

Permanence and Higher Education, educational challenges

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Abstract

The phenomenon of permanence in higher education is a complex and multi-causal one, representing one of the main challenges for contemporary educational institutions. The objective of this study was to identify the factors associated with the permanence of students enrolled in the Bachelor's Degree in Physical Education, Recreation and Sports program at the Colombian Polytechnic Jaime Isaza Cadavid in Medellín. A mixed approach was utilized, incorporating quantitative predominance and stratified probability sampling. The Risk Factors for Permanence Questionnaire (CFRP) was utilized, with its validity confirmed by expert judgment and a pilot test ($\alpha=0.87$). The results indicate that 68% of the students are from low socioeconomic backgrounds, 62% are engaged in both academic pursuits and employment, and 57% have contemplated withdrawing from their studies due to financial constraints. Intrinsic motivation and family support have been identified as protective factors, while poor academic performance (average <3.5) and lack of knowledge regarding institutional support programs have been identified as risk factors. A comprehensive analysis of the extant literature reveals a consensus that student permanence is contingent upon the implementation of multifaceted strategies that encompass the academic, socioeconomic, personal, and institutional dimensions.

Keywords: Student permanence, higher education, academic dropout, socioeconomic factors, academic motivation, institutional strategies.

INTRODUCTION

The phenomenon of permanence in higher education is a multifaceted and multifactorial one, constituting a primary challenge for contemporary educational institutions. According to the Colombian Ministry of National Education (2017), "It is a phenomenon made up of different risk factors that impact the permanence of students" (p. 12). This issue has become especially salient in recent decades, particularly in the aftermath of the pandemic, due to the elevated rates of attrition observed in both public and private higher education institutions. The ramifications of this phenomenon extend beyond the individual, encompassing socioeconomic, academic, and institutional dimensions.

The Jaime Isaza Cadavid Colombian Polytechnic in Medellín has been a regional exemplar in several respects. Its academic processes, projection, innovation, and quality have been lauded, and it has been a leader in the region. Nevertheless, the institution is confronted with contemporary challenges, among which the phenomenon of student permanence is particularly salient. This assertion is substantiated by data from SPADIES 3.0 (2023), which reveals that the institution has sustained an average dropout rate of 10.76% over the past five years. This figure is 2.5 percentage points higher than the national average of 8.2%. This situation underscores the necessity to identify and comprehend the factors contributing to students' decisions to persist or discontinue their academic pursuits.

According to Atal and Hernández (2016), previous research has indicated that the main factors influencing this phenomenon are institutional, family, individual, and job expectation variables. As Otero (2021) emphasizes, the implementation of academic, economic, occupational, and socio-emotional strategies is imperative to ensure the success of student retention initiatives. In the context of Latin America, Pereira and Vidal (2021) emphasize the necessity for educational institutions to modify their approaches to align with the distinct characteristics of their student body and prioritize the retention process within a broader, more comprehensive analysis.

From a theoretical perspective, Fonseca et al. (2016) identify relevant factors such as intrinsic and extrinsic motivation, personal and institutional commitment, academic integration, social and family interaction, and economic conditions. This multidimensional vision enables us to comprehend permanence as a phenomenon that transcends the academic or economic, encompassing psychosocial and contextual dimensions.

In this framework, the objective of the present research was to determine the variables related to the permanence of students enrolled in the Bachelor's Degree in Physical Education, Recreation and Sports program at the Colombian Polytechnic Jaime Isaza Cadavid in Medellín. Specifically, the objective was to identify the factors associated with permanence, to assess the level of knowledge among students regarding student accompaniment programs, and to analyze the variables associated with the decision to drop out.

The significance of this study lies in its potential to provide conceptual tools and the design of strategies aimed at mitigating dropout. It has the potential to function as a model for the implementation of analogous strategies in other programs and faculties. This could contribute to a more effective institutional approach to student retention and the enhancement of educational quality.

MATERIALS AND METHODS

Approach and Methodological Design

The research was developed under a mixed approach, with quantitative methods predominating, allowing for the combination of quantitative and qualitative methods to achieve a comprehensive understanding of the phenomenon. Concurrently, a nested qualitative research study was conducted, with the objective of providing supplementary insights to the quantitative findings (Creswell & Plano Clark, 2018).

Population and Sample

The population under study consisted of active students enrolled in the Bachelor's Degree program in Physical Education, Recreation and Sports. The academic semester employed a stratified probabilistic sampling method. The sample size was determined using Cochran's formula (1977) for finite populations, with a confidence level of 95% and a margin of error of 5%. The inclusion criteria encompassed two fundamental requirements: first, active student status within the program; and second, enrollment in any academic semester during the designated study period. Additionally, participation in the research was to be voluntary.

