

Research as a Bridge between Theory and Practice in University Education

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Abstract

A documentary review was carried out on the production and publication of research papers related to the study of the variables Research, University Training and Professional Practice. The purpose of the bibliometric analysis proposed in this document was to know the main characteristics of the volume of publications registered in the Scopus database during the period 2017-2022 by Latin American institutions. Regarding the study of the aforementioned variables, a total of 253 publications were identified. The information provided by this platform was organized through graphs and figures, categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics have been described, the position of different authors on the proposed topic is referenced through a qualitative analysis. Among the main findings made through this research, it is found that Brazil, with 118 publications, was the Latin American country with the highest scientific production registered in the name of authors affiliated with institutions of that nation. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material related to the study of Research Devices in Academic Training was Social Sciences with 143 published documents, and the Type of Publication that was most used during the period indicated above was the Journal Article, which represents 85% of the total scientific production.

Keywords: *Research, University Education, Professional Practice.*

1. Introduction

The axis of higher education is based on the premise of being able to integrate theory and practice together, as these constitute the cornerstone of a knowledge-enriching learning experience. Universities, as an institution that forges knowledge and exploits student and academic skills, plays a fundamental role in preparing students for success in a changing and interconnected world. At the heart of this preparation is the intricate bridge built by research, which seamlessly connects theoretical concepts with practical applications.

Theoretical knowledge, while fundamental and essential, often exists in an abstract realm, divorced from the tangible realities of professional landscapes. It is within the framework

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of research that these abstract theories find a tangible foothold, transforming into ideas and practical solutions. Research in higher education acts as a potent catalyst, propelling students beyond the confines of textbooks and lecture halls, into the realm of practical exploration and critical thinking.

One of the characteristics offered by university research is to sow a culture of inquiry and curiosity in students. This culture goes beyond memorizing facts; It encourages students to question assumptions, challenge established norms, and seek innovative solutions to real-world challenges. By engaging in research activities, students develop the analytical and problem-solving skills crucial to navigating the complex landscapes of their chosen fields. The research provides a variable platform for students to witness the evolution of theoretical paradigms in real-time. It allows them to actively participate in ongoing dialogue within their academic disciplines, fostering a sense of ownership and intellectual contribution. As theories are tested, refined, or even revolutionized through research efforts, students are not mere spectators but integral participants in the ever-evolving landscape of knowledge.

The union between theory and practice is further exemplified in the interdisciplinary nature of research. Universities serve as knowledge hubs, bringing together experts from various fields to collaboratively address multiple challenges. This approach reflects the interconnected nature of the professional world, where solutions often require a synthesis of ideas from different domains. In addition, research experiences allow students to develop a nuanced understanding of the ethical dimensions of their chosen fields. While grappling with real-world issues, students are confronted with the ethical implications of their work, which encourages them to reflect on the social impact of their contributions. This ethical lens is critical to cultivating responsible, socially conscious professionals who are attuned to the broader implications of their actions. For this reason, this article seeks to describe the main characteristics of the compendium of publications indexed in the Scopus database related to the variables Research, University Training and Professional Practice, as well. Such as the description of the position of certain authors affiliated with Latin American institutions, during the period between 2017 and 2022.

2. General Objective

To analyze, from a bibliometric and bibliographic perspective, the production of research papers on the variables Research, University Training and Professional Practice registered in Scopus during the period 2018-2022 by Latin American institutions.

3. Methodology

A quantitative analysis of the information provided by Scopus is carried out under a bibliometric approach on the scientific production related to the study of the variables Research, University Training and Professional Practice. Likewise, from a qualitative perspective, examples of some research works published in the area of study mentioned above are analyzed, from a bibliographic approach to describe the position of different authors regarding the proposed topic.

The search is carried out through the tool provided by Scopus and parameters referenced in Figure 1 are established.

