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INNOVATION AND TECHNOLOGY IN THE TEACHING OF ACCOUNTING SCIENCES: AN ANALYSIS OF CURRICULAR MATRICES AT HIGHER EDUCATION INSTITUTIONS IN GOIÁS

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Abstract:
This study aims to identify courses within the curricula of undergraduate accounting programs in Goiás, Brazil, that promote discussions on innovation and technology in their syllabi, focusing on improving teaching quality and academic performance. The research highlights the importance of adapting accounting education to contemporary work market demands by integrating active methodologies and Information and Communication Technologies (ICTs) into educational processes. The study examined the curricula of 138 Higher Education Institutions (HEIs), both public and private, across 69 municipalities offering on-campus and distance learning (DL) courses through document analysis. Results indicate that 73% of public HEIs include subjects related to innovation, compared to 47% for private on-campus programs and 33% for private (DL) programs. However, private institutions offer a wider variety of innovation-focused subjects, while public HEIs predominantly emphasize entrepreneurship. Overall, only 44% of the analysed HEIs provide courses focused on innovation and technology. This low percentage is attributed to traditional curriculum structures, financial and technological limitations in implementing new subjects, and a shortage of specialized faculty in innovation and technology. The findings underscore the need for revising and updating curricula to adequately prepare students for contemporary market demands.

Keywords: innovation, technology, accounting education, Goiás higher education institutions

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1. Introduction

Accounting, as an applied social science, is constantly adapting to environmental changes. Therefore, an educational process that enables accounting professionals to operate effectively in dynamic scenarios is crucial, acting as guardians of wealth and communicators of economic and financial information (Soares, Souza, Azevedo, Araújo, & Lima, 2020).

Accounting education has evolved in line with technological advancements, aligning academic training with labor market demands. It is imperative that educators integrate theory and practice (Viana, & Barreto, 2019), using active methodologies, Information and Communication Technologies (ICTs), and collaborative learning practices (Galvão & Schneider, 2023). These approaches present benefits and challenges, promoting student motivation and cognitive skills, although the effectiveness of technological tools varies.

The market requires accountants to possess an analytical mindset and familiarity with technology, enabling them to analyze data and make assertive decisions. Therefore, it is relevant that educational institutions integrate these technologies into curricula to form professionals capable of facing contemporary challenges (Círico, Telles, & Criscuolo, 2023).

Notably, technological schools offer free technical courses in areas such as artificial intelligence (AI), robotics, big data, and the Internet of Things. Although these courses are not specifically focused on accounting sciences, they contribute to developing relevant technological skills for this field. For example, the government of Goiás has launched initiatives to encourage entrepreneurship and innovation, such as financial support for startups led by women. This can benefit students and graduates of accounting sciences who wish to start their own businesses (Goiás, 2024). Similarly, public managers are concerned about market demands.

Brazil faces significant challenges in innovation, including excessive bureaucracy and lack of government support. These factors hinder digital transformation, placing the country in a disadvantageous position compared to others. For instance, while the global average investment in software development is 29%, in Brazil, it is only 4.5% (Pontes, 2023).

Innovation and technology are no longer options but market necessities for businesses in Brazil. The ability to innovate and adapt to market changes is essential for ensuring competitiveness and sustainability in an ever-evolving environment. Therefore, higher education institutions need to foster discussions about innovation and technology in the context of teaching, learning, research, and extension in their undergraduate courses (Guerra, Ribeiro, Sousa, & Dias, 2023).

Given this context, a research problem arises: How are discussions about innovation and technology integrated into the curricula of undergraduate accounting programs with a focus on improving teaching quality and academic performance in the

State of Goiás? To address this problem, the following objective was established: to identify in the curricula of undergraduate accounting programs disciplines that promote discussions about innovation and technology with a focus on improving teaching quality and academic performance in the State of Goiás.

