

## Accountancy Professionals in 4.0 Era: what now?

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### ABSTRACT

Globalization has given rise to digital accounting with new ways of sharing information, particularly digitalization of the profession.

The teaching of accounting must go along with technological changes in preparing students for the challenges of 4.0 environments. We used action research to present an innovative teaching method that aims to move around the academic environment into real life problems of organizations resulting from digital accounting. We present the case of a higher education accounting school where students face a different methodology of teaching and learning, as they are the centre of the process of learning. They are the managers of a virtual company during a calendar year, two school semesters, performing activities of real companies, dealing with legal deadlines and taxes. Students organised in groups of 3, have at their disposal a set of technologies, which allows them to work with a real ERP and process the information created and organised by them in the database with about 1800 digital documents (two semesters). At the end of the academic year, each student has his or her electronic portfolio with all the digital documentation dealt with in the implementation of the activities proposed during the third year of his or her degree course. The study reveals the concern of teaching and learning with digital documentation, incorporating it in business simulation classes based on an integrated ERP. In this way, students have contact with real life problems in a simulated technological context while at school.

### Keywords

Digital Accounting, Digitalization, Higher Education, Innovation, Artificial Intelligence.

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### Introduction

Researchers around the world are on the same question: how to make the learning tools and rebuilt the classroom (virtual and face-to-face) to cope with this digital generation? This change needs to incorporate new skills; these skills, called core skills, are changing the way to teach and to learn.

A generation ago, teachers expected that what they taught students would be valid throughout life. Today, schools have to prepare students for a faster socio-economic change than ever before, for jobs that haven't even been created yet, to use technologies that don't exist yet and solve problems that we still don't know will arise.

Educational success no longer lies predominantly in the reproduction of contents, but in extrapolating what we know and in its creative application to new situations.

Therefore, education has more and more to do with the development of creativity, of critical thinking, problem-solving and decision making; and with forms of work that imply communication and collaboration.

Technologies have changed the world and the way we work. Accounting as a reactive science, reacts to developments in both business and technology [1]. The digital age has made accounting evolve, allowing the processing of a large volume of information, which today can be accessed quickly anywhere.

In this context, new difficulties arise which must be overcome quickly. It is urgent to prepare future accountants for the new technological challenges. Teaching has to integrate new technologies and new accounting, preparing students for future ever-changing environments. The rapid technological advances make us believe that today's accounting will be different in the future.

Students have to know how to manage change and adapt.

The teaching of accounting in Portugal, namely in the higher education institution under study, incorporated an environment identical to the business reality so that students could be connected with the new technological demands. Virtual companies are created in a digital context, allowing information to be quickly accessed anywhere in the world. This study, based on an action research, analyses how the various documents under the responsibility of accountants are treated digitally and integrated into the teaching of accounting.

Contributing to the studies of accounting teaching in the digital era, we present a peculiar case of business documentation and accounting reports, preparing students to solve real life problems in a technological context.

We concluded that the reality of teaching is very close to business, uses the same tools both in terms of hardware and software, allowing students a first contact with these technologies and familiarization with business techniques. Students have a first contact with the digital documentation and its treatment (collection, classification, storage, consultation) and their treatment in accounting in order to prepare the financial reporting to support management decisions.

The article is structured as follows: after this introduction, we present a point dedicated to the development of technologies in the world of accounting. In a third point we address the changes needed in higher education of accounting, to develop the empirical case in point four. We close with conclusions, limitations and suggestions for future investigations.

## **1. The development of technologies in the world of accounting**

The internationalisation of organisations has been assumed as an essential point in their way of being in the markets. The Internet and communication technologies are clearly factors that have contributed to the organizations becoming global. This new organizational environment requires new skills such as: the ability to search a wide variety of sources such as the Internet and the ability to work with large databases [2].

The complexity inherent to the globalization processes of organizations, their activities, transactions, workers, lacks a treatment that necessarily involves support in technology as a fundamental tool for its operation and the continuous posture in the global market.

The speed with which what is right today and not right tomorrow makes management more complex. The manager has to have the information in real time to make his daily decisions. The business / organizational strategy is today completely different from what it was forty years ago.

Technology provides higher education with the tools that can or should engage learning soft skills for students as individuals, in order to support them in their process of developing the core skills needed to embrace the labour market. Higher education institutions (HEIs) should create technological learning environments, including scenarios where students find information, tools and teachers properly prepared to deal with the real situations proposed. The use of digital environments combined with the traditional set of the process of teaching and learning 'improves student performance and helps to be more effective'.

