Chapter

What Was Published in Accounting Education Journals about Accounting Teaching?

Rui Jorge Rodrigues da Silva,
Maria Margarida Mendes Rodrigues
and Maria do Céu Gaspar Alves

Abstract

The curricular units related to the accounting area are essential for any student in business sciences. However, it appears that students generally experience great learning difficulties when faced with its study. Bearing in mind the stated problem and its consequent importance, both in academic terms and for society in general, this article aims to: (1) Identify how many studies related to Accounting Education in Higher Education Institutions have been published in Accounting Education journals since started its scientific activity; (2) List a ranking of articles having as a criterion the number of citations; (3) Describe the main conclusions and research methodologies used; (4) State the main research areas and topics and (5) List the research paradigms used in the articles. The systematic review of the literature shows concern in HEIs to promote quality education in general and the curricular accounting unit.

Keywords: Accounting Education, Higher Education, Accounting Teaching, Accounting Academic Performance, Competences, Motivations

1. Introduction

Currently, accounting has spread to all courses in the area of Management and Economics. However, it appears that students are not prepared for this curricular unit that is both interesting and complex. Its specificity leads to learning difficulties where everyone must assume their responsibilities, from the teacher who teaches to the student who learns.

Therefore, teachers must arouse curiosity about this topic in students, helping them learn that what seems difficult is not always the case. The most profoundly traditional teaching methods are not always the most attractive to the student. It is necessary to innovate in accounting, making it more attractive to the target audience.

Considering the above problem and its importance for universities in general and teachers and students in particular, this article aims to identify how the teaching of accounting has been taught in HEIs as it intends, through a systematic literature review based on articles published in journals in this thematic area, understand what the necessary skills that accounting students must have to be successful in learning this curricular unit are.

Students' approaches to the learning context and their perceptions are considered the primary influence on their success [1, 2]. According to Entwistle et al. [1], student learning is more affected by the perception of teaching than by the teaching methods themselves. In this context, teaching includes methods and a strong teacher-student interaction, which is fundamental to a good university learning environment [3, 4].

A fundamental principle of student-centred learning refers to the importance of being consulted about the teaching process of which they are an integral part, leaving the more traditional pedagogical approaches in which teaching was centred on the teacher, thus making the student more passive [5, 6].

Several research types have concluded that student involvement is one of the crucial aspects of their learning, directly influencing retention rates [7–9]. In this sense, if universities intend to improve retention rates and student satisfaction with the teaching-learning process, they need to pay more attention to students' real needs and expectations [6].

Ramsden and Entwistle [10] refer that the quality of teaching, in whatever area, is directly influenced by teachers' attitude. As a general rule, ineffective teachers promote discouragement of positive attitudes by students.

Students' educational experience and learning background have a substantial influence on their orientation to study [11, 12]. Some authors argue that the student's behavior concerning learning is strongly related to their motivation [13]. However, this also varies according to the learning field [14].

The literature identifies three approaches related to simple, profound and self-fulfilling approaches, being said that a student who takes a more straightforward approach is intrinsically motivated. One who takes a deeper approach is intrinsically motivated [15]. In the context of accounting, it is stated that students must first learn the terminology, basic concepts and procedures and only later can they use their new knowledge acquired according to the context in which they are inserted [16, 17].

In the context of the present research, it appears that the learning of accounting does not escape the rule of what has already been saying about perceptions, attitude, teacher involvement, student involvement and motivation. Accounting teaching is seen as essentially technical [18], which is an area that usually attracts a population with a more advanced academic level. It is recurrent that a graduate student reveals more significant difficulties in learning this subject than a graduate or master student [19]. Some studies reveal that there are some obstacles in the learning of this topic, where the absence of previous school bases, the inexperience resulting from the diversity of the student population, language barriers, socio-economic, cultural and educational contexts are highlighted. Oral and written communication skills are also considered fundamental to the success of accounting learning, and HEIs need to be concerned with finding ways to improve these capacities in order to obtain better future results [20–22].

These aspects can prove to be obstacles that increase the complexity of the learning environments in HEIs, posing problems related to heterogeneous competencies among students that directly influence learning [23]. In fact, a gap between students 'expectations and what they experience can result in students' resistance to accepting new teaching approaches, leading to less academic performance or even, in extreme cases, abandoning the institution [24, 25].

Universities are faced with the challenge of maintaining a balance between the products (courses) they offer and the actual preferences of their customers (students), trying to optimize this balance in order to remain in the market [26].

Concerning accounting, universities need to keep up-to-date by not shying away from the need to keep up with technological innovation that allows them to take a learning approach that complements traditional teaching [27].

In addition to increasing technological updating in accounting education, it is necessary to make it more practical, encouraging student participation in projects aimed at their learning in the field [28].

The accounting learning approach is influenced by how students view it and can be superficial or profound, leading to different learning outcomes making them capable of solving more or less complex problems as well as making them more or less capable of understanding the social and critical perspectives of accounting [29]. Some studies show that most accounting students learn only superficially this scientific field of knowledge, thus becoming less able to solve problems that prove to be more complex [30–33].

On the other hand, working in a team is acknowledged as a good accounting learning practice as the exchange of experiences and acquired knowledge allows students to improve their learning skills [34].

The present research intends to fill a gap found in the literature related to the fact that no systematic review of the literature has been found that focuses in detail on the teaching of accounting in HEIs and whose scientific publication has been carried out in one of the most important journals in this field of knowledge: Accounting Education.

2. Literature review

2.1 Accounting teaching and learning in higher education

Learning depends on the availability of time one gets assigned and the intellectual resources made available to achieve the expected results. In this sense, one of the main motivations of students is competitiveness with their colleagues [35]. As a result of several types of research, it was possible to identify the main aspects that influence learning, being the structure and relevance given to the contents [36], the conception of learning [37], motivation [38] and the approach to learning [36].

According to various researches, in order to be successful in accounting teaching and learning, several skills are needed, such as an excellent entrepreneurial spirit, good ability to solve practical problems, communication and interpersonal skills, good management and negotiation skills as well as an excellent theoretical background [39, 40]. In this sense, the skills of the professional who teaches and the student who learns must be much more than essentially technical, maturity, interpersonal effectiveness and general psychological well-being are necessary, not forgetting other essential aspects such as oral and written communication skills, sound reasoning and reasoning skills [39, 41].

From the students' point of view, academic success is of paramount importance, as the possibility of failure entails emotional and financial costs [42]. According to these authors, from the point of view of the HEIs, students' failure can promote discredit caused by high retention rates.