Accounting, as an applied social science, requires an adaptable educational process to environmental and technological changes. The integration of active methodologies and information and communication technologies into accounting curricula is essential for forming professionals capable of operating in dynamic scenarios. The analysis of curricula reveals the need to include discussions about innovation and technology to improve teaching quality and academic performance. Furthermore, the Brazilian context, marked by challenges in innovation and digital transformation, highlights the importance of higher education institutions in fostering these discussions to ensure business competitiveness and sustainability. Therefore, it is fundamental that higher education institutions promote the integration of innovation and technology in their courses, preparing future accounting professionals to face contemporary challenges.

2. Theoretical Framework

2.1 Higher Education Technology

The evolution of accounting is intrinsically linked to the development of society, reflecting human, political, and economic demands over time. Both accounting and society have gradually evolved, remaining in constant transformation. The history of accounting spans decades, and its evolutionary process demonstrates a continuous adaptation to emerging needs (Schmidt & Gass, 2018).

The decision regarding the knowledge framework to be adopted in curriculum design is crucial, especially in light of contemporary challenges related to knowledge and information. Preparing future professionals for a constantly changing world requires training that values innovation and interdisciplinarity (Pietrocola, 2019).

Accounting education has improved as social demand for access to knowledge relevant to the accounting field has increased. According to Viana and Barreto (2019), accounting is a science that progresses in line with the activities of institutions and society, focusing on the assets of these institutions and monitoring the resulting transactions.

The influence of the environment in which activities are practiced is evident, as the social context allows agents to exert significant influence around them. Iudícibus, Marion, and Faria (2017) highlight that accounting progress occurs in proportion to economic development, exemplified by the emergence of the North American School of Accounting during the strengthening of the U.S. economy. Due to transformations in the social context, it becomes essential to follow regulations governing certain activities to better achieve expected objectives and ensure proper social coexistence.

The integration of knowledge in the accounting field is fundamental for building intellectual capital and training qualified professionals. The training of competent accountants and their contribution to organizational management generate significant returns, measurable through indicators such as job creation, technological advancements, production, taxes, and foreign exchange (Ramalho, Abrantes, Ferreira, & Ramalho, 2015).

Knowledge construction should occur in a dynamic and integrated context rather than a fragmented and static one. Therefore, it is imperative that the content taught across various disciplines be interconnected since interdisciplinarity is essential for a holistic understanding of these contents. Interdisciplinarity, defined as a teaching method where two or more disciplines interact, allows for the integration of concepts, application of ideas and methods, and mutual complementarity between the fundamentals and applications of the involved disciplines. This underscores the importance of accounting both in training accountants and in corporate decision-making processes (Ramalho, Abrantes, Ferreira, & Ramalho, 2015).

Accounting is deeply interconnected with socioeconomic development, reflecting human, political, and economic demands over time. The training of accounting professionals requires a curriculum approach that values innovation and interdisciplinarity, preparing them for a constantly changing world (Pietrocola, 2019). Accounting progresses in line with institutional and societal activities, focusing on assets and their transactions (Viana & Barreto, 2019).

The integration of knowledge in the accounting field is essential for building intellectual capital and training qualified professionals who generate significant returns for organizations (Ramalho, Abrantes, Ferreira, & Ramalho, 2015). Therefore, it is relevant that educational institutions promote an interdisciplinary and dynamic approach by integrating concepts and methods for a holistic understanding of accounting.

2.2 Innovation in Higher Education

Innovation in accounting education seeks to adapt to the constantly changing needs of organizations and society. According to Rios (2021), the implementation of new pedagogical methodologies in accounting courses aims to improve the planning and performance of educators. Iudícibus (2021) emphasizes that monitoring the evolution of companies' equity is fundamental to the accounting discipline. Traditionally, the growth of theories and practices has been closely tied to the progress of Brazilian societies, whether social, institutional, or economic.

As accounting theories and practices evolve, it is necessary to recognize that this progress is directly associated with the socioeconomic and institutional context in which organizations operate. Rios (2021) suggests that implementing new pedagogical methodologies in accounting courses improves educators' planning and performance. Just as accounting evolves, professionals in the field must also adapt to changes, altering their professional profiles to meet emerging demands.