3.1 Methodological design

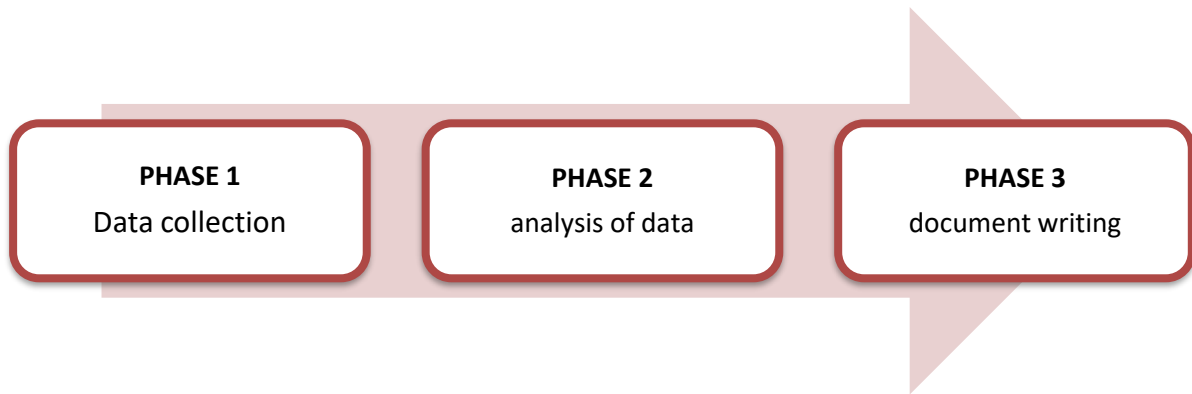


Figure 1. Methodological design

Source: Authors' own creation

3.1.1 Phase 1: Data collection

Data collection was carried out through the Search tool on the Scopus website, through which a total of 253 publications were identified. To this end, search filters were established consisting of:

TITLE-ABS-KEY (research, AND university AND training, AND professional AND practice) AND PUBYEAR > 2016 AND PUBYEAR < 2023 AND (LIMIT-TO (AFFILCOUNTRY , "Brazil") OR LIMIT-TO (AFFILCOUNTRY , "Colombia") OR LIMIT-TO (AFFILCOUNTRY , "Chile") OR LIMIT-TO (AFFILCOUNTRY , "Mexico") OR LIMIT-TO (AFFILCOUNTRY , "Peru") OR LIMIT-TO (AFFILCOUNTRY , "Ecuador") OR LIMIT-TO (AFFILCOUNTRY , "Argentina") OR LIMIT-TO (AFFILCOUNTRY , "Cuba") OR LIMIT-TO (AFFILCOUNTRY , "Costa Rica") OR LIMIT-TO (AFFILCOUNTRY , "Venezuela") OR LIMIT-TO (AFFILCOUNTRY , "Puerto Rico") OR LIMIT-TO (AFFILCOUNTRY , "Paraguay") OR LIMIT-TO (AFFILCOUNTRY , "El Salvador") OR LIMIT-TO (AFFILCOUNTRY , "Bolivia")

- ✓ Published documents whose study variables are related to the study of the variables Research, University Training and Professional Practice.
- ✓ Limited to Latin American countries.
- ✓ Without distinction of area of knowledge.
- ✓ No distinction of type of publication.

3.1.2 Phase 2: Construction of analytical material

The information identified in the previous phase is organized. The classification will be made by means of graphs, figures and tables based on data provided by Scopus.

- ✓ Co-occurrence of Words.
- ✓ Year of publication
- ✓ Country of origin of the publication.
- ✓ Area of knowledge.
- ✓ Publication Type

3.1.3 Phase 3: Drafting of conclusions and outcome document

After the analysis carried out in the previous phase, we proceed to the drafting of the conclusions and preparation of the final document.

4. Results

4.1 Co-occurrence of words

Figure 2 shows the co-occurrence of keywords within the publications identified in the Scopus database.

