A *wiki* proposal for collaborative learning in the Accountancy undergraduate course*

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Abstract

The aim of this study is to present an experience report on the adoption of a *Wiki* in the teaching and learning process of the undergraduate Accountancy course. To this end, a qualitative case study was carried out at the Federal University of Sergipe, Itabaiana campus. The data was produced using reports extracted from the website created, which was called "Accounting Wiki". In addition, researchers carried out questionnaires with the students and interviews with one of the lecturers. The results of these consultations were analysed using descriptive statistics and Discourse Textual Analysis. Results show that students interacted well with the website, considering it easy to use, with a suitable and comfortable interface, as well as being useful mainly for revising content. The lecturer, in turn, saw a long-term perspective for the website, recognising the need for the project and identifying the Accounting Wiki as an excellent opportunity to foster collaboration between students and lecturers. The study contributes to lecturers in the undergraduate Accounting course, reflecting on the possibility of appropriating Digital Information and Communication Technologies in their pedagogical process, seeking to adapt existing experiences to their contexts, with the aim of training accounting professionals who are able to deal with contemporary demands that increasingly require the binomial autonomycollaboration in continuous learning.

Keywords

Collaborative learning - Accountancy - Wiki.

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Introduction

Cyberculture consists of a set of techniques, both material and intellectual, attitudes, practices, thoughts and values that enable the growth of cyberspace. Cyberspace is the means of communication which ensures the worldwide interconnection of computers, not only in terms of the physical infrastructure, but also to human beings who navigate it. These, in turn, consume and produce its content, thus giving rise to what is known as collective intelligence (Lévy, 1999).

However, simply accessing the information contained in cyberspace does not guarantee that knowledge will be built (Silva; Fiori, 2020). Therefore, when considering cyberspace as a learning environment, it is necessary that students are encouraged to analyse and reflect on the information available (Bottentuit Junior; Coutinho, 2010). Moreover, it is essential to provide a teaching-learning process that ensures the development of reflective minds that investigate, know how to use critical judgement and are simultaneously analytical and creative (Camargo, 2015).

In the specific case of undergraduate Accounting courses, it is vital to instil an autonomous and active attitude in students. When they enter the labour market, they will be faced with an area that undergoes routine changes, since, as a social science, it is constantly adapted to the context in which it is inserted. Thus, students are urged to master the learning process, including in a collaborative way, considering that they will need, in partnership with their peers, to keep up to date with new regulations, laws and normative devices that emerge.

In this vein, *Wikis* emerge as potential solutions, being defined a resource that can be conceptualised as "[...] a freely expandable system of web pages interconnected in a hypertext system to store and modify information" (Barra *et al.*, 2012, p. 467). *Wikis* enable collaborative writing, whereby different authors with different skills interact collectively to produce a document, contributing to the development of critical thinking when used well in the teaching-learning processes (Fernandes *et al.*, 2010).

It should be noted that it is not compulsory to participate in a *Wiki* by adding content, and it may be possible to simply consume the content made available there. However, what enhances the platform is precisely the constant and dynamic exchange of information (Dieb; Peschanski; Paixão, 2023). Thus, given the context outlined above, it is understood that the creation of *Wikis* for teaching and learning in Accounting can contribute towards the development of cognitive skills (as students learn the course content) and social skills (as they will do so collaboratively).

The aim of this article is to present an experience report on the adoption of a *Wiki* in the teaching and learning process of an undergraduate Accounting course. To this end, a website called "Accounting *Wiki*" was created to enable collaborative writing between students in a curricular component of the undergraduate Accounting course at the Federal University of Sergipe, Itabaiana campus. It should be noted that this work presents the results of a research project carried out through the Institutional Scientific Initiation Scholarship Programme (PIBIC) of the aforementioned Higher Education Institution (HEI),



having been submitted to and approved by the Ethics Committee, as it involves research with human beings.

The research aims to contribute towards a reflection on the teaching-learning methodologies adopted in the Accounting course, seeking to encourage lecturers to integrate Digital Information and Communication Technologies (DICT) into the pedagogical process. In addition, the action presented in this article is expected to encourage students to act as protagonists in their learning process, leading them to understand that it is not enough to consume content on the internet, but rather to critically analyse what is posted and, based on what is learned, produce information, thus contributing to the learning of their colleagues.