Abreu and Carneiro (2021) argue that exclusive use of lecture-based teaching methods, from basic education to higher education, fosters a culture of student passivity and encourages inertia within a comfort zone where students become mere recipients of knowledge. This may be one of the factors initially causing resistance to adopting active methodologies in academic environments.

Soares, Souza, Azevedo, Araújo and Lima, 2020 (2020) note an increase in efforts within academic literature aimed at promoting studies on the development and application of active methodologies in accounting education. Consequently, active methodologies in accounting education have evolved, introducing distinct approaches that encourage students to develop critical thinking and participate more actively in classes. The goal is to prepare them to become professionals capable of responding and adapting to constant changes demanded by the labor market (Guerra & Teixeira, 2016).

Rios (2021) highlights that implementing new pedagogical methodologies in accounting courses is essential for improving educators' planning and performance, especially in an educational context demanding innovation and adaptation to market demands. These include: (i) innovative teaching; (ii) active learning methodologies; (iii) distance education (DL); (iv) project-based learning (PBL); (v) cooperative learning; and (vi) flipped classrooms.

In innovative teaching, traditional teacher-centered methodologies are being challenged by innovative approaches that place students at the center of the learning process. This theoretical framework explores some of these innovative methodologies, highlighting their characteristics, benefits, challenges, and relationships with the labor market.

Active learning methodologies employ strategies that directly involve students in the educational process. They include various approaches promoting interaction, collaboration, and practical application of acquired knowledge (Galvão & Schneider, 2023). Distance education uses digital technologies to offer courses and programs remotely. According to Carraro, Souza, and Behr (2017), this modality has proven effective for reaching a broader audience, providing flexible study schedules, and personalizing the learning process.

Project-based learning engages students in complex and challenging projects requiring the application of multiple skills and knowledge. This approach fosters collaboration, creativity, and problem-solving skills while preparing students for real-world workplace situations (Lovato, Michelotti & Loreto, 2018). Cooperative learning encourages students to work together in small groups toward common goals. According to Silva, Teodoro & Queiroz (2019), this method promotes socio-emotional skills such as communication, empathy, and teamwork essential for professional environments.

The flipped classroom methodology reverses traditional class structures. Students first study theoretical content at home through videos, readings, or other materials provided by instructors. Classroom time is then dedicated to practical activities,

discussions, and problem-solving exercises for deeper contextualized learning (Vargas, Scherer & Garcia, 2020).

The pursuit of innovation in education through approaches that break away from traditional methods is essential not only for classroom practice but also for advancing literature on accounting education. Such efforts underscore the importance of continuously exploring methods that inspire students creatively and consistently in their quest for knowledge while ensuring the training of professionals equipped to meet market challenges (Soares, Souza, Azevedo, Araújo, & Lima, 2020).

Innovation in accounting education is vital for adapting to the constantly changing needs of organizations and society. The implementation of new pedagogical methodologies, such as innovative teaching methods, active learning strategies, distance education programs, project-based learning approaches, cooperative learning models, and flipped classrooms, aims to enhance educators' planning while preparing students for an evolving job market (Rios, 2021). Active methodologies promote practical and interactive learning experiences that stimulate critical thinking and active student participation, which are key elements for training accountants capable of addressing contemporary challenges (Galvão & Schneider, 2023; Lovato, Michelotti & Loreto, 2018). The drive for innovation not only improves classroom practices but also contributes significantly to advancing research on accounting education while ensuring professionals are well-prepared for today's market demands.

2.3 Education in Accounting Sciences

Accounting science plays a pivotal role in socioeconomic development, as its analysis and monitoring of asset transformations evolve in harmony with societal advancements. As Viana and Barreto (2019) highlight, accounting, as an ancestral discipline, progresses in line with institutional and societal activities, focusing on the detailed study of assets and their transactions.