Marriott [43] refers that teachers who teach the curricular accounting units assume themselves as extrinsic motivators of their students in the sense of indicating the right path for learning, which, in the vast majority of cases, is essentially superficial. However, students' approaches to learning can be modified through new teaching strategies aimed at improving academic results, that is, teaching methods that are oriented towards a more practical component and more related to

the fundamental requirements of the accountant profession [44, 45]. In education in general and of accounting in particular, one of the main concerns is related to the apparent ineffectiveness of the teaching given in the HEIs, and this inefficiency is attributed to the lack of motivation shown by both teachers and students [46]. Bui and Porter [47] refer that in the teaching of accounting, the students lack the desired skills. However, the teachers' lack of time to devote the necessary energy to their teaching is also the problem, making it more stimulating and motivating. In turn, students also report some disappointment as they find that their teachers are not enthusiastic about teaching, which causes demotivation. The latter author mentions in his research that the students see the teacher's enthusiasm as essential to increase their intrinsic motivation in an indirect and extrinsic way directly, assuming itself as a preponderant factor in the evaluation of the quality and effectiveness of teaching. Another aspect mentioned in the literature is related to the gap between the expectations previously established by the students and the reality they encounter in the classroom environment [46].

Patel et al. [48] report in their research that accounting students are influenced by cultural and social factors that interfere with their ability to learn. In this sense, language-related barriers are also important in learning and can constitute obstacles to the interiorization of contents [49].

Students' experience throughout their academic career also influences their orientation towards study, making them more independent as a result of their greater adaptation to the academy in general and to the curricular units in learning in particular [50]. The same author states that the greater the educational experience of students, the less dependent they become on teacher-centred learning as a result of the number of years of presence in the academy. This conclusion is consistent with the research carried out by Lee and Lodewijks [51]. They concluded that students in their final year of university are more likely to change their learning approaches than their peers in the early years. Within this line of thought, several researchers refer that accounting students must experience rigorous and profound learning of topics to apprehend them consistently in the sense that, if they choose this field in the future, they become better professionals [52–54]. Despite considering the importance of rigor and deepening of learning in accounting, these same authors consider it is challenging to lead students to this intellectual aspiration, saying that it would be essential that this type of learning be experienced as early as the first years of higher education.

Turner and Baskerville [55] also concluded that a general change in accounting students' attitude, focusing on more profound and more rigorous learning in the first weeks of the course, allows you to provide them with a solid basis for their learning be more active and effective.

As research is a constant academic requirement, teachers inevitably have to pay attention to it, sometimes neglecting, even without any intention, the quality of their classes [56]. However, with the impact of accounting research less academically visible and therefore more difficult to value, as in other areas [57], this makes that in many cases, research related to this area does not become an asset that influences students, for research in accounting has been identified as a process that is excessively away from the practical reality that is the one which is more prevalent in the context of the teaching-learning process in HEIs [58].

2.2 Student learning skills and teacher teaching strategies -

Crawford et al. [59] refer in their research to the necessary skills that a student should have when entering the job market in the field of accounting and the skills that future employers expect them to have. In fact, knowledge of these skills is a

strong help for teachers to adapt their teaching methodologies to fulfill those needs. The study concluded that analytical, oral and writing skills are fundamental, so it should be easily seen that universities have every interest in moving in that direction.

In the context of accounting education, it appears that there is an effort aimed at encouraging students to greater participation through the construction of their knowledge and practices [48]. In this sense, accounting students, to achieve excellence goals, need to integrate and adapt to learning approaches that improve academic performance, progress and seek superior quality learning results [60–62].

Although students' efforts are crucial to their academic success, the importance of accounting teachers cannot be overlooked, who must, above all, be aware of the needs and difficulties of students in the classroom and outside the classroom [63]. The author mentions in his research that the program's quality, the methodology used, and the resources available prove to be fundamental for the improvement of the accounting learning environment.

Many studies related to teaching and learning focus on certain concrete aspects of teaching, such as strategies, skills and methodologies applied to each context [64]. However, according to these authors, education in general and its strategies, skills and methodologies applied in particular cannot be considered just as an isolated sequence in order to achieve particular objectives. Teaching should be seen as a set of relationships where changing one aspect necessarily requires changes in other aspects [62]. However, in the vast majority of cases, this aim is tough to achieve.

Regarding the methodologies preferred by students, studies show that students prefer expository classes, with step-by-step teaching, resolution of exercises and functional specification of content instead of other methodologies [62]. However, the various teaching methodologies are never completely good or bad, effective or ineffective, appropriate or inappropriate as they depend on several factors that affect the success of the teaching-learning process, such as teacher quality, content difficulty, classroom environment, school background, among others [65].

A single teaching method usually cannot create all the conditions effectively because each topic has its complexity and specificity. It is necessary to adapt to the best method for each situation. Teachers may find it impossible to adopt very sophisticated teaching strategies because the curricular unit is very specific, technical and sometimes also theoretical from a conceptual perspective [66].

In the era of digital technology, it becomes crucial to understand whether the teaching of accounting should initiate innovative changes in its methodology, trying to understand whether this change may or may not bring pedagogical complexities resulting from innovative approaches [67].

Owens and Price [68] found in their researches that the use of technologies is already so every day that, in the classroom, students already consider them as traditional teaching. For this reason, the authors question whether education has already reached a turning point and is on the threshold of being entirely transformed by innovative digital technologies that place it on the next level of qualitative evolution. However, according to Taylor and Newton [69], students are still not convinced that technology can improve their learning experience.

Several researchers say it is a significant challenge to adapt universities to new teaching methodological trends that increase student preferences and teacher motivation [70–72]. The truth is that many teachers remain accustomed to the usual routine, resisting the necessary change in the teaching paradigm [73–75], mainly ignoring the necessary change due to apparent lack of knowledge of new technologies [76].

Watty et al. [77], in their research, concluded that some professors are innovative in the application of new technologies. However, there are still many that prove to be inhibitors to their use. These authors discovered four factors that demonstrate resistance to the implementation of new technologies in the teaching of accounting. These factors are (1) resistance of the teaching staff - insofar as it appears that the teaching staff presents resistance to the use of new technologies due to the existence of opposition to the change in teaching methods. This resistance is due to the lack of knowledge/adaptation to the use of new technologies and also to the preference of teachers for more traditional teaching approaches; (2) Individual and solitary innovators - insofar as there are teachers who individually try to implement new technologies, being, in their curricular units, pioneers of innovation. However, they report that when they tried to implement new technologies, they felt strong resistance from their co-workers; (3) Comfort zone and generational attitudes - it appears that the teaching staff is resistant to the use of new technologies due to the existence of opposition to the change in teaching methods. This resistance is due to the lack of knowledge/adaptation to the use of new technologies and also to the preference of teachers for more traditional teaching approaches; (4) Lack of support from teaching staff – the lack of support from the rest of the faculty was found as a form of resistance to the adoption of new technologies. The lack of support is due to the lack of knowledge that some teachers reveal about the use of technology, the need to relearn and the fear of appearing incompetent for not knowing how to use these tools.; (5) Lack of time and overwork by the teaching staff - the teachers revealed that the immense workloads they have do not allow them to spend time learning new technologies that then allow them to have the background to use them properly in the teaching process learning in the classroom.