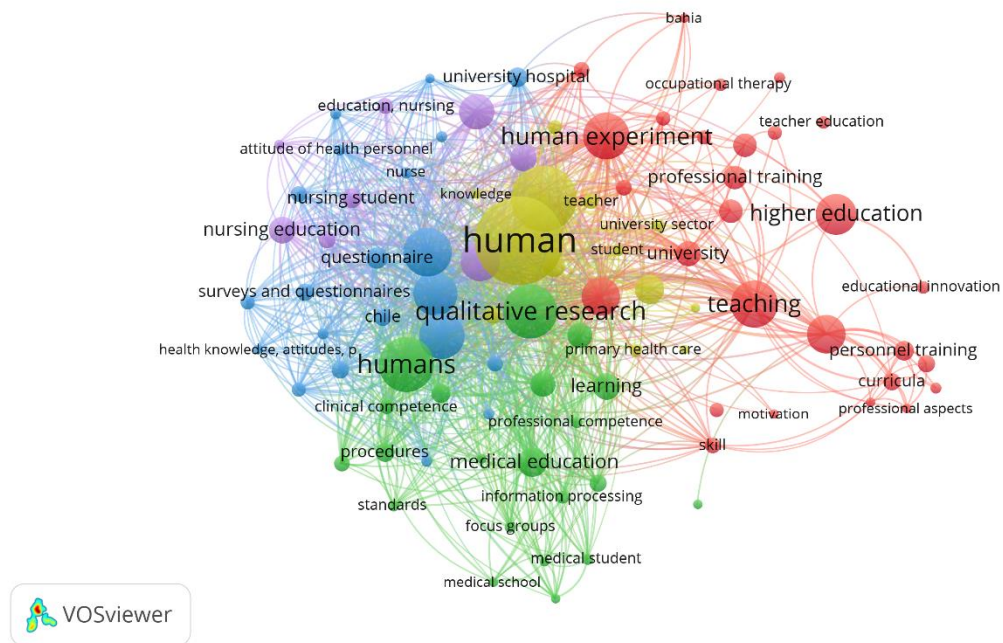


Figure 2. Co-occurrence of words

Source: Authors' own elaboration (2023); based on data provided by Scopus.

Higher Education was the most frequently used keyword within the studies identified through the execution of Phase 1 of the Methodological Design proposed for the development of this article. University is among the most frequently used variables, associated with variables such as Educational Innovation, Education, Learning, Research, Theory and Practice, Teachers. From the above, it is striking, the research serves as a transformative force in university education, weaving a seamless tapestry that connects theoretical foundations with practical applications. As students engage in the pursuit of knowledge through research, they not only deepen their understanding of academic concepts, but also cultivate the skills and perspectives essential for success in their future endeavors. This integration of theory and practice, facilitated by research, is not simply a pedagogical strategy; It is the essence of a comprehensive and empowering education that prepares students to navigate the complexities of an ever-evolving world.

4.2 Distribution of scientific production by year of publication.

Figure 3 shows how scientific production is distributed according to the year of publication, taking into account that the period between 2017 and 2022 is taken

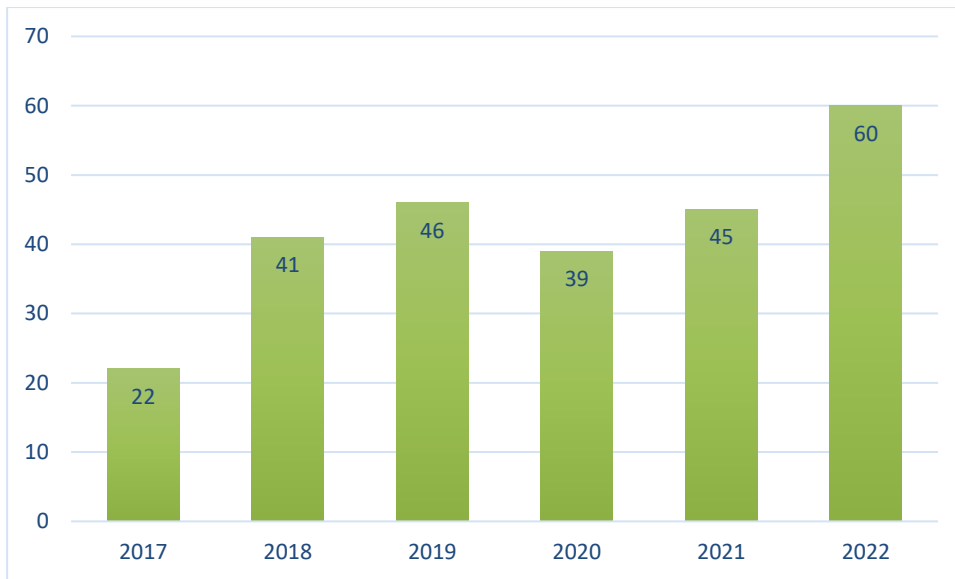


Figure 3. Distribution of scientific production by year of publication.

Source: Authors' own elaboration (2023); based on data provided by Scopus.