In the context of training accountants, students enter universities with the expectation of acquiring the necessary competencies to work in various areas of accounting, considering the university as the ideal environment for this formation, according to Silva and Ferreira (2016).

Regarding accounting education in a technological context, Marin, Agostinho, and Araújo (2020) emphasize that the International Federation of Accountants (IFA) stresses the need for adopting international standards through the International Accounting Education Standards Board (IAESB). These standards regulate essential aspects of professional accounting training, including technical competencies, professional skills, values, ethics, and the necessary posture for future professionals in the field.

The evolution in communication between organizations, driven by the internet and Information and Communication Technologies (ICTs), has significantly impacted the training of accounting professionals. According to Carraro, Souza, and Behr (2017), these

changes have transformed not only organizational culture but also the learning methods of accountants in the job market.

Carenys, Moya, and Perramon (2017) investigated the impact of using video games and simulators in teaching accounting and business students. They conducted experiments and analyzed participants' perceptions, concluding that integrating these technologies enhances students' learning experiences, increasing engagement and motivation. The authors highlight that gamification can facilitate a state of flow among participants, promoting greater well-being during educational activities.

Nagib (2018) explored the relationship between the adoption of active methodologies, the professional life cycle of educators, and their qualification in teaching undergraduate accounting. The study used an online questionnaire applied to professors of accounting courses in Brazil, obtaining 441 valid responses. The results indicated that the adoption of active methodologies is positively associated with educators' professional stage, academic and professional experiences, and pedagogical training. This study aimed to investigate the innovative teaching approaches described in the literature, evaluate their effectiveness in promoting student learning, and identify the challenges faced in implementing these methods.

2.4 Evaluation of Higher Education Quality

The evaluation of higher education quality in Brazil is a fundamental process to ensure excellence in the training of professionals across various fields, including accounting. To monitor and improve the quality of higher education, the federal government implemented the National System for the Evaluation of Higher Education (NSEHE) in 2004, as established by Law No. 10.861/2004. NSEHE comprises three main components: (i) National Student Performance Exam (NSPE); (ii) Preliminary Course Concept (PCC); and (iii) evaluation of Higher Education Institutions (HEIs) (Lovato, Michelotti, & Loreto, 2018).

Article 3 of Resolution No. 10/2004 of the National Education Council (NEC) establishes guidelines for bachelor's degree programs in accounting sciences, emphasizing the comprehensive training of future accountants. These professionals must be capable of understanding scientific, technical, social, and economic issues in national and international contexts while considering different organizational models. Furthermore, they are expected to demonstrate full mastery of functional and equity responsibilities, including assessments, audits, and arbitrations, as well as critical-analytical skills to address organizational implications resulting from information technology and systematic processes.

Regarding NSPE, it is an evaluation that integrates NSEHE and aims to assess the performance of graduating students in undergraduate programs. Established by the federal government through Law No. 10.861/2004, NSPE seeks to measure the knowledge acquired by students throughout their studies, focusing on the skills and competencies developed during their academic training (Machado, 2014). This assessment is applied to

both on-campus and distance learning programs to ensure that all students meet a nationally defined quality standard.

The PCC is another key component of SINAES. It is a quality indicator that evaluates undergraduate courses based on various criteria. It considers student performance in NSPE, the value added by the educational process, and inputs related to course offerings, such as faculty qualifications, infrastructure, and didactic-pedagogical resources (INEP, 2017). This metric provides a comprehensive view of course quality, helping identify strengths and areas needing improvement.

In accounting courses specifically, NSPE has been applied in specific years such as 2006, 2009, 2012, 2015, 2018, and 2022. The information gathered through these exams is essential for evaluating the quality of education provided and implementing improvements where necessary. Additionally, it has been observed that students from private institutions tend to perform better than those from public institutions a difference that may reflect disparities in infrastructure quality and faculty qualifications.