The study is divided into five sections, the first being this introduction, which outlines the context of the research, its objective and justification. This is followed by a review of the literature. The third section presents the research methodology, while the fourth section presents the results achieved. Finally, the fifth section presents the study's conclusions, limitations, contributions and suggestions for future research.

Literature review

Wikis and collaborative learning

The term *Wiki* originated with Ward Cunningham in 1995, with the philosophy of maintaining an open space on the Web for sharing information, whereby any individual can structure, modify, create and organise documents and texts online (Costa; Alvelos; Teixeira, 2013). *Wikis* are part of Web 2.0 and have various mechanisms that enable continuous content improvement of the content of documents and websites, given the ease of access and editing (Costal; Turrione; Martins, 2013). One of the most popular *Wikis* is Wikipedia, created in the first decade of the 21st century, which has fuelled the widespread dissemination of other encyclopaedias on the internet, covering the most diverse subjects (Finau; Ribeirete, 2018).

Wikis are also being seen as a potentially significant resource for the teachinglearning process. Cyrino *et al.* (2012), for example, emphasised that *Wikis* foster interactivity, an essential element for the production of collective intelligence, and consequently for the dissemination and construction of knowledge. Thus, according to the aforementioned authors, this type of resource makes the learning process broader, more contextualised and collaborative. This is a fundamental element for thinking about contemporaneity (Schneider, 2002).

The use of *Wikis* in the educational system enables shared textual construction (Rosa, 2021) and, consequently, collaborative learning (Medeiros, 2017). In turn, the latter is defined as the sharing of knowledge between two or more students, who engage in the learning process, collaborating with each other, thus leveraging the possibility of achieving the higher levels of cognitive objectives provided for in Bloom's Taxonomy (Junqueira, 2019; Gomes *et al.*, 2021).

Although it may seem new, Costa and Silva Júnior (2019) pointed out that this methodology has existed since Ancient Greece, while the contemporary discussion on this subject began at the beginning of the 20th century with the first psychologists and educational theorists. In this type of learning, students actively participate in the knowledge building process, enabling them to bring lived experiences far beyond the walls of the educational institution or the content found in the syllabus, enabling both professional and, above all, human enrichment (Alves *et al.*, 2019).

In this new scenario, teachers must create situations that promote meaningful exchanges of information (Costa; Silva Júnior, 2019), positioning themselves as mediators of the learning process (Braga *et al.*, 2020), adopting a reflective and innovative approach (Santos; Hardoim, 2021). In addition, it helps to adapt their pedagogical practices so that they are aligned with the new social dynamics (Lima; Cabral; Silvano, 2021).

Furthermore, as *Wikis* are open in content, it is up to lecturers to be the curators of information, guiding students in choosing reliable sources. In addition, in the case of a *Wiki* written by students, the teacher's assessment and feedback is crucial, so that relevant, reliable and high-quality content with real pedagogical value is produced.

Previous studies

Initially, a search was carried out on the CAPES journal platform for articles discussing the use of *Wikis* in the teaching-learning process in the field of accounting. The search only the study carried out by Frías (2010), in the Spanish context. In this study, a *Wiki* tool was used to encourage collaborative work in the teaching of International Accounting at a Spanish university.

The results of the aforementioned study showed a low level of reception from the students, as most texts had been published without any real collaboration between students. The author also reinforced the need for accounting teachers who intend to adopt *Wiki* in their classrooms to take a stance of constant encouragement so that students realise the relevance of using the strategy.

Thereafter, a search was carried out on studies that used *Wikis* in any field of knowledge, as long as the application took place in Higher Education. Twenty-five studies were found that dialogue with this study, both in the Capes journals and in the Scopus database, which allowed a more accurate survey of international literature. Some of these studies focused on experiences with students and others with teachers, as shown in Figure 1.



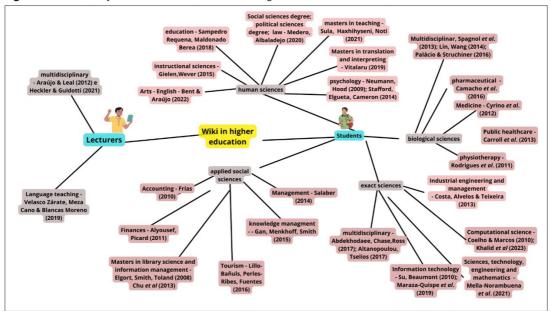


Figure 1 - Summary of articles found on Wiki in higher education

Source: Authors' own elaboration (2023).

