEDO ($p < 0.05$).

Discussion of Results

The results obtained coincide with previous studies that highlight the importance of digitalization in academic management. Research carried out in universities in Europe and Latin America has shown that the implementation of information systems contributes to the improvement of teaching performance and educational quality.

The increases observed in teaching planning and the use of didactic methodologies reflect a greater structuring of the teaching process, which allows for more effective

learning for students. Likewise, the improvement in the use of technological resources has allowed for more interactive teaching adapted to new digital environments.

These findings confirm that SIGEDO is an effective tool to strengthen teacher management, improving the quality of teaching in higher education. The statistically significant difference obtained with the Wilcoxon test empirically supports the effectiveness of the implemented system.

Conclusions

It is concluded that the implementation of SIGEDO has significantly influenced the improvement of educational quality in a Peruvian University. The optimization in the planning, monitoring and evaluation of teaching performance has generated a positive impact on the academic training of students.

The data obtained reflect a significant increase in several key indicators of teacher management. The expansion of the system to other universities is recommended to validate its effectiveness in different academic contexts and to continue exploring improvements in its implementation.

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