It can thus be inferred that evaluating higher education quality in Brazil is a process that contributes to ensuring excellence in professional training across fields such as accounting. The National System for the Evaluation of Higher Education (NSEHE), instituted in 2004, plays a crucial role in this context with its components like NSPE, PCC, and HEI evaluations (Lovato, Michelotti & Loreto, 2018). NSPE and PCC serve as tools to measure student performance and course quality, respectively, enabling the identification of improvement areas and promoting academic excellence (Machado, 2014; INEP, 2017). Furthermore, NSEHE aims to enhance higher education quality while guiding its expansion and increasing its institutional and social effectiveness (Brasil, 2004).

3. Methodology

The research was based on the curricula of accounting courses offered by Higher Education Institutions (HEIs) located in the State of Goiás, which provide accounting programs in both on-campus and distance learning (DL) modalities. The study was conducted through document analysis during the evaluation periods of May to July 2024 and February to March 2025.

3.1 Population, Sample, Data Collection, and Analysis

The population and sample of the research consisted of 138 active public and private HEIs distributed across 69 municipalities in Goiás. Among these municipalities, 54% offer courses exclusively in the distance learning (DL) modality, while 4% combine DL and on-campus modalities. The latter are located in the municipalities of Goiânia, Anápolis, and Jataí. This result indicates that out of the 246 municipalities in Goiás, 47% offer accounting courses in both EAD and on-campus modalities.

It is important to note that within the total number of HEIs, there are campuses, branches, and academic units. Of the 138 HEIs offering accounting courses, 64 are on-campus programs, and 77 are remote programs. Additionally, three HEIs offer both on-campus and DL modalities (as presented in Table 1). This diversity of modalities reflects the complexity and variety of educational offerings within the state.

Table 1: Distribution of Population and Sample of Courses

Classification	**Modality**	**Number Courses**
Private	Distance Learning	77
	Presential	53
	Sub-total	130
Public	Distance Learning	-
	Presential	11
	Sub-total	11
Private and Public	**Grand total**	**141**

Source: Research data (2025).

The data collection process was conducted through the portal of the Coordination for the Improvement of Higher Education Personnel (CIHEP) during the periods of May to July 2024 and February to March 2025. For the purposes of the National Student Performance Exam (NSPE) score, the 2022 evaluation was considered. The analysis of results was based on data collected from CIHEP, as well as the syllabi and teaching plans of Higher Education Institutions (HEIs) and their respective courses.

4. Discussion and Analysis of Results

4.1 General Characteristics

During the period from May to July 2024 and February to March 2025, 138 Higher Education Institutions (HEIs) offering undergraduate accounting programs in the state of Goiás were selected based on information available on the Coordination for the Improvement of Higher Education Personnel (CIHEP) portal. Additionally, the syllabi and teaching plans of each institution were collected. These HEIs are distributed across 69 municipalities, three of which offer the program in both presential and distance learning (DL) modalities, resulting in a total of 138 HEIs and 141 courses offered.

The analysis conducted covered curricular matrices, syllabi, teaching plans, as well as the pedagogical plans of the institutions, aiming to identify the presence of courses addressing innovation and technology (as presented in Table 2). This study focused primarily on evaluating the integration of innovative and technological content into the curricula of accounting programs to understand how these institutions are preparing future professionals for contemporary market demands.

Table 2: Profile of Classroom and Distance Learning Courses

Item	Mode	Nom	Noc	Aw	Anos	Cwa NSPE	Eg NSPE 1	Eg NSPE 2	Eg NSPE 3	Eg NSPE 4	Eg NSPE 5
Private	DL	41	77	3168	46	24	1	19	21	11	1
	Presential	26	53	3120	52	8	1	10	20	12	2
	Sub-total	67	130	3144	49	32	2	29	41	23	3
Public	DL	-	-	-	-	-	-	-	-	-	-
	Presential	11	11	3171	48	-	-	-	5	5	1
	Sub-total	11	11	3171	48	-	-	-	5	5	1
Total	**DL + Presential**	**78**	**141**	**3156**	**48**	**32**	**2**	**29**	**46**	**28**	**4**

Note: Nom = Number of municipalities; Noc = Number of courses; Aw = Average workload; Anos = Average number of subjects; Cwa = Course without assessment NSPE; Eg = Evaluation score NSPE.
Source: Research data (2025).