The role of each participant in the process of teaching and learning must change to assure high quality education in the future. Higher Education Institutions must reinvent themselves in order to maintain their major role in society: to graduate students prepared for a profession. [2]

Accounting as a management support tool has become "digital" supporting itself from integrated information systems. All accounting information is represented in electronic format, can be electronically manipulated, and transmitted [3].

Digital accounting brings relevant benefits to organizations: faster processes (such as credit approvals, payments and collections, closing accounts, reporting, more time available for analysis activities); greater geographical reach; continuous availability (24-hour access that can translate into more satisfied internal and external clients); reduction of error rates (i.e. fewer transactions with errors); reduction of human resources allocated to accounting treatments and higher productivity; better management of net financial means (greater efficiency and effectiveness in payments and collections);

reduction of costs with correspondence and handling and physical filing in paper format, improves and facilitates auditing processes and security. Although there are also specific costs associated with the initial investment in hardware and software; maintenance of systems, processes, information processing and changes in report management; the initial need for consultants covering several areas, the need for specific training and/or verification of personnel with specialized skills, user resistance; double attention on security, control and audits of financial transactions; acuity in the initial configuration of the systems, if the parameters and other initial procedures are not correct or there is a weak integration with the ERP software, costs may arise from the implementation process [2]. With careful cost control, the return is surely achieved.

Accountants spend a lot of time processing documents; about 94% of their working time is spent on processing documents [2]. As these documents are mostly digital, the time spent on reading this type of documents has increased, which leads to new behaviours related to reading documents on "screens" [3].

In fact, accounting was one of the first functional areas to benefit from the introduction of computers in organizations [4]. Thus, the accounting professional is the main agent of the digitalization of this area of knowledge. The teaching of accounting must keep pace with technological changes to prepare students for the new challenges of the digital age.

## 2. The necessary changes in accounting teaching

Accounting, seen as a tool to support the management of organizations, lacks technological support, since the timeliness of information has become relevant.

Thus, we believe it is imperative that the teaching of accounting and the way it is still perceived by those involved in the educational process must change.

Technology has been used in teaching in the areas of accounting and management as a tool for solving theoretical exercises [5].

The learning by students of technologies, hardware and software has been evolving in areas such as computer science, engineering, computer

systems, high technology industries. We are in the era of the digital world.

Students, from a very early age, grasp technologies in a complete way. We must direct this appetite to teaching, enhancing the use of technologies in higher education of accounting and management, being, in our opinion, understood as a facilitator in any teaching / learning process [6].

The organisms that control the accounting, fiscal and related information impose the availability of this same information through their own software. Companies and their managers will have to be provided with professionals prepared for this reality.

The accountant from thirty or twenty years ago does not exist. Technology along with accounting has to be part of the daily life of this profession.

The development of technologies and the widespread use of the Internet have changed the vast majority of professions, including the accounting profession. The concepts of time and space have changed radically [7].

The effectiveness of the use of technologies in education is fundamental for their fruitful use in the educational process.

The discussion on how to use technologies in the teaching and learning process was not peaceful, namely in the construction and/or reconstruction of relations School - Students - Teachers - Involving Community. The correct use of technologies in the teaching and learning process is fundamental for the country's development in global terms and its insertion in the world.

According to Lapointe (1990), quoted by Soares [8] technology is a rational intervention tool that guides intuition in research, as well as the development and application of satisfactory, realistic, desirable and achievable solutions to multiple problems. According to the author, we believe that the technological approach in education should be based on wisdom and should not allow for its overlapping with education. Thus, the use of technology in education should give special emphasis to the methodologies applied in the classroom facilitating the learning process.

It is also essential that students acquire skills in the handling of technologies and their development, namely integrated information and decision support systems.

The increasing interaction between the accountancy profession, organisations and government inspection services has led to the introduction of professional programmes in accounting and management education. In our opinion, technology should be used to simulate real situations. This study considers that students, when confronted with simulated tasks/situations, are encouraged to perform them, with the support of technology. Technology appears in this context as support and not as a substitute for teaching methodologies. Students must be able to conceive, understand, handle, and reflect critically. [9].

### 3. Empirical study

We present an action research in which researchers study a social reality, seeking to improve the actions that occur in that reality. [10]. This research is divided into four phases: planning, action, observation/analysis and reflection [11]. As methods of data collection, we use direct observation and document analysis. [12].

#### 3.1. Context: Business Simulation Project

We present the case of the curricular unit of "Business Simulation Project I and II" (PSEI and PSEII), resulting from Porto Polytechnic Institute, Porto Accounting and Business School, in Portugal, in the school year 2019/2020 where 234 students of the Accounting and Administration Course, were enrolled.