In line with the previous study, it can be said that while many teachers have been striving to improve the teaching and learning process, others remain stagnant and willing to keep everything as usual [73–75, 78–80].

Concerning accounting, the perception of researchers is the same. There are professors interested in being innovative [80] but many others in being inhibitors [73, 78, 81].

The curricular unit of accounting has been somewhat slow in adopting technologies that improve its results [80]. Although there is a growing effort to adopt technology in order to improve the teaching of accounting [82], such an objective remains limited in time and space [81, 83, 84].

In addition to all the aspects already mentioned, it is also interesting to address others explored by the literature that prove to be relevant to the topic highlighted here.

Student feedback is a crucial aspect of the teaching-learning process's success, whether in the area of accounting or any other area. Watty et al. [85] state in their studies that a meaningful way to improve the quality of accounting teachers' classes is related to the need to obtain student feedback regarding the whole process. The authors state that feedback allows students to identify the difference between their performance and their goals. Moreover, on the other hand, it allows students and teachers to adopt new methodologies and strategies of teaching and learning, respectively, in order to achieve the goals of better-quality teaching.

The uniformity of accounting education within a country or between different countries would also be relevant as it would allow an international student to learn this curricular unit in the same way as internal students, this proving to be a helpful teaching tool in order to be able to understand better the educational systems of accounting around the world [86].

The origin of the students who attend the curricular accounting unit is also of relevant analysis to understand the teaching problem of this curricular unit. There

are two types of students, those who bring secondary education bases and those whose bases are reduced or practically nil. There are students whose provenance is a professional education and brings many bases because they are directed to a more practical component and students from regular general education who do not have access to any accounting discipline. In that sense, Abhayawansa et al. [87] refer that students exposed to accounting learning before entering university usually achieve better academic results than the rest. This conclusion suggests the need for universities in general and teachers in the classroom to adopt mechanisms and methodologies that allow everyone to have access to learning in an integrated and sustained way, leaving no one behind [88].

The student's cultural background and knowledge of the literature also contribute to the improvement of skills in the area of accounting learning, since the original, creative, imaginative and multicultural thinking added to scientific rigor allows for more excellent reflection and the ability to apply the knowledge acquired in the university context [89].

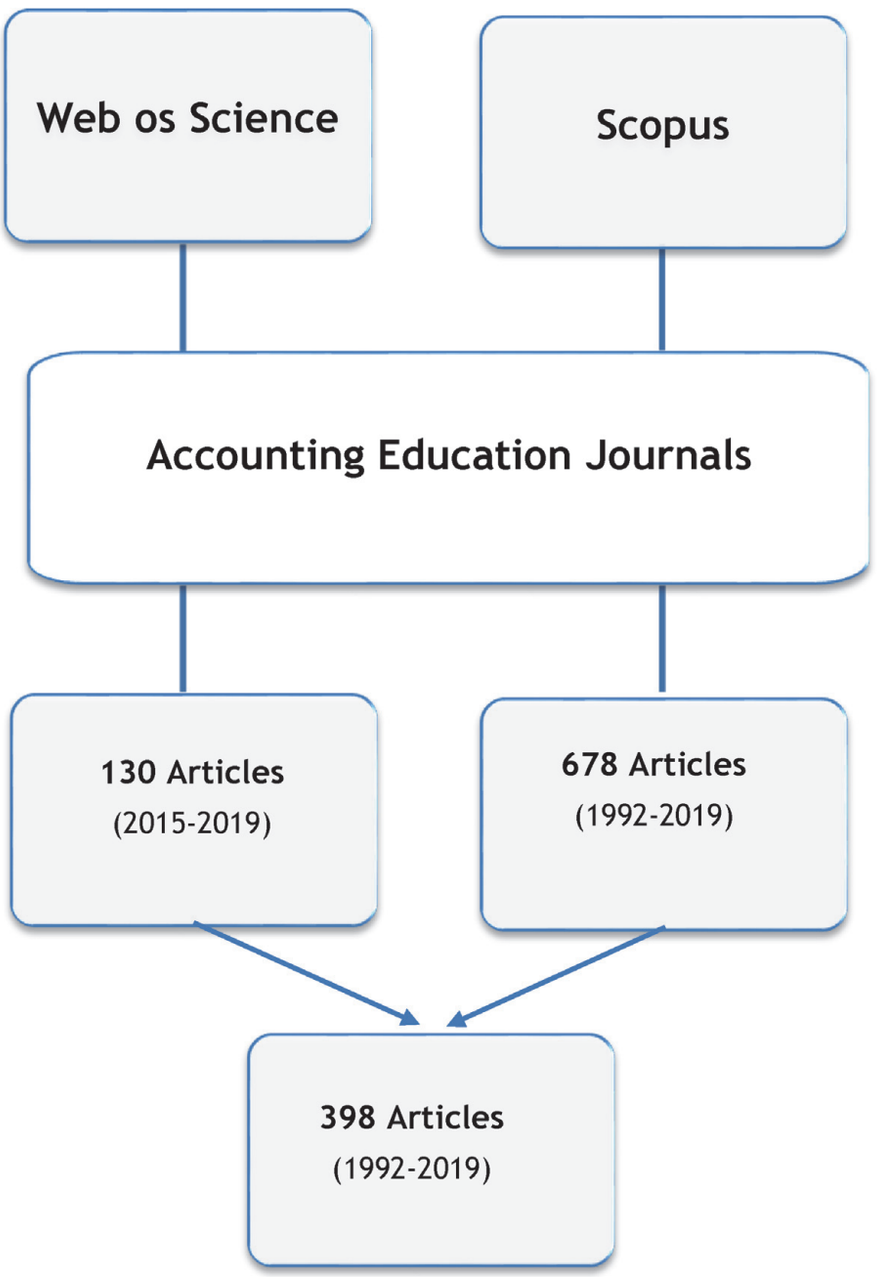

Figure 1.
Search criteria.

Students' initial choices when entering higher education also influence their future intention in a particular area, that is, a student who at the beginning of his academic life chooses accounting as one of his areas of choice maintains his dedication to this area typically, becomes a better professional, and his intention to pursue a career related to this topic increases [88].

Cooperative learning through the formation of working groups within the classroom can also condition learning. Suppose the teacher purposefully selects the working groups to promote the exchange of knowledge between the most prepared and the least prepared students. In that case, this increases learning by exchanging ideas and knowledge between students who are in different stages of learning with each other [90].

In the following chapters, the methodology that guided the present research is presented, followed by the same and respective conclusions.

3. Methodology

According to Barañano [91], the research method adopted was quantitative, confirmatory and descriptive research. This chapter describes the research process adopted, following the research process advised by Tranfield et al. [92]: (1) review planning; (2) systematic review; (3) review disclosure.