In general, studies show the potential of *Wikis* to promote collaborative practice (Chu *et al.*, 2023; Costa; Alvelos; Teixeira, 2013; Salaber, 2014; Velasco Zárate; Meza Cano; Blancas Moreno, 2019), while also enabling the development of writing and communication skills (Bradley; Lindström; Rystedt, 2010; Palácio; Struchiner, 2016; Maraza-Quispe *et al*, 2019; Bento; Araújo, 2022) and improving interaction (Neuman, 2009; Spagnol *et al.*, 2013), promoting reflective processes (Rodrigues *et al.*, 2011; Araújo; Leal, 2012; Heckler; Guidotti; 2021) and boosting autonomy (Sula; Haxhihyseni; Noti, 2021).

Thus, it is understood that this work expands the literature, given that no studies were found that addressed *Wikis* in the field of accounting in the Brazilian context, while the work carried out in the Spanish context showed a low reception by students. The aim is to encourage lecturers in accounting courses in Brazil to reflect on the use of the resource discussed in this study, as well as to understand what aspects can be adopted to improve student interaction with the proposed teaching and learning methodology.

Methodology

This study is an experience report on the use of a *Wiki* in the undergraduate Accounting course. The research was carried out at the Federal University of Sergipe, in the Itabaiana campus, in the compulsory curricular component "Commercial Accounting", offered in the third academic term. It should be noted that the study refers to an Institutional Scientific Initiation Scholarship Programme (PIBIC) project approved by the Federal



University of Sergipe, which was submitted to and approved by the Ethics Committee via the Brazil platform. The data was collected between 14 March and 15 April 2023, during the academic term of 2022.2³, with 38 students enrolled in the subject. In order to achieve the study's objectives, researchers carried out a qualitative case study, which is an empirical study that allows an in-depth understanding of the problem, enabling a combination of different data production methods (Dresch; Lacerda; Antunes Júnior, 2015).

Initially, a *Wiki-type* website was created, called Accounting *Wiki (Wiki Contábil* - https://wikicontabilufs.wixsite.com/wikicontabil). The Wix ecosystem was chosen to build the website, as it is a free resource that allows interfaces to be customised to create a variety of websites and blogs. Moreover, a bank of 75 questions from public exams in the field of accounting was created, aligned with the themes that the students had seen in previous subjects and were being covered during the term. The questions were posted on the website so that the students could choose and send in their answers, with the possibility of improving on the answers posted by their classmates.

It should be noted that before being published on the website, the answers were assessed by one of the researchers, who has a bachelor's and master's degree in accounting. If the response submitted was inconsistent, it was not published, and the student received feedback explaining what needed to be analysed in order to encourage them to resubmit the question with the appropriate response. This procedure was adopted to ensure that students who accessed the website to learn from their colleagues' responses had access to reliable information, as well as to enable the student who submitted the incorrect answer to reflect, encouraging them to advance in their learning.

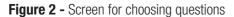
With this ready, two of the researchers went to the classroom on 14 March 2023, with the agreement of the subject teacher, who even added the project as part of the evaluation for the second unit, explaining the project to students and inviting them to take part and present them with the Informed Consent Form (ICF). At the time, there were 31 students in class, but those who missed the lesson were able to access the explanations to the lecture via a video made available on the website, as well as accessing the ICF and confirming their awareness of the ethical aspects of the research on the website.

On the same day, the website started receiving messages from students answering the questions. At this stage, researchers used the reports provided by Wix itself as a data production tool, as well as a control spreadsheet of questions received and posted on the website. A second visit to the class was made on 31 March 2023 to reinforce the project. At the time, there were a total of 18 students. After this second meeting, students had a few more days to contribute to the website, and this stage ended on 15 April 2023. Specifically on this day, the last visit was made to the class, when a questionnaire was administered to identify their perception of the adoption of the *Wiki*.