Still based on Table 2, which presents a detailed profile of accounting courses offered in both on-campus and distance learning (DL) modalities, in both private and public institutions, it can be inferred that approximately 23% of the courses do not yet have an NSPE score, as they were established and authorized after the last edition of the exam, held in 2022. Additionally, it is observed that public institutions do not offer the course in the DL modality, limiting themselves to the on-campus modality.

The concentration of accounting course offerings is mainly in the municipalities of Goiânia, Anápolis, Aparecida de Goiânia, and Rio Verde. This concentration can be explained by the economic power of each municipality, which tends to influence the demand and supply of higher education courses. Another notable point is that the total course hours are similar in both on-campus and DL modalities, although a small variation is observed in the DL modality compared to the on-campus modality. This similarity suggests that institutions seek to maintain a standard of quality and curricular extension, regardless of the teaching modality.

In the results of the National Student Performance Examination (NSPE), it is observed that 65% of private higher education institutions (HEIs) in the distance learning (DL) modality received scores of 1 and 2. In the presential modality, this percentage is 35%. Regarding scores 3 and 4, both DL and presential courses show the same percentage, of 50%. Finally, a score of 5 was achieved by only one DL course and two on-campus courses, all located in the municipalities of Goiânia (UFG and Associated College of Goiânia) and Rio Verde (University of Rio Verde). Regarding courses offered by public HEIs, only UFG holds a score of 5, while the others have 50% with a score of 3 and 50% with a score of 4.

It was also found that private institutions offer a greater diversity of courses, both in DL and on-campus modalities, while public institutions focus more on the on-campus modality. Additionally, private institutions tend to have a greater variety of NSPE scores, possibly reflecting a greater heterogeneity in the quality of courses offered.

In Table 3, the results related to the offering of innovation-related disciplines in accounting courses are presented, considering the teaching modalities (DL and presential) and the type of institution (private and public). It is observed that among the

courses offered in the DL modality, 67% do not include in their curricular matrices, syllabi, or teaching plans disciplines or discussions about innovation and technology. The courses that offer such common disciplines include entrepreneurship, which addresses discussions about innovation and technology.

Table 3: List of Subjects Offered by HEIs/Courses

Ranking	Modality	Curses	Ido*	Dnodi*	Disciplines
Private	DL	77	29	48	Entrepreneurship; Technology and Innovation; Digital Teaching; Informatics and Information; Entrepreneurship and Business Plan; Entrepreneurship, Innovation, and Creativity; Digital Teaching; Informatics and Innovation; Entrepreneurship, Innovation, and Creativity; Marketing Fundamentals; Artificial Intelligence; Information and Communication Technology; Creativity and Innovation Management; Innovation Management and Startup Laboratory.
	Presential	53	25	28	Entrepreneurship; Innovation Management and Technological Advances; Business Plan and Innovation; Personal Marketing; Entrepreneurial Behavior; Management and Marketing; Digital Tools Applied to Management; Business Technology; Digital Accounting; Startup Initiation; Technology for Business Management; Digital Culture; Introduction to Data Science and Big Data; Technological Methodology; Digital Media.
Public	DL	-	-	-	-
	Presential	11	8	3	Entrepreneurship; Business Plan; Innovation and Management Technology; Technology and Innovation; Creativity in Organizations; Business Technology; Information Technology.
Total		**141**	**62**	**79**	**Note: sum of presential + distance learning**

Note: Ido* = Innovation Discipline Offer; Dnodi* = Does not offer Discipline Innovation.
Source: Research data (2025).