It was defined as a base research criterion that only articles published in the Accounting Education magazine and that was indexed in the ISI Web of Science and Scopus databases, whose abstract addressed accounting education in the context of HEIs, would be analyzed. In the initial search, 808 articles were found (130 in WOS and 678 in Scopus) published between 1992 and 2019. Duplicate articles were eliminated, abstracts of all articles were read, and only those that dealt with the topic of teaching accounting in HEIs were considered, leading to the exclusion of 410 articles that, despite dealing with the topic of accounting in general, did not deal with the topic of teaching accounting in HEIs. **Figure 1** shows the search criteria used in this study.

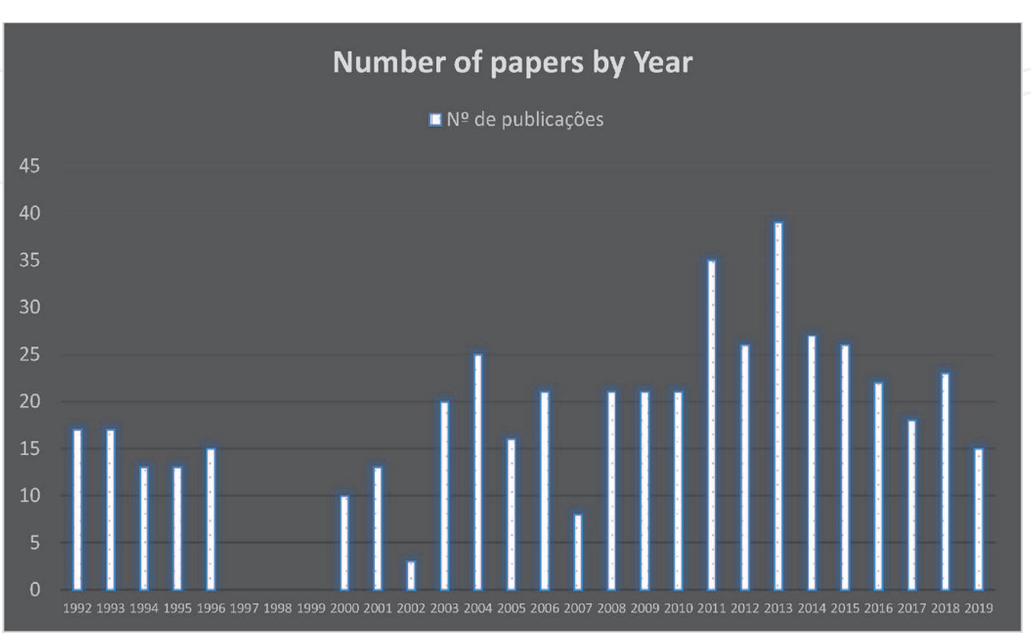

Figure 2.
Number of papers evolution (1992–2019).

4. Results

4.1 Final output (N = 398 articles)

4.1.1 Number of publications by year

The first and last research work published in Accounting Education on teaching accounting in HEIs was written by Wilson [93] and Coetzee et al. [94].

In the period between 1992 and 2019, which is the period in which the 398 articles included in this study are located, the number of publications varied, with the years 1997 to 1999 having the lowest number of publications (0) and the year 2013, which reached the highest number (39). Analyzing the period in question, we can say that from 2008 onwards, the number of publications was consistently above 20, except in 2019, which at the date of this research had not yet ended (**Figure 2**).

The years 2011 and 2013 were the most productive, with 35 and 39 articles published respectively.

4.1.2 Authors with five or more publications

As the primary author, the number of publications by each author, the analysis of the 485 articles in our database allows us to verify that there are 20 authors with five or more publications on teaching accounting in HEIs, totalling 147 articles from the complete database. The remaining 139 authors have between 1 and 4 articles published on average (**Figure 3**). The authors with the most significant number of publications are Jackling, Beverley F. (h-index 16); Marriott, Neil (h-index 9) and McHugh, Gerard (h-index 2).

4.1.3 Most covered areas of knowledge

There are several areas of knowledge in which research has focused, with Accounting Educations with 200 articles, Financial Accounting with 62 and International Accounting with 25 as the main areas.

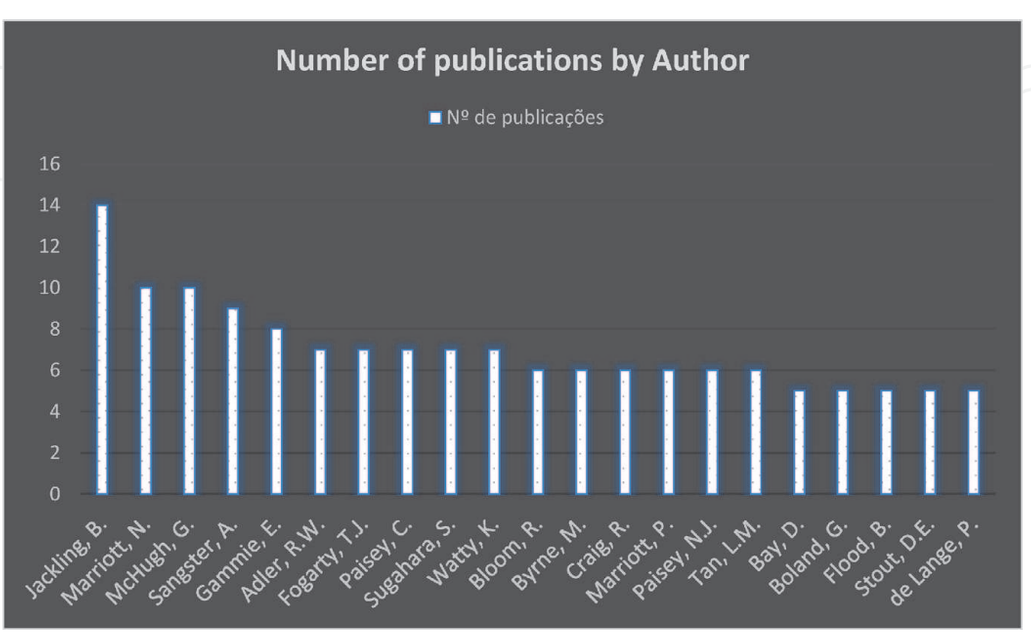

Figure 3.
Number of publications by author (1992–2019).

In **Figure 4**, we can observe the main areas of knowledge on which the research works published in the Accounting Education magazine focused.

4.1.4 Most covered topics

Regarding research topics, these are diverse, with the main topics related to academic performance (38 papers), the adoption of technologies in teaching (20 papers) and teaching methodologies (17 papers), among many others being highlighted, as we can see in **Figure 5**.