It should be noted that a pilot website was set up, given that this was a PIBIC research project, and that the scholarship student was from the programming area. The students accessed the website, which was open to the public, via the link posted on the Virtual Learning Environment (VLE). The section called "Questions" (Figure 2) listed those

³⁻ Due to the pandemic period, which temporarily suspended activities at the University, the academic calendar was disrupted. Thus, the 2022 academic year was only held during the 2023 calendar year.

available in the database, grouping them into four themes: accounting concepts and standards, accounting entries, accounting statements and tax aspects.

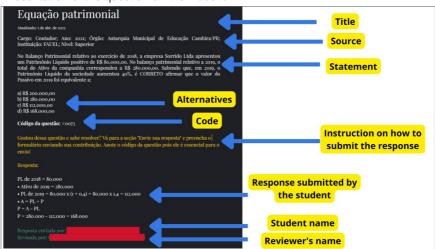


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Source: Authors' own elaboration (2023).

By clicking on the question, students had access to the wording, the alternatives and their code (Figure 3), which had to be written down, as it would be needed to identify the question on the answer form. After the question, there was the answer sent by the student, followed by their name and the researcher who received and reviewed the answers.

Figure 3 - Presentation of the question on the website



Source: Authors' own elaboration (2023).



On the website's page specifically for submitting answers (Figure 4), students filled in a brief identification questionnaire and sent information pertinent to the chosen question, as well as reinforcing the ethical aspects of the research. However, although the ecosystem in which the website created allows the number of accesses per day to be visualised, it was not possible to see which students were accessing it the most.



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Source: Authors' own elaboration (2023).

It should be noted that the questionnaire was designed based on previous studies, such as those by Frias (2010), Rodrigues *et al.* (2011), Costa, Alvelos and Teixeira (2013), with regard to the variables of the students' profile and aspects such as motivation and learning through interaction with the *Wiki*. The observations recorded in the field notes were also analysed.

To validate the device, the research supervisor's review was adopted, as carried out by Filipe (2021). The questionnaire contained closed, multiple-choice questions with 5-point Likert scale answers. Appendix A shows the questionnaire that was administered to the class, whose data was analysed using descriptive statistics. It should be noted that there was an optional discursive question at the end of the questionnaire for students, who were free to make suggestions, criticise, praise or leave any other comments they felt were relevant to researchers. Students limited themselves to brief comments thanking researchers for carrying out the project. These responses were not considered in the analysis since, despite the researchers' interest, they did not constitute a sufficient corpus to make up this aspect of the work.

On 5 May 2023, 27 questionnaires were collected, six of which were excluded as they had been incompletely filled in, giving a total of 21 valid questionnaires. In addition, the teacher who paved way for the research was interviewed in order to find out his perceptions of the intervention. As this was a PIBIC study and a student was responsible

for carrying out the interview, a structured script was chosen. The audio of the interview was recorded and transcribed. Thus, the data produced at this stage was examined using Discursive Textual Analysis (DTA), which is a qualitative analysis methodology organised into three phases: disassembling the texts, categorising them and capturing the new emergent (Silva, 2022). The final product of DTA is a meta-text, which presents the researcher's interpretation, the discourse produced in the field and the discussion with theory (Moraes; Galiazzi, 2011).

Results

Sample profile and interaction with the website

With regard to the profile of students who answered the questionnaire, 57% were male and 43% female. The average age was 23 at the time of the survey. With regard to their professional situation, 81% of respondents said they were working or doing an internship. Of these, the majority worked professionally in a field other than accountancy. All participants reported using the internet on a daily basis. In the study by Frías (2010), 63% of the students replied that they used the internet daily. These results show that, over the years, the internet has taken on an increasingly essential role in people's daily lives.

With regard to the internet services used, all respondents stated that they access WhatsApp every day. A similar result was also found in studies such as Fermann *et al.* (2021) and Silva (2022), the latter with secondary school students. These findings are confirmed by the Panorama Mobile Time survey (2022) on the use of apps in Brazil, which found that WhatsApp is the app that Brazilians access the most during the day. Comparing these results, it is understood that teachers, regardless of the academic level they work at, need to consider this app as the preferred means of communication for younger groups.

With regard to *Wikis*, the majority of students said they only used websites such as *Wiki*pedia when necessary. It should also be noted that field observations showed that when students commented on their interaction with *Wiki*, they did so only for consultation, without taking advantage of the resource's collaborative potential. Furthermore, studies such as those by Lillo-Bañuls, Perles-Ribes and Fuentes (2016) and erná Borkovcová (2023), emphasise that *Wiki* systems are not so popular among university students.