Data Collection Instrument

The Risk Factors for Permanence Questionnaire (CFRP) was utilized in this study. The instrument was developed and validated for the specific context of the program, in accordance with the guidelines established by the Ministry of National Education of Colombia (2017). The instrument assesses socioeconomic, personal, institutional, and academic factors through Likert-type items and open-ended questions. The validation process was executed through the implementation of expert judgment and a pilot test, which yielded an alpha of 0.87, thereby ensuring the reliability and relevance of the study's

findings.

Procedure

The study was developed in four main phases:

1. **Preparation phase:** An exhaustive review of the literature on student retention and risk factors in higher education was carried out. The CFRP instrument was designed and validated, ensuring its alignment with the objectives of the research.
2. **Application phase:** The questionnaire was implemented to the selected sample using a digital form, guaranteeing confidentiality and informed consent of the participants. During this phase, continuous monitoring was carried out to ensure a representative response rate.
3. **Analysis phase:** Quantitative data were processed using specialized statistical software (SPSS v.25), applying descriptive and inferential statistical techniques. For qualitative information, content analysis was performed by categorization and coding of responses.
4. **Integration phase:** The quantitative and qualitative results were triangulated to obtain a comprehensive view of the phenomenon studied, identifying convergences, divergences and complementarities between both types of data.

RESULTS AND DISCUSSION

Sociodemographic Characterization of the Population Studied

The findings of this study indicated that the student body of the Bachelor's Degree in Physical Education, Recreation and Sports exhibited a heterogeneous composition in terms of sociodemographic characteristics. The analysis indicates that 68% of the students belong to socioeconomic strata 1, 2, and 3, suggesting a predominance of the population experiencing economic limitations. With respect to the distribution by gender, a preponderance of males (73%) was observed compared to females (27%), a salient fact given the nature of the academic program.

With respect to the employment situation, 62% of the students indicated that they engage in work activities concurrently with their academic pursuits. Of these students, 45% reported that their work is related to their professional training. This situation evinces a complex reality that directly influences the availability of time for academic activities and the possibility of meeting the demands of the program.

Socioeconomic Factors

A thorough examination of socioeconomic factors indicates that economic hardship is a primary predictor of student attrition. A significant proportion of the participants indicated that financial constraints had prompted their consideration of withdrawing from school. Furthermore, a substantial percentage of the participants, amounting to 42%, reported experiencing challenges in meeting expenses related to transportation, food, and academic materials.

These findings align with the recommendations put forth by Otero (2021), who advocates for the promotion of support among students and companies that can offer economic incentives. These incentives have the potential to assist in maintaining students' motivation and commitment to their chosen careers. The evidence collected underscores the necessity to fortify financial support programs and to seek alternatives that facilitate the permanence of students with financial limitations.

A salient issue is the relationship between professional environment and academic performance. It has been demonstrated that students who engage in work that exceeds 20 hours per week are more prone to encountering academic challenges and contemplating the cessation of their academic pursuits. This finding underscores the necessity of formulating institutional strategies that are attuned to the realities experienced by working students. Such strategies should encompass the provision of flexible schedules and study modalities.

Personal and Institutional Factors

With regard to personal factors, intrinsic motivation for one's chosen career has been shown to serve as a protective element for permanence. Conversely, students who reported high motivation and vocational clarity exhibited a reduced tendency to drop out, aligning with the findings reported by Machado et al. (2021) on the pivotal role of motivational processes in fostering university retention.

The analysis identified adaptation skills to the university environment, coping strategies in the face of academic stress, and family support as significant variables. A significant proportion of the participants, 68%, attested to the pivotal role of family support in ensuring their academic continuity. Furthermore, 54% of the participants acknowledged that challenges in adapting to the demands of university life have posed a risk factor to their academic perseverance.

With respect to institutional factors, a salient finding is the dearth of knowledge concerning student support and accompaniment programs. A significant proportion of the student body, precisely 63%, admitted a lack of awareness concerning the institutional strategies designed to promote their permanence. This finding underscores the necessity to enhance the channels of communication and dissemination of these resources. As Otero (2021) emphasizes, within the domain of socio-emotional support, it is imperative to incorporate emotional and affective support programs for students, in conjunction with the effective dissemination of available assistance resources.

The perception of teaching quality also emerged as a significant variable, with 72% of the participants indicating that pedagogical competence and the accompaniment by teachers influenced their decision to remain in the program. This result aligns with the findings of Gómez et al. (2016), who identified teaching as a significant factor influencing students' decisions regarding the continuation of their studies.

Academic Factors

The analysis of academic factors revealed that academic performance is a determining variable in student permanence. Students who maintained an academic average below 3.5 were 2.3 times more likely to contemplate dropping out (OR = 2.3, 95% CI [1.8, 2.9]).

The subjects of the specific disciplinary area were identified as the most difficult by 58% of the participants, followed by those of the pedagogical component (27%) and those of the research area (15%). This finding indicates a necessity for the enhancement of academic support strategies in particular domains and a re-evaluation of teaching-learning methodologies in subjects that demonstrate high rates of failure.