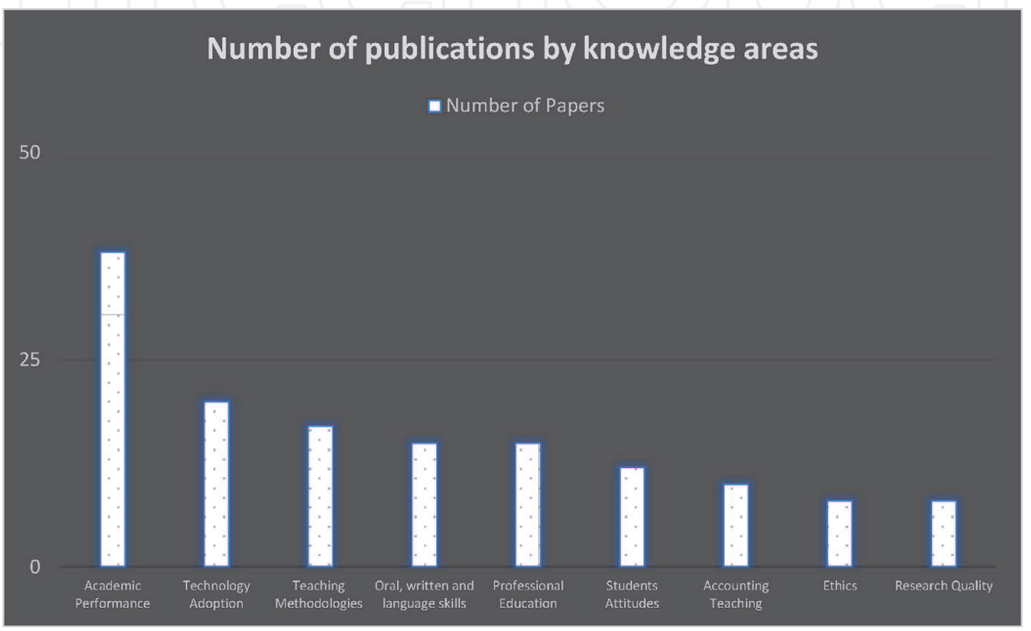

Figure 4.
Number of publications by knowledge areas (1992–2019).

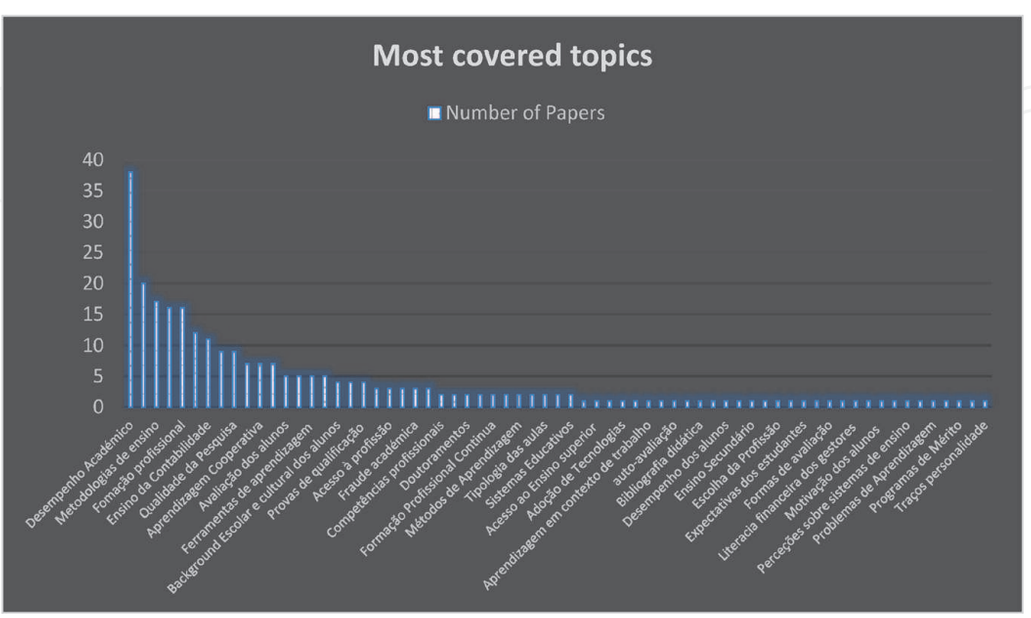

Figure 5.
Most covered topics (1992–2019).

4.2 Top 20

4.2.1 Main authors and respective citations

The criteria for presenting results that will be used from now on will be based on the 20 most cited articles. It was necessary to count the citations that occurred in WOS and SCOPUS and thus reach the 20 most cited articles in the totality of the two databases used. **Table 1** presents the TOP 20 most cited articles in the sum of both databases.

4.2.2 Structure and content of the TOP 20 articles

Table 2 presents the results extracted from the TOP 20, providing us with relevant information on the main empirical data resulting from the various investigations. Regarding the methodological dimension, the most general studies are quantitative with 55.3% of publications (16), followed by qualitative with 24.1% (7), then mixed methods and literature review have 10.3% (3) each of methodology predominance. Empirical studies with the application of surveys are the most used to research how accounting is taught at HEIs and the necessary skills that the professional in the area of accounting must have to be an effective teacher in higher education. Surveys were used in 15 articles (51.7%), interviews in 6 (20.7%), surveys and interviews in 4 (13.8%) and the remaining 4 (13.8%) were essentially theoretical without application of any inquiry and/or interview.

4.3 TOP 20 vs. *N* = 485

4.3.1 Main research topics

Regarding the main research topics covered in our research articles, the topic most addressed in the total output is that which is also the most researched in the Top 20. Then there are two topics (Adoption of Technologies and Teaching Methodologies) that are very much addressed in the final output that is not found in our Top 20. The topics located in the 4th and 6th positions of the complete database are also in the same position in our Top 20, together with the topics Cooperative Learning and School and students' cultural background. In **Table 3**, we can see the complete information of the general overview of the most discussed research topics.

4.3.2 Research paradigms (N = 398 vs. TOP 20)

For the classification of articles according to their paradigm, the study of Hopper and Powell [117], shown in **Figure 6**, which based on a structure defined by Burrell and Morgan [118], synthesized accounting research into a taxonomy based on two axes, where the researcher's variety of ontological and epistemological assumptions is represented on one axis and the assumptions about human nature and its relationship to social change are represented on the other axis.

A general analysis made to the final output of the 385 articles allowed us to verify that the main paradigms addressed are the Interpretative with 50% of the occurrences, followed by the positivist with 41%, with 8% we find articles with both approaches simultaneously and with 0.25% the critical paradigm. In the Top 20, we find that the positivist paradigm is the one that is used in most articles with 60% of occurrences, followed by articles with a positivist and interpretive paradigm simultaneously with 30% of occurrences, the interpretive paradigm with 9% and with 1% the critical paradigm.