With regard to the students' interaction with the website, using the data initially available on WIX, it was noted that 31 March 2023 was the day with the highest number of hits, which corresponds to the researchers' second visit to the class. This result shows that when applying new teaching and learning methodologies, lecturers must motivate the pedagogical process, as recommended by Frías (2010). In this regard, the fact that the two researchers came to the classroom and emphasised the importance of the project, even though they were not the subject teachers, may have motivated the students to increase their participation.

In addition, students were asked how they accessed the Accounting *Wiki*. The majority (43 per cent) reported using their laptop for this purpose. This is an interesting result as, although smartphones offer immediate access to the web, they are not the most recommended for learning activities due to their size (Pina *et al*, 2016). Thus, the fact that



students use laptops indicates that, for academic activities, the best option is to adopt a device that allows better visualisation and interaction with the content. A similar result was found by Mella-Norambuena *et al.* (2021), who identified that students did not often rely on their mobile phones to access the *Wiki* system adopted in the teaching-learning process.

In addition, researchers from the present study found that the majority of students accessed the website sporadically, as they ticked the option "Not every week, only once in a while" in the questionnaire. It should be noted that the lecturer responsible for the subject set the deadline for the activities to be handed in at the end of the research data production period. It was also found that the highest number of accesses occurred on the day before the researchers visited the class. This result reinforces the fact that students still see the activities as a mere academic obligation, without actually reflecting on the benefits they can provide. Access was most often at home (90 per cent). The questionnaire also included a question on which sections of the website were accessed by students, and it was found that the "Questions" and "Send your answer" sections were the ones with which students interacted the most.

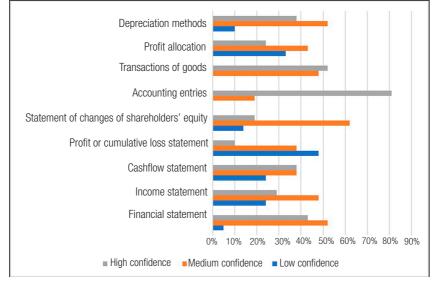
With regard to the answers sent in by the students, an average of three questions were sent per student. Of the sample of questions prepared, 13 remained unanswered. In most of the submissions, the solution was correct. Conversely, whenever answers were incorrect, students received feedback with guidelines on how to improve the solution so that it could be posted on the website. In addition, when students sent questions that already had answers on the website, the researcher responsible for receiving the messages checked the similarity between the answers and assessed whether the new comment added any relevance to the solution, then deciding whether or not to include the new comment. However, it was noted that the students still lacked the skills to make new constructive comments (Abdekhodaee; Chase; Ross, 2017).

Question code #0035, which dealt with Shareholders' Equity (PL), received the highest number of wrong answers (five answers, only one of which was correct). Of the thirteen questions that remained unanswered, most dealt with this content or related content, such as the statement of changes in shareholders' equity and the income statement, which has a direct impact on the value of equity. Considering the course curriculum, students should have covered this content in General Accounting II. Thus, when selecting the questions that would make up the database, researchers were careful to choose those that were appropriate to the academic term in which the students were enrolled.

In the questionnaire, students were asked how confident they were about their knowledge on specific topics. The topics that were most directly related to equity, such as "Statement of Retained Earnings", "Statement of Changes in Shareholders' Equity" and "Profit Allocation", were the ones that students most often pointed out as having the least confidence in. This explains why most of the thirteen questions that remained unanswered dealt with this topic. Graph 1 shows the results for this stage of the survey.



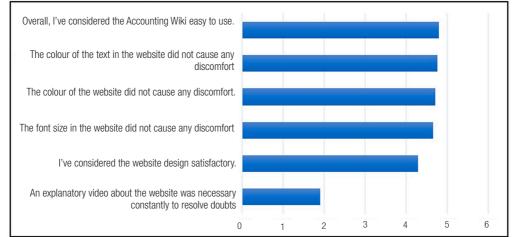
Graph 1 - Students' level of certainty about specific topics



Source: Authors' own elaboration (2023).