Regarding courses in the on-campus modality, both in private and public institutions, it was found that 53% of private institutions do not offer innovation disciplines, with common disciplines being entrepreneurship and business planning. In public institutions, only 27% of courses do not offer innovation disciplines, with entrepreneurship being the most common discipline.

There is a significant concentration of private sector courses (DL and on-campus) that do not offer innovation and technology disciplines compared to public institutions. This difference is attributed to the larger number of private institutions. It is important to highlight that private institutions offer more courses in both DL and on-campus

modalities, totaling 130 courses (77 DL + 53 on-campus), while public institutions offer only 11 on-campus courses.

Additionally, it is noted that most private courses do not offer innovation disciplines, with 48 DL and 28 on-campus courses lacking this offering. In public institutions, most courses offer innovation disciplines, with 8 on-campus courses. Although private institutions present a greater diversity of innovation-related disciplines, including entrepreneurship, information technology, artificial intelligence, and creativity and innovation management, public institutions also offer relevant disciplines, but with less diversity.

This analysis suggests that private institutions have a greater presence in the higher education market, especially in DL, and offer a wider variety of innovation-related disciplines. Public institutions, although fewer in number, tend to offer more innovation disciplines in their on-campus courses.

In general, the analysis of accounting courses in the state of Goiás reveals a significant distribution of higher education institutions (HEIs) in different municipalities, with a greater concentration in Goiânia, Anápolis, Aparecida de Goiânia, and Rio Verde. This concentration is related to the economic power of these regions, influencing the demand and supply of higher education courses. Private institutions offer a greater diversity of courses, both in DL and on-campus modalities, while public institutions focus more on the on-campus modality. Additionally, it is observed that private institutions tend to have a greater variety of NSPE scores, possibly reflecting a greater heterogeneity in the quality of courses offered.

Regarding the inclusion of innovation and technology disciplines, it is noted that private institutions have a greater presence in the market, especially in DL, but a significant portion of their courses do not offer such disciplines. In contrast, public institutions, although fewer in number, tend to include more innovation disciplines in their on-campus courses. The entrepreneurship discipline is common in both private and public institutions, addressing discussions about innovation and technology. This analysis suggests that, despite the greater diversity of disciplines in private institutions, public institutions prioritize the inclusion of innovative content in their on-campus courses.

4.2 Identification of the Main Innovative Approaches Currently Used in Teaching Accounting by the HEIs Researched

The analysis of the curricular matrices of accounting science courses in Higher Education Institutions (HEIs) reveals a diversified approach in incorporating disciplines focused on innovation and technology. The pedagogical practices in HEIs present a variety of methodologies that encourage active student participation, such as project-based learning (PBL), flipped classrooms, and distance education.

However, institutions that offer disciplines directly focused on these innovative approaches, such as Entrepreneurship and Marketing, Innovation and Entrepreneurship,

Technology and Innovation, Technological Innovation in Management, and Entrepreneurship, Business Plan and Innovation, are possibly meeting the market's demands for professionals with skills in technological tools and advanced methodologies.

The importance of technology in accounting education is widely discussed by Soares, Souza, Azevedo, Araújo, and Lima (2020), who argue that the application of active methodologies is crucial for forming professionals capable of facing contemporary challenges. Guerra and Teixeira (2016) also reinforce that education should include the development of an analytical mindset and familiarity with technology, highlighting the urgent need for curricular adaptation in HEIs. These authors emphasize that, although there are innovative approaches in some institutions, the lack of consistent application across the entire sample reflects a gap in preparing students for an increasingly technological and dynamic job market.

The results indicate that only 44% of the analyzed institutions offer disciplines directly focused on innovation and technology in accounting science courses, considering both on-campus and DL modalities. This percentage can be explained by resistance to change in traditional curricular structures, lack of financial and technological resources to implement new disciplines, and the shortage of professors specialized in innovation and technology (Círico, Telles, & Criscuolo, 2023).

Additionally, complementary data from the 2022 Synthesis Report of the Accounting Sciences Area show that 5,745 students were enrolled in the state of Goiás, of which 49% did not attend to formalize their enrollment. These data suggest a need to review teaching and recruitment strategies to better meet market and student demands.