Position	Authors	Paper Title	Total citations WOS	Total citations SCOPUS	Total citations WOS + SCOPUS
1°	Sangster [95]	You Cannot Judge a Book by Its Cover: The Problems with Journal Rankings	20	26	46
2°	Moya et al. [96]	Performance-based Incentives and the Behavior of Accounting Academics: Responding to Changes	14	17	31
3°	Dull et al. [97]	Achievement Goal Theory: The Relationship of Accounting Students' Goal Orientations with Self-efficacy, Anxiety, and Achievement	12	16	28
4°	Everaert et al. [98]	The relationship between motivation, learning approaches, academic performance and time spent	11	13	24
5°	Daly et al. [99]	Using Group Work to Develop Intercultural Skills in the Accounting Curriculum in Australia	11	13	24
6°	Rackliffe and Ragland [100]	Excel in the accounting curriculum: perceptions from accounting professors	9	12	21
7°	Spraakman et al. [101]	Employers' Perceptions of Information Technology Competency Requirements for Management Accounting Graduates	11	9	20
8°	Carenys and Moya [102]	Digital game-based learning in accounting and business education	7	12	19
9°	Levant et al. [103]	Business simulation as an active learning activity for developing soft skills	8	10	18
10°	Aldamen et al. [104]	Does Lecture Capturing Impact Student Performance and Attendance in an Introductory Accounting Course?	8	9	17
11°	Moore [105]	Exploring the Role of Symbolic Legitimation in Voluntary Journal List Adoption	8	9	17
12°	Webb and Chaffer [106]	The expectation performance gap in accounting education: a review of generic skills development in UK accounting degrees	6	11	17
13°	McGuigan [107]	The Impact of Journal Rankings on Australasian Accounting Education Scholarship - A Personal View	7	9	16
14°	Hussain et al. [108]	Journal Rankings, Collaborative Research and Publication Strategies: Evidence from China	7	8	15
15°	Marriott et al. [109]	Experiential Learning - A Case Study of the Use of Computerized	6	9	15

Position	Authors	Paper Title	Total citations WOS	Total citations SCOPUS	Total citations WOS + SCOPUS
		Stock Market Trading Simulation in Finance Education			
16°	Barac [110]	Helping Disadvantaged Students: Findings from the Thuthuka Programme	7	7	14
17°	Wen et al. [111]	Understanding the Intentions of Accounting Students in China to Pursue Certified Public Accountant Designation	7	6	13
18°	Ellington [112]	The impediments to the change to UK university accounting education, a comparison to the USA pathways commission	5	6	11
19°	Lindsay [113]	More than 'continuing professional development: a proposed new learning framework for professional accountants	5	6	11
20°	Cameron and O'Leary [114]	Improving Ethical Attitudes or Simply Teaching Ethical Codes? The Reality of Accounting Ethics Education	9	0	9

Table 1.
Authors and citations (Top 20).

Authors	Sample	Methodology	Review	Main conclusions
Sangster [95]	Not applicable (theoretical)	Qualitative	Accounting Education	The ranking lists of journals in the accounting area have an impact on the quality of accounting research. This means that often the inclusion of the word accounting leads authors to lower the magazines' ranking level.
Moya et al. [96]	Academic articles by Spanish authors on accounting for the period between 1996 and 2005.	Quantitative	Accounting Education	In view of the change in the regulation of publications in Spanish universities, these authors considered a decrease in publications, jeopardizing the relationship between research and professional practice. Additionally, they argued that this is because publication in indexed journals is favored exclusively.
Dull et al. [97]	521 students in the financial accounting course at a US public university.	Quantitative	Accounting Education	They argued that students' goals and their relationship to academic expectations, performance, self-efficacy and test anxiety have a positive relationship. However, the combination of mastery and motivation regarding performance goals can lead to better results in terms of course scores.

Authors	Sample	Methodology	Review	Main conclusions
Everaert et al. [98]	388 1st year students of a degree in economics and administration from a university in Belgium	Quantitative	Accounting Education	Accounting students can opt for deep or superficial learning. In the study, they concluded that most students opt for deep learning over superficial learning, which is motivated by their motivation to learn, their gender, their skills, and the time they intend to spend studying. This option leads to higher academic performance.
Daly et al. [99]	192 international students studying at an Australian university	Quantitative	Accounting Education	Learning based on working alliances between students from different cultural backgrounds allows for a very positive multicultural exchange and higher learning levels compared to control groups. The students participating in these alliances showed higher learning levels of the contents and cultural increases resulting from the exchange of experiences with their colleagues from other nationalities. It is also concluded that accounting students' intercultural learning is fundamental for their future globalized labour market.
Ramachandran et al. [115]	Accounting teachers and of other similar areas	Quantitative	Accounting Education	Most of these teachers use Excel to teach their classes. However, students often do not show skills to work in the classroom with this software. This means that there are still disconnects between teachers and students' skills regarding the use of computer tools in class.
Spraakman et al. [101]	Senior financial advisers and their subordinates in large New Zealand companies.	Qualitative	Accounting Education	They concluded that technology and information tools are crucial for accounting and finance professionals. Their findings explicitly provide information that accounting teachers should integrate the use of these tools in their programs.
Carenys et al. [116]	Not applicable (theoretical)	Literature review	Accounting Education	The results allow us to understand better the effectiveness of using games in these areas.
[103]	Undergraduate and postgraduate students from the university campuses of Paris, Nice and Lille, to apply a business simulator	Quantitative	Accounting Education	They concluded that the skills and abilities of students in the use of the simulator are influenced by the ethnic, cultural and professional experience of the students and that it also requires that there be sharing of practices in a context of global education.
Aldamen et al. [104]	254 students in the first year of the introduction	Quantitative	Accounting Education	There is a weak positive relationship between capture/attention and the performance obtained with the use

Authors	Sample	Methodology	Review	Main conclusions
	to financial accounting course in Qatar.			of lectures, mainly taking into account the variables: average grades, frequency, gender and age. However, students with good performance value these lectures as an efficient pedagogical resource, in contrast to students with lower performance.
Moore [105]	Not applicable (theoretical)	Qualitative	Accounting Education	They concluded, with some caution, that issues of symbolic legitimation in assessing the quality of research can play a crucial role in the processes of listing and classification of journals.
Webb and Chaffer [106]	Application of questionnaires to CIMA interns at UK (valid answers = 1655)	Quantitative	Accounting Education	In order to gain an understanding of how accounting courses are geared towards the professional requirements of the market, they concluded that there is still a need to improve, at the level of students, their oral communication skills, their global view on the organization, their ability to resilience and their ethical conscience.
McGuigan [107]	University and accounting teachers	Quantitative	Accounting Education	The ranking of the journals where scientific articles are published is seen as the main measure of academic performance in the area of accounting. The article concludes that this narrow measurement approach must be abandoned in order to encourage creativity and innovation in business research in order to solve the really important problems that we face in the present and that we will have to face in the future.
Hussain et al. [108]	200 participants at an international symposium at Shanghai University of Finance and Economics	Mixed (quantitative and qualitative)	Accounting Education	Most respondents of Chinese origin use the ranking list of the university's own magazines to assess their quality; However, this option generated conflicts for 73% of the interviewees when collaborating with other academics from other universities due to the variation in the classification criteria of the journals being different.
Marriott et al. [109]	97 UK universities with higher education programs in finance.	Mixed (quantitative and qualitative)	Accounting Education	There is effectiveness when presenting educational simulators for the student and the teacher, which leads to a better understanding of the complex concepts inherent in the area of finance.
Barac [110]	12 students from a	Qualitative	Accounting Education	The characteristics of a support program, which involves the various