Regarding the use of the website, some statements were marked according to the level of agreement, using a 5-point Likert scale, where 1 meant "totally disagree" and 5 "totally agree". It was noted that, according to the students' perception, the website was easy to interact, as the majority disagreed with the statement "It was necessary to constantly access the explanatory video about the website to solve doubts.", which indicates that the students were able to use it intuitively, without having to resort to the video. Graph 2 shows that, with the exception of the one above, all statements had a high level of agreement (close to 5).

Graph 2 - Students' perception of interaction with the Accounting Wiki



Source: Authors' own elaboration (2023).



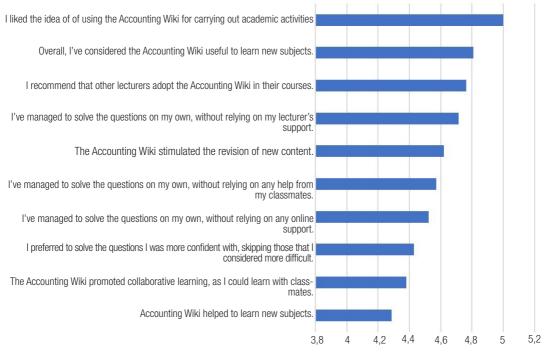
With regard to the students' perception of the use of the Accounting *Wiki* in the learning process, results showed an overall student satisfaction, as all statements presented in the questionnaire had an average level of agreement above 4 (on the 5-point Likert scale), as seen in Graph 3. It should be noted that when submitting an answer, students were asked to mark the perceived level of difficulty for that question (easy, intermediate, difficult). 56.56% considered the questions they answered to be easy, 41.80% intermediate and 1.64% as difficult. Based on the data from the questionnaires, it was found that the majority of students favoured solving questions they were sure of, avoiding answering those they considered to be more difficult (average of 4.43 for the assertion). In this way, it can be understood that the questions that remained unanswered were considered difficult by students.

In this aspect of the questionnaire, the statement with the lowest level of agreement (average of 4.29) was "The Accounting *Wiki* helped me to learn new subjects". Despite realising that the use of the website did not significantly promote the learning of new subjects, it was possible to identify the resource's potential for revising subjects, as can be seen from the level of agreement with the statement "The Accounting *Wiki* stimulated the revision of content" (mean 4.62). This potential was also pointed out in studies such as those by Lillo-Bañuls, Perles-Ribes, Fuentes (2016) and Camacho *et al.* (2016).

In the work by Rodrigues *et al.* (2011), content revision was also seen as a positive factor in the use of *Wikis*. Therefore, when adopting similar strategies, it is important for teachers to bear in mind what their objective is: for students to learn new content or to reinforce what they have already learnt? However, it is worth questioning whether the fact that the students preferred to solve questions with which they felt more confident did not lead to this result. If they had chosen to solve questions in which they were not so confident, they might have had the opportunity to learn something new.

Students also agreed that the use of *Wiki* enhanced collaborative learning, since they were able to learn with their colleagues without necessarily being in the same physical environment as them or interacting in the same time frame (average 4.38). This result is similar to that found by Costa, Alvelos and Teixeira (2013). Nonetheless, this aspect was one of the lowest in the level of agreement among the students. This may be due to the fact that the texts were produced individually.

Thus, it can be understood that students accepted the teaching-learning proposal well, perceiving it as relevant to enhancing their knowledge and understanding of the topics discussed in class. However, the analyses explained so far are enriched by the qualitative data produced in the interview with the teacher who was responsible for the subject, which is discussed in the next subsection.



Graph 3 - Students' perception of the use of the Accounting Wiki in the learning process

Source: Authors' own elaboration (2023).

The metatext: the teacher and the Accounting Wiki

Two final categories emerged from the teacher's discourse using textual discourse analysis. The first was the long-term vision for the project in question. It was possible to perceive the expectation that the project will broaden its horizons. The lecturer believes that the Accounting *Wiki* "could benefit the entire community, all over Brazil". In this way, we can see that strategies such as these should not be confined to specific institutions, as it can generate inter-institutional dialogue, even enabling to encourage the collective intelligence advocated by Lévy (1999). Still in the lecturer's view, adopting the Accounting *Wiki* more widely, with a view to preparing students for the Examination, "[...] could end up boosting the pass rate".