Among the main characteristics evidenced by the distribution of production

By year of publication, the number of publications registered in Scopus was in 2022, reaching a total of 60 documents published in journals indexed on this platform. This can be explained thanks to articles such as the one entitled "The business link: a form of organizational expression in universities" The purpose of this research is to describe the impact of the linking actions of companies in higher education institutions. The methodology was based on documentary studies and surveys applied to students and graduates of a University. The results highlight that students who participate in internship programs in organizations during their stay at universities have greater possibilities of exercising their professional practice. It is scientifically concluded that higher education institutions that provide internships to students in the industry increase their enrollment thanks to the incorporation into professional practice.(Tamayo, 2022)

4.3 Distribution of scientific production by country of origin.

Figure 4 shows how the scientific production is distributed according to the nationality of the authors.

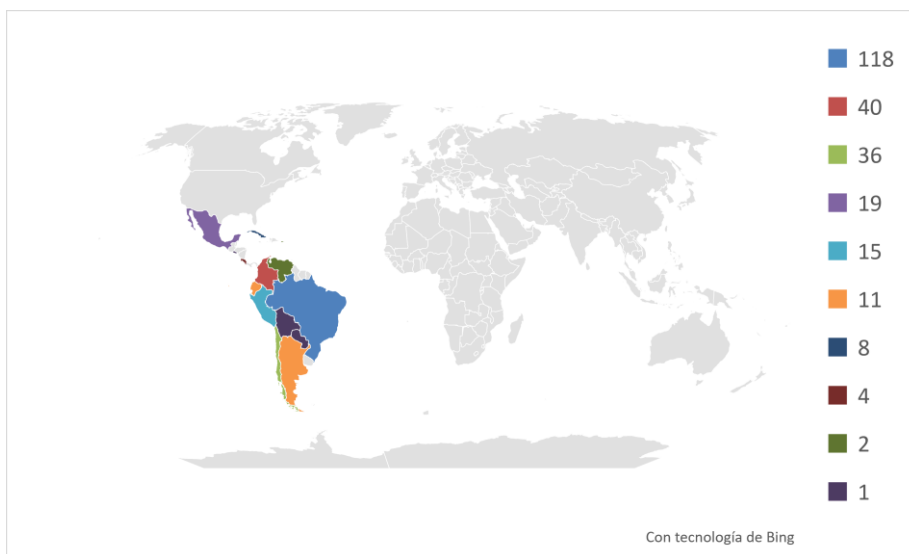


Figure 4. Distribution of scientific production by country of origin.

Source: Authors' own elaboration (2023); based on data provided by Scopus.

Within the distribution of scientific production by country of origin, registrations from Latin American institutions were taken into account, establishing Brazil as the country of this community with the highest number of publications indexed in Scopus during the period 2017-2022, with a total of 118 publications in total. In second place, Colombia with 40 scientific documents, and Chile occupying the third place presenting to the scientific community, with a total of 36 documents among which is the article entitled "Reflections on medical responsibility as a moral and legal value in the exercise of the profession" the present study aims to address in a reflective way the variable legal responsibility in students of Medical Sciences for the future impact on the exercise of their profession. Development: A review was carried out in certified databases for health research on the definitions and pedagogical treatment of medical responsibility towards which educational strategies are directed. They focus primarily on moral value rather than legal aspects related to the performance of the profession once students graduate from our universities. Conclusions: The educational conception proposed for the development of legal responsibility in students of medical sciences, in addition to philosophical, sociological and psychopedagogical assumptions, must integrate legal aspects. These must be addressed throughout their training, in order to expose the consequences and sanctions that may arise from professional irresponsibility and prevent errors by the future health professional, whose consequences may be criminal, civil and/or administrative.(González, 2022)

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows how the production of scientific publications is distributed according to the area of knowledge through which the different research methodologies are executed.