Authors	Sample	Methodology	Review	Main conclusions
	university in Africa			interested parties, which aims to help socioeconomically most disadvantaged students to study and simultaneously have a job are fundamental to their success, both academic and professional These support programs are essential so that students can more easily enter the restricted labour market.
Wen et al. [111]	288 accounting students (undergraduate and masters)	Quantitative	Accounting Education	There is a genuine interest in obtaining the title of certified accountant by students, in view of the prospect of becoming independent professionals in the labour market and the influences of professionals of excellence in the area.
Ellington [112]	Theoretical	Qualitative	Accounting Education	By comparing US and UK universities with respect to the changes that business environments demand, they concluded that UK universities should change their programs in accordance with accounting bodies, institutional policies and the identity of professors of universities.
Lindsay [113]	Theoretical	Qualitative	Accounting Education	Through the development of a holistic and interactive framework, they have helped accounting bodies and accounting professors to interact and train future accounting professionals
Cameron e O'Leary [114]	Senior year students of accounting	Quantitative	Accounting Education	Regarding the sensitivity that students have about ethical, moral and legal issues and attitudes and their effectiveness in the accounting area, they concluded that training in accounting ethics needs to be reassessed for it to be effective.

Table 2.
Overview of the main conclusions of published articles on teaching accounting in HEIs - Top 20.

Tables 4–7 shows the unit of analysis of the articles (Students /Teachers / Students and Teachers/Others), the research paradigms used (Positivist, Interpretative), that is, the theoretical and methodological frameworks for interpreting the phenomena used by the researchers, as well as the essential topics addressed by the authors and the respective authors of the scientific articles that addressed them are also presented.

Analyzing the articles that focus on the "Students" analysis unit, we verified the existence of positivist articles (8 articles) and only 1 interpretative positivist article. Concerning the "Teachers" analysis unit, we found that the positivist nature (5 articles) and the positivist/interpretative nature (3 articles) simultaneously in the same article are the observed paradigms. The topic of analysis, "Academic Performance" and the one with the most significant number of articles, is the topic whose

Thematic	Final Output (N = 398)	Top 20
Academic Achievement	**38**	4
Adoption of Technologies	**20**	X
Teaching methodologies	**17**	X
Oral, written and linguistic skills	**16**	3
Professional qualification	**16**	X
Student Attitudes	**12**	3
Accounting Teaching	**11**	X
Ethics	**9**	X
Research Quality	**9**	X
Curricular Adjustment	**7**	X
Cooperative Learning	**7**	3
International Accounting Standards	**7**	X
Student evaluation	**5**	X
Curricular internships	**5**	2
Learning Tools	**5**	X
Using Multiple Choices	**5**	X
School and cultural background of students	**4**	3
Challenges for teachers	**4**	X
Qualification tests	**4**	X
Access to Profession	**3**	X
Student Choices	**3**	1
Academic fraud	**3**	X
Information systems	**3**	X
Professional skills	**2**	X
Professional commitment	**2**	X
Ph.Ds	**2**	X
Choice of Magazines	**2**	X
Continuing Professional Training	**2**	X
International Education Standards (IES)	**2**	X
Learning Methods	**2**	X
Plagiarism	**2**	X
Typology of classes	**2**	X
Quality of teaching	**2**	X
Education Systems	**2**	X
School dropout	**1**	X
Access to Higher Education	**1**	X
Accreditation of courses	**1**	X
Adoption of Technologies	**1**	X
Professional affiliation	**1**	X

Thematic	Final Output (N = 398)	Top 20
Work-based learning	**1**	X
Evaluation activities	**1**	X
self-evaluation	**1**	X
Performance evaluation	**1**	X
Didactic Bibliography	**1**	X
Curriculum	**1**	X
Student performance	**1**	X
Employability skills	**1**	X
High school	**1**	X
Student involvement in learning	**1**	X
Choice of Profession	**1**	X
Professional Exams	**1**	X
Student expectations	**1**	X
Instructional feedback	**1**	1
Assessment methods	**1**	X
Accounting research	**1**	X
Financial literacy of managers	**1**	X
Mentoring	**1**	X
Student motivation	**1**	X
School Organization	**1**	X
Perceptions about education systems	**1**	X
First job	**1**	X
Learning Problems	**1**	X
Support programs	**1**	X
Merit Programs	**1**	X
Problem-solving	**1**	X
Personality traits	**1**	X

Table 3.
Main research topics: TOP 20 vs. N = 485.

research approach differs concerning the paradigms used. It appears that the approaches were different between different authors on the same topic. Three articles each follow the research topics Students' attitudes; School and cultural background of students. Cooperative learning; Oral, written and linguistic skills and Challenges for teachers (**Table 4**).

By analyzing **Table 5**, we can see that, concerning the articles that focus on the "Teachers" analysis unit, it is verified that the positivist nature leads with 5 articles, followed by the positivist and interpretative nature with 3 articles, not finding articles of only interpretive nature. The topic with the most significant number of published articles is the topic "Challenges for teachers" with three articles, followed by "Typology of classes" and "Adoption of technologies" with 2 articles each.