4.3 Comparison of Innovative Pedagogical Practices with Traditional Accounting Teaching Methods in the HEIs Researched

Regarding the comparison between innovative pedagogical practices and traditional accounting teaching methods in the institutions researched, the study identified that, although some Higher Education Institutions (HEIs) begin to incorporate disciplines focused on innovation, the majority still rely on traditional methods. This difference reflects a disparity in student performance on the National Student Performance Examination (NSPE) and suggests a possible inadequacy in preparing professionals to face the challenges of the contemporary market, which requires both a solid theoretical foundation and practical skills and mastery of technologies. Thus, while traditional methods remain fundamental for conceptual learning, they may not be sufficient to fully meet the demands of a constantly evolving market.

Therefore, it can be inferred that HEIs have a contributory role in the qualification process of these accounting professionals, who are protagonists in the adoption of new technologies and innovation practices. In this context, it becomes opportune for HEIs to promote a review of their curricular matrices and seek the inclusion of disciplines focused on innovation and technology, improving student formation and performance, and

aligning themselves with market demands. This can be achieved through the implementation of active methodologies, such as project-based learning (PBL) and flipped classrooms, which stimulate active student participation and the resolution of real-world problems, better preparing them for the contemporary demands of the accounting market.

5. Conclusion

The analysis of the curricular matrices of 138 Higher Education Institutions (HEIs) in Goiás revealed a disparity between public and private HEIs regarding the teaching of innovation disciplines. On one hand, 73% of public HEIs offer some innovation discipline, while in the private sector, 47% of on-campus courses and 33% of distance learning (DL) courses offer these disciplines. However, the private sector offers a broader range of innovation disciplines, whereas in public HEIs, the thematic axes revolve around entrepreneurship as a common discipline.

The results also reveal, regarding pedagogical practices in teaching disciplines focused on innovation and technology, an approach that encourages more active student participation, such as flipped classrooms, distance education, and project-based learning (PBL). This demonstrates an alignment of thought between the content taught and how academia offers this knowledge, as well as what the market expects from these professionals in the future. However, we can observe that only 44% of the analyzed institutions offer disciplines focused on themes like technology and innovation in accounting science courses, both in on-campus and DL modalities. This percentage below half of the analyzed HEIs can be explained by factors such as resistance to change in traditional curricular structures, lack of financial and technological resources for implementing new disciplines, and the scarcity of professors specialized in innovation and technology.

Regarding accounting education in the analyzed HEIs, it was found that there is the opposite of pedagogical practices in relation to the specific teaching of innovation and technology disciplines. While the latter involves more dynamic and participatory teaching by the student, general accounting education still predominates with traditional methods. This difference can be perceived in objective metrics such as student performance on the National Student Performance Examination (NSPE), as well as in published studies that show a possible inadequacy in preparing professionals to face the challenges of the contemporary market, which requires not only a solid theoretical foundation but also practical skills and mastery of technology. It is important to emphasize that this study does not intend to classify universities in terms of teaching quality. The research focus was exclusively on analyzing curricular matrices without conducting any qualitative evaluation of courses or the academic performance of institutions. Thus, the objective was to understand how innovation and technology

disciplines are integrated into Accounting Science curricula without making judgments about the quality of education offered by the analyzed institutions.

For future research, it is suggested to replicate the study on a national scale, expanding the database to include higher education institutions from other regions of Brazil, providing a broader view on the integration of innovation and technology into Accounting Science curricula. Additionally, it is essential to analyze the effectiveness of innovation and technology disciplines in student formation and their preparation for the job market, including studies on the performance of graduates. Comparative studies between on-campus and distance learning modalities are also recommended to detect differences in acquiring knowledge about innovation and technology. Furthermore, it is important to investigate the perception of students, teachers, and employers about the importance and effectiveness of these disciplines, seeking insights for curricular improvements.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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