Another salient aspect pertains to the relationship between the pedagogical strategies employed by teachers and the motivation towards learning. A survey of students revealed that 67% of respondents indicated that participatory and practical methodologies favor their academic commitment and permanence in the program.

As indicated in the structure of scientific articles, "a scientific article must contain the main results of a research study or a part of it," and these findings constitute significant contributions to the understanding of the phenomenon studied.

Integration of Results and General Discussion

The integration of the results enables us to comprehend student permanence as a multidimensional phenomenon in which socioeconomic, personal, institutional, and academic factors intervene and are interrelated in a complex way. This perspective aligns with the approach of the Ministry of National Education (2017) to the multi-causal nature of permanence in higher education.

A salient finding of this research is the identification of risk profiles according to the combination of factors. Students who concurrently exhibit economic hardship, substandard academic performance, and inadequate family assistance are the demographic with the greatest likelihood of withdrawing from their studies. This characterization enables

the development of targeted intervention strategies, with a focus on specific populations, thereby optimizing the utilization of institutional resources.

The relationship between knowledge of the accompaniment programs and the intention to remain in the career was statistically significant ($p < 0.01$). Students who are aware of and engaged in these initiatives are 3.1 times less likely to contemplate withdrawing from their studies. This finding underscores the significance of enhancing the dissemination and accessibility of these resources.

These results are in dialogue with the findings of Pereira and Vidal (2021), who underscored the significance of adjusting the terminology of the actions carried out by higher education institutions, focusing them more on the process of permanence than on the retention process³. This perspective necessitates the transcendence of the conventional administrative and economic paradigms of retention, thereby facilitating the development of strategies that foster an effective and affective bond between students and their training process.

The research also demonstrates the tension between the specific needs of students and standardized institutional responses. As Blanco, Meneses, and Paredes (2018) have noted, it is imperative to pay close attention to the re-entry process and consider academic trajectories from a broader perspective than the simple dichotomy of permanence-dropout. In this regard, the findings indicate the necessity of implementing diversified strategies in accordance with the identified risk factors and the distinct characteristics of the student population.

A comparative analysis of academic semesters reveals that the critical periods for attrition are concentrated in the first three semesters (67% of cases) and during professional internships and undergraduate work (23%). This pattern indicates the necessity of implementing support strategies during these particular phases of the academic career to enhance the articulation between secondary and higher education, as well as the processes of completing studies.

CONCLUSIONS

The present research enabled the determination of variables associated with the permanence of students enrolled in the Bachelor's Degree in Physical Education, Recreation and Sports program at the Colombian Polytechnic Jaime Isaza Cadavid. This analysis revealed the multicausal and complex nature of this phenomenon. The findings indicate that student permanence is influenced by a multifaceted interaction of socioeconomic, personal, institutional, and academic factors. To design effective strategies, it is essential to address these factors from a comprehensive perspective.

A comprehensive review of the extant literature reveals that socioeconomic factors, particularly economic difficulties and the need to combine study and work, emerge as variables with a high impact on the decision to stay or abandon studies. This predicament presents substantial challenges for the institution, particularly with regard to the development of more robust economic support programs and the enhancement of academic flexibility to facilitate the harmonization of work and training activities.

With regard to personal factors, intrinsic career motivation, adaptability to the university environment, and family support have been identified as protective elements for permanence. These findings underscore the significance of implementing pre-entry vocational guidance programs and fortifying support networks during academic careers.

A concerning revelation is the dearth of awareness among students regarding the institution's offerings in the realm of student support programs. This situation underscores the necessity to enhance communication channels and dissemination strategies to ensure that available resources are effectively disseminated to the intended recipients.

With respect to academic factors, performance in particular subjects and teaching-learning

methodologies exerts a significant influence on the decision to remain in the program. This outcome underscores the necessity for a comprehensive review of the curriculum and pedagogical strategies, with a focus on participatory and contextualized approaches that prioritize meaningful learning.

The research also facilitated the identification of critical junctures in the academic trajectory where the highest rates of attrition are concentrated. This knowledge enables the implementation of targeted support strategies during these specific periods and the development of preventative measures rather than remedial ones.

The findings obtained provide a substantial foundation for the enhancement of the early warning system and the formulation of diversified intervention strategies according to the risk factors identified. The implementation of comprehensive actions that address the various dimensions of student permanence will contribute to improving retention and graduation rates, strengthening the academic quality of the program, and promoting the integral development of students.

It is important to acknowledge that this study represents an inaugural effort to comprehend the phenomenon of permanence within the distinct context of the Bachelor's program in Physical Education, Recreation and Sports. Subsequent research endeavors may encompass a more thorough examination of particular components, including but not limited to the efficacy of implemented accompaniment strategies, the correlation between entry profile and academic success, and the distinctive characteristics associated with attrition in virtual or hybrid training modalities.

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