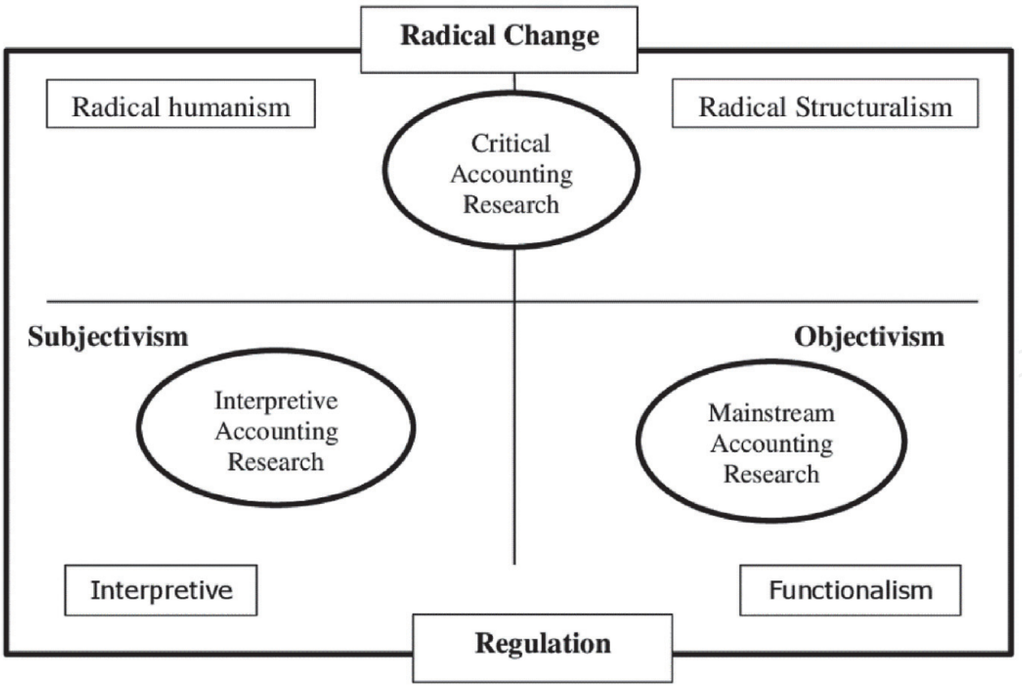

Figure 6.
Taxonomy of accounting research. Adapted from: Hopper and Powell [117].

Analysis Unit	Research Paradigms	Topics covered	Author (s) and Year
Students	**Positivist**	Student Choices	[111]
		Student attitudes	[104, 97, 98]
		Feedback	[111]
		Academic achievement	[107, 111, 97, 106]
		Curricular internships	[111, 106]
		School and cultural background of students	[104, 114, 98]
		Cooperative learning	[99, 104, 98]
		Oral, written and language skills	[104, 98, 106]
	Positivist e Interpretative	School and cultural background of students	[103]

Table 4.
Research paradigms and topics addressed - analysis unit: students.

By analyzing **Table 6**, we can see that in relation to the articles that focus on the unit of analysis, "Students and Teachers", there is only interpretative nature (2 articles).

By analyzing **Table 7**, we can see that concerning the articles that focus on the analysis unit "Other topics", there is a predominance of articles with a critical nature (3 articles), followed by a positivist and interpretive nature with 1 article each.

Analyzing the topics covered in the articles, we can see that the vast majority are centred only on the student. However, there are also topics centred on the teacher and other topics that are not centred on the student or the teacher. The most addressed topics are academic performance (4 articles), followed by the research

Analysis Unit	Research Paradigms	Topics covered	Author (s) and Year
Teachers	**Positivist**	Continuing professional training	[113]
		Challenges for teachers	[109, 106, 100]
		Typology of classes	[109, 112]
	Positivist e Interpretative	Technologies Adoption	[101, 103]
		Support programs	[110]

Table 5.
Research paradigms and topics addressed - analysis unit: teachers.

Analysis Unit	Research Paradigms	Topics covered	Author (s) and Year
Students and Teachers	**Interpretative**	Learning Tools	[103, 100]

Table 6.
Research paradigms and topics addressed - analysis unit: students and teachers.

Analysis Unit	Research Paradigms	Topics covered	Author (s) and Year
Others	**Positivist**	Ethics	[114]
	Interpretative	Quality of research	[105]
	Critic	Choice of quality magazines	[95, 108, 96]

Table 7.
Research paradigms and topics addressed - analysis unit: others.

topics “Students’ attitudes”;” School and cultural background of students”; “Cooperative learning”; “Oral, written and linguistic skills” and “Challenges for teachers” with 3 articles each.

5. Conclusions

This systematic review of the literature was directed solely and exclusively to the magazine Accounting Education to identify articles published over 28 years of scientific contribution to knowledge evolution. We identified how many studies related to the Teaching of Accounting in Higher Education Institutions (HEIs) had been published in the Accounting Education magazine since the journal started its scientific activity. We proposed a ranking of articles based on the volume of citations in the WOS and SCOPUS databases. We described the main conclusions and research methodologies used in the TOP 20, described the main research topics and described the research paradigms used in the articles. This issue of the epistemological paradigms used by accounting researchers is relevant and rarely addressed in the literature, being a significant contribution. Based on the results found, we verified that most of the studies carried out used quantitative and qualitative research methodology, which reveals the robustness of the researches carried out, the relevance of the conclusions drawn from each study and the contribution of each research to the increase of knowledge on this thematic area. The systematic review of the literature carried out shows concern in HEIs to promote quality education in general and the curricular accounting unit. It was found that the vast majority of concerns inherent to the research of this topic are encompassed in the students’ skills, teaching methodologies and teaching-learning strategies. It was also

found that teachers and students' intrinsic and extrinsic motivation are preponderant for increasing commitment and dedication to the accounting area. The way students approach learning, superficial or deep, is also a determining factor for their academic success and professional future in the field.

It was also possible to identify several research areas and topics on which the teaching of accounting in the HEIs is approached, such as the students' school background, oral, written and linguistic skills, cooperative learning, curricular internships, adoption of technologies, among other particular topics of interest, explained throughout this research, for the understanding of the phenomenon under study.

It appears that over the past 28 years, the research on teaching accounting published in this journal is related to good teaching practices, both methodologically. In terms of the skills of those who teach and those who learn, an evolution in the quality of teaching occurring. Researchers' effort has promoted and relaunched the curricular accounting unit to a level of excellence both in research and in the quality of teaching by teachers and learning by students. HEIs and their entire hierarchical organization, with their support and strategic plans, have contributed a lot to make the success and continuous improvement of accounting education in HEIs a reality. The present research is thus able to fill a gap found in the literature by focusing only on one journal, which is a reference in the area of accounting education, summarizing the main published studies on the subject under analysis, enumerating the main topics addressed by the researchers and enunciating the epistemological research paradigms that guided each research. Based on the results found, this article identifies research paths that can be explored to provide greater consistency and substantially increase the theoretical and empirical knowledge related to the teaching of accounting in HEIs.

Acknowledgements

This work of author Rui Silva is supported by national funds through the FCT – Portuguese Foundation for Science and Technology under the project UIDB/04011/2020 and the work from author Maria do Céu Alves is supported by national funds through the FCT – Portuguese Foundation for Science and Technology under the project (UIDB/04630/2020).

Author details

Rui Jorge Rodrigues da Silva[1*], Maria Margarida Mendes Rodrigues[2] and Maria do Céu Gaspar Alves[3]

1 University of Tar's-os-Montes e Alto Douro, CETRAD, Vila Real, Portugal

2 University of Beira Interior, CEFAGE-UBI, Covilhã, Portugal

3 University of Beira Interior, NECE-UBI, Covilhã, Portugal

*Address all correspondence to: ruisilva@utad.pt

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