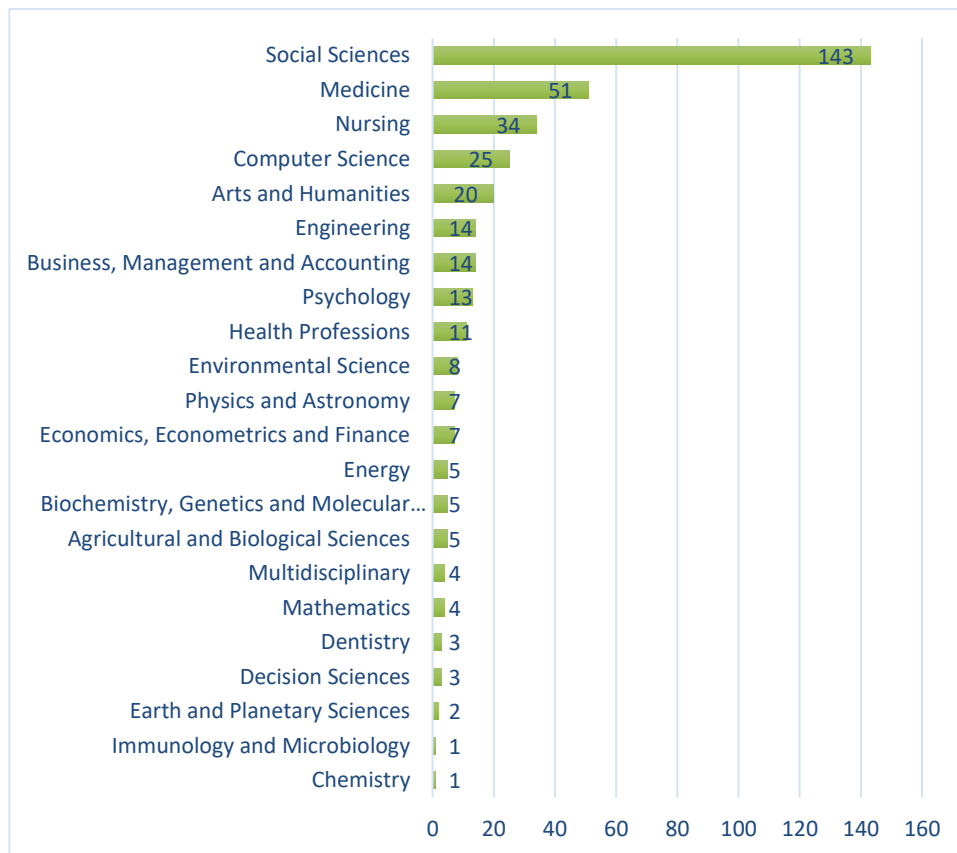


Figure 5. Distribution of scientific production by area of knowledge.

Source: Authors' own elaboration (2023); based on data provided by Scopus.

Social Sciences was the area of knowledge with the highest number of publications registered in Scopus with a total of 143 documents that have been based on its methodologies Research, University Training and Professional Practice. In second place, Medicine with 51 articles and Nursing in third place with 34. This can be explained thanks to the contribution and study of different branches, the article with the greatest impact was registered by Social Sciences entitled "Knowledge, attitudes and practices on environmental health in university students." This research aimed to determine the level of knowledge, attitudes and practices about environmental health in Ecuadorian students of the Huancayo campus of the Universidad Peruana Los Andes. The research was descriptive cross-sectional, whose sample was composed of 147 Ecuadorian students enrolled in the second semester of 2021 in medicine and nursing. As an instrument, the three-module, 18-item sustainability-related CAP survey was applied. For data analysis, proportions and summary measures, Spearman correlations, Kolmogorov-Smirnov test with Lilliefors correction were calculated. As a result, it was found that the level of knowledge was "Excellent" in terms of knowledge of the meaning of environmental health ($x: 3.62$), "Poor" in participation in environmental improvement actions in the community ($x: 2.35$) and "Poor" in participation in environmental education programs ($x: 1.27$), likewise, the percentage classification and scores of the investigated dimensions were "Bad" in the level of knowledge ($x: 52.01$), "Bad" in attitudes ($x: 53.23$) and "Bad" in practices ($x: 34.08$). It is necessary to implement strategies with a comprehensive approach in the training of professionals focused on the knowledge of environmental problems and the development of environmental behavior that has an impact on the improvement of public health.(Trigos, 2022)

4.5 Type of publication

Figure 6 shows how the bibliography is distributed according to the type of publication chosen by the authors