Nevertheless, the teacher emphasises that the project has its limitations, mainly as it uses an ecosystem to design the website that was not created for this purpose. Thus, it is important to clarify that in the teaching process it is possible to appropriate resources, and Wix had already been used to create teaching and learning environments in other works, such as Aliatti (2015) and Toyos, Mendes and Costa (2017). Despite these limitations, the teacher made it clear that "for the initial proposal, it met what was requested very well".



In addition, the teacher said that he would find it interesting to continue using the website, though that he would not make it a compulsory activity at this stage. This is in line with Freire's (1996) idea of encouraging students to have autonomy, giving them the chance to make decisions and choices. It should also be emphasised that the application presented in this article was only of preliminary basis, so that the *Wiki* could cover other subjects in the future.

It was also possible to see that the teacher's long-term vision is the result of the advantages envisioned for Accounting *Wiki* within the context of the subject. He said that the strategy "ends up reinforcing learning" and "stimulates both active and passive learning". It seems that the teacher understands that passive learning takes place when students read their colleagues' answers, i.e. they receive the content ready-made, while active learning takes place when they try to solve a question and move on to solving it.

However, for Ausubel (2000), both learning by reception and by discovery can be active, as long as students find a correlation between the content being worked on and the knowledge already existing in their cognitive structure. Considering this perspective, it is understood that even if students interact with Accounting *Wiki* by reading the resolutions already posted, if they are making the appropriate connections with their prior knowledge, their learning is active. Regardless of the line of thought, it is possible to consider that *Wikis* can be part of the set of active methodologies that can be integrated into higher education (Araújo; Leal, 2021; Chu *et al.*, 2013).

However, the teacher realised that the fact that the website was used with students in their third academic term, who are still a long way away from their final examinations, may not have generated as much motivation as if it had been used with students in the final terms of the course. For him, "perhaps if this had been done with a ninth or tenth academic term class, the result might have been different". However, we believe that activities like this, at the beginning of the course, can lead students to realise the need for continued study and preparation throughout the course. Furthermore, the intention is not just to use the *Wiki* as a resource for preparation for final exams, but to adopt it as a broad resource for students to revise relevant content for their future professional life, with a view to preparing for other exams, such as the National Student Performance Exam (ENADE), the Brazilian Accounting Olympics and other projects in the field.

Furthermore, strategies like this, even in early stages, can already boost students' autonomy (Sula; Haxhihyseni; Noti, 2021). The teacher himself said that students sometimes came to him with questions about how to find certain sections on the website, despite the existence of an explanatory video on the home page. The teacher then said that "students claimed they had not watched it". For the teacher himself, "sometimes the user lacks the interest to go to the appropriate tool". This reinforces the need to encourage the student to act as the main person responsible for their learning process.

Besides these aspects, it was noted that the Accounting *Wiki* enhanced the act of learning and teaching on the Internet, which was the second category that emerged from the study. To do this, teachers need to be open to new teaching and learning methodologies, which, according to Moraes *et al.* (2019), has not been the case. Instead, they need to seek knowledge in order to adopt the resources available in cyberspace to enhance their teaching



practices. Thus, according to Altanopoulou and Tselios (2017) and Medero and Albaladejo (2020), the teaching role in teaching-learning processes through *wikis* is transformed in order to generate a new type of interaction between teacher and learner.

The teacher interviewed showed that he was open to these aspects, as he said "this project fits in very well with this idea that I defend". For him, the Accounting *Wiki* enhances student learning as he also puts himself in the position of teaching. In his words: "when we need to explain to others what we have understood, this also enhances our learning". Once again, the teacher's thinking harmonises with Freire (1996), who defends that "when we teach, we are learning, and those who learn teach by learning".

In addition, through the teacher's discourse it was possible to see that this act of learning and teaching on the internet, enhanced by the Accounting *Wiki*, has a collaborative perspective, both in the student-student, student-teacher and teacher-teacher relationship. As far as the student-student dimension is concerned, the teacher defends that "the fact that you need to prepare an explanation for a third party to understand what you have understood already enhances learning".

With regard to the student-teacher dimension, it is possible to expand the dialogue between teachers and students by applying strategies such as the Accounting *Wiki*, as the teacher said that "[...] some students have come to me to ask questions". In this way, it is understood that the teacher's role has changed, since he will no longer be available just to explain the content, but also to help students with their questions, enabling a closer and more personal dialogue with students.