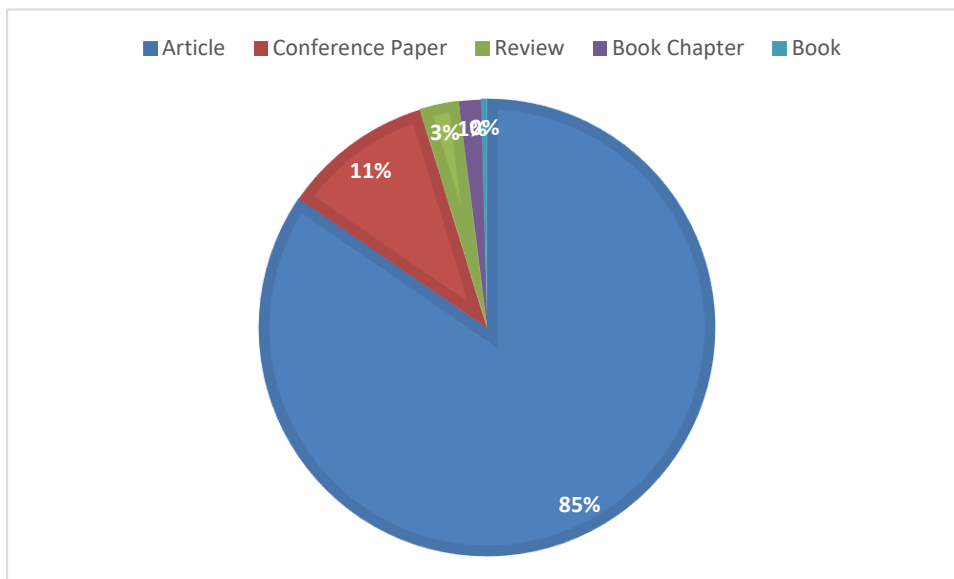


Figure 6. Publication Type

Source: Authors' own elaboration (2023); based on data provided by Scopus.

The type of publication most frequently used by the researchers referenced in the body of this document was the one entitled Journal Articles with 85% of the total production identified for analysis, followed by Session Papers with 11%. Journals are part of this classification, representing 3% of the research papers published during the period 2017-2022, in journals indexed in Scopus. In the latter category, the one entitled "The research-practice dialogue in the learning and teaching of second languages: past, present and future" stands out. This article explores ways in which a dialogue between researchers

and practitioners can be two-way, effective and beneficial for both professional communities. We suggest concrete directions for second language (L2) research: (a) a collaborative mindset, (b) the nature of the research, (c) spaces for dialogue, and (d) institutional support. First, we argue that we, both researchers and teachers, can develop a collaborative mindset and understand that dialogue is established through equal contributions and benefits. Second, we argue that if a researcher's intention is to impact practice, they should consider the practical relevance of their studies. We propose practice-based research, in which practitioners and researchers work together for the development and implementation of research. Third, we explore spaces where reciprocal contributions can be explored, including teacher training programs, professional development workshops, and collaborations between universities and schools. Finally, we share our hopes that institutions (universities and schools) will provide support to researchers and practitioners who help create and facilitate reciprocal relationships, such as time off and promotional incentives. Overall, we argue that researchers bear most of the responsibility for paving the way for a productive dialogue between research and practice in the future. (Sato, 2022)

5. Conclusions

Through the bibliometric analysis carried out in this research work, it was established that Brazil was the country with the highest number of published records for the variables Research, University Training and Professional Practice. With a total of 118 publications in the Scopus database. In the same way, it was possible to establish that the application of theories framed in the area of Social Sciences, were used more frequently in how the seedbeds of university research plan a bridge between theory and practice in education, this in turn fosters a joint relationship to improve the teaching and learning experience in general. Through research efforts, students gain a deeper understanding of theoretical concepts by applying them to real-world scenarios. This scenario not only employs theoretical knowledge, but also instills in students critical thinking, ranging from conflict resolution and a sixth sense of curiosity when acquiring knowledge. The integration of research into university education allows students to transcend the boundaries of textbooks and lectures, interacting with the complexities and nuances of their chosen fields. When executing a research project, students actively contribute to the expansion of knowledge within their disciplines, bridging the gap between theory and the practical application of that theory. Autocorrelation is essential to prepare students to challenge the difficulties of such a dynamic world where adaptability and innovation are key. Moreover, the symbiosis between theory and practice in research is not limited only to students. The members of the guideline body, through their research activities, remain at the forefront of advances in their respective fields, enriching their teaching methodologies and contents.

Ultimately, the role of research as a bridge between theory and practice goes beyond the confines of the classroom. It contributes to the development of a knowledgeable and intellectually curious individual, able to navigate the complexities of the professional world with a solid foundation in both theoretical knowledge and practical knowledge and knowledge of the world. Universities continue to prioritize research as an integral component of their educational frameworks, they play a crucial role in the formation of individuals who are not only informed scholars but also active contributors to the advancement of knowledge and society in general.

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