The teacher also pointed out as an advantage the fact that on the Accounting *Wiki* this collaboration between students was monitored by a teacher, which makes the information published more reliable. It can be seen that strategies like this led the teacher to once again take on a new role; that of guiding the learning process, the one who points the way, so that the student finds in him a guide to enhance the construction of knowledge.

It should also be noted that, during the interview, the teacher recalled his student days, when he was preparing for the Final Examination. In his narrative, he mentioned that when he was studying for the exam, he used websites that provided the answers to questions from previous exams as a support resource. In his opinion, Accounting *Wiki* is similar to the strategy he adopted. However, he sees additional potential in Accounting *Wiki*. According to the teacher: "the great thing about *Wiki* in relation to the way I studied is the collaborative aspect, so you do not have to rely on just one person's answer, but you can also feel engaged in improving that answer", an element that enhances learning, as also pointed out by Costa, Alvelos and Teixeira (2013) and Palácio and Struchiner (2016). Thus, generating innovation in the teaching and learning process does not necessarily mean bringing something new, but knowing how to refine, improve and expand existing resources and materials.

Finally, with the continuation of the Accounting *Wiki*, other lecturers in the department will be able to work in partnership, receiving questions, giving feedback to students and publishing the answers received. According to the teacher, this reinforces the teacher-teacher dimension. In his words, if this does not happen, the project will be



limited as "accounting has several different segments, and with that each lecturer ends up becoming a little more specialised in the one they are pursuing". In this way, the adoption of a *Wiki*-type website in an undergraduate course not only promotes collaboration between students, but also collaborative work between the course teachers.

Thus, it can be concluded that the adoption of the Accounting *Wiki* requires a longterm vision, a motivation to constantly improve the teaching and learning processes and the resources created to make this process effective. Yet, as teachers adopt new teaching and learning methodologies, as well as take into account the appropriate use of ICT in pedagogical activities, they will be experiencing new ways of learning and teaching via the Internet, enabling new experiences for their students and for themselves as teachers.

Final considerations

The aim of this study was to present an experience report on the adoption of a *wiki* in the teaching and learning process of the Accounting undergraduate course. To this end, a qualitative case study was carried out with the support of quantitative analyses, with research participants being the students and the lecturer of the commercial accounting subject in the Department of Accounting Sciences at the Federal University of Sergipe, Itabaiana campus. The Accounting *Wiki* website, questionnaires and interviews were used to produce the data, which was analysed using descriptive statistics and Textual Discourse Analysis.

It was found that students interacted well with the website, considering it easy to use, with an appropriate and comfortable interface. In addition, they found it useful mainly for revising content and recommended its use in other subjects. The lecturer, on the other hand, has a long-term vision for the website and believes that the project needs to continue, moving from a pilot website to a resource that can be widely used and accessed on the course. In addition, the lecturer recognised that the Accounting *Wiki* enables new ways of learning and teaching on the internet, with collaboration as its differential. However, for this teaching-learning process to bear the expected fruit, it is necessary for students to be more independent, as well as for teachers to take on a role that goes beyond exposing content, positioning themselves as mediators, curators and evaluators.

Limitations of the present research include the fact that only one class took part in the study, and this was at the beginning of the course, which meant that it was not possible to cover a larger amount of content on the website. In addition, it is important to emphasise that the questionnaire was produced using mostly national surveys in order to better adapt the questions to the reality of the students. Moreover, a limitation of the research is the fact that, at this initial stage, the work focussed more on the potential use of the *Wiki*, rather than on the competences that were developed by students.

For future work, the authors suggest applying the *Wiki* again in a class that is at the end of the Accounting course. Another suggestion is to carry out a study on the profile of the course lecturers. This would help to understand their openness to new teaching and learning methodologies, checking whether the teaching staff is willing and motivated to continue the project more widely and not just restricted to specific classes and lecturers. In



addition, the authors recommend analysing the skills developed among students through the use of *Wiki*, both in the initial and final periods of the course in question.

However, despite its limitations and the possibility of continuity, the work contributed to a reflection on the adoption of an active methodology in teaching accounting. In addition, it helped lecturers to be more aware of the use of appropriate ICT tools in their pedagogical process. A better use of ICT tools helps to adapt existing experiences to the academic context, with the aim of training an accounting professional with contemporary demands that increasingly require the binomial autonomycollaboration in continuous learning.

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