This study aims to present an innovative model in the teaching/learning process. This Business Environment Simulator Model (MSAE) aggregates in itself the creation of two curricular units called Business Simulation Project I and II that work in the last year of the 1st cycle of studies of Accounting and Administration. MSAE works as a core environment where the development of a work, in pairs, of the various multidisciplinary areas is intended and where the student is at the centre of the teaching/learning process.

This curriculum unit, implemented in 2003, was designed to bring education closer to business reality. The aim of the study is to analyse how the curriculum unit incorporates the current business

context, particularly regarding digital accounting. This study aims to analyse and reflect on the methodology in use at MSAE regarding changes in digital accounting due to the various technological environments imposed on companies.

This Model of Simulator of technological basis must propitiate a space of learning, based on the simulation of the organizational environment typical of an entity provided with an advanced management profile, which involves the student in the application of the knowledge that throughout the course is emerging in a multi and interdisciplinary form. The particularity of the skills training process for which the Project Business Simulation I and II course units are oriented, shapes the teaching methodology and the evaluation system itself, which is built on a dynamic basis, mainly interested in the progressive effects of the expected change in students, in the learning of complex behaviours, but also concerned with the verification of the skills acquired with a view to their final academic certification.

As this is an education and training practice, the fundamental aim of which is to link theory with practice by turning training experience into work experience, evaluation is interpreted as a process of systematic collection of information to measure students' progress.

In each of the different and gradual stages: the training path, the demarcated management, it is important to verify and qualify the degree of progression in the trajectory of accumulation of powers. The student is given the possibility to judge his own evolution. In summary, the assessment of the level of skills acquired as a result of attending the Business Simulation I and II course units follows a system of assessment by the constant feedback given to the student by the teacher and by the obligation for the student to carry out the tasks planned personally and accompanied by the teacher, in all work sessions.

When designing this learning is essential:

- 1 – the integration of TIC (technologies of information and communication) in its dual roller of mentor and facilitator,
- 2 - the priority to dematerialization and interaction (of the students) networked in the global market, with a strong reaction dynamics,



3 - the execution in person, subject to a real calendar, with the possibility of local and remote exploitation (via Internet), and the use of the electronic portfolio in the construction of the student's curriculum,

4 - the learning supported by an organizational environment of high systemic complexity, based on a global network by processes,

5 - the availability of professional tools and the forms commonly used in the reality of the business world,

6 - the subjects as a comprehensive system,

7 - the multidimensional treatment of the information oriented to the support of decision making, to the resolution and answer of the "contents/themes/problems/..." placed to the student. [7]

The main objectives of teaching in a simulated business environment are:

- to orient training to the most demanding and best paid market levels;
- to prepare professionals for more specialized functions;
- foster the development of new skills;
- stimulate the capacity to structure, research and reorganize information in an integrated environment and in digital format;
- train and promote group and cooperative work;
- measure work capacity under pressure;
- activate the ability to make decisions;
- enrich the ability to communicate;
- familiarize the student with the organizational structure;
- consolidate professional, personal and ethical attitudes;
- fully comply with the established program;
- involve the participation of teachers from all related areas;
- encourage collaboration between schools.

This innovative methodology consists in the creation and development of all the bureaucratic activities of a company; the operational dynamics based on reactivity and the mandatory use of new technologies, with priority for interaction.

This teaching method uses advanced tools and technological means, professional mechanisms, management tools identical to those available to the medium/large company; has appropriate facilities for simulating the business environment;

involves the participation of teachers, monitors and entities with professional experience.

It is intended, with this methodology that students work, in class, still assisted by teachers, with professional technological tools, as they do in real practice.

Thus, when they enter the labour market, they have the technical skills at the level of knowledge and processing of integrated management systems, which enables them to promote an economic and financial analysis of the information that, during the school year, they inserted in the simulated company. At the same time, as managers of their company, they have the responsibility to make all information available to government bodies and employers' associations in the same timetable as companies in the labour market do. The tools used are the real ones and not those created for teaching. In this way, enabling the student to organize information in digital format and, where legally required, in physical format.

Since its implementation, in 2003, this Model of teaching and learning has undergone changes, particularly those related to the profound changes in the world of business management resulting from the 4.0 era. The requirements imposed on businesses by government authorities in terms of providing economic and financial information to various bodies at national and European level, have led to new tasks/activities being planned and others being changed. These changes to the curricula of the curricular units under consideration have essentially resulted in greater involvement of the digital in accounting and related tasks/activities.

The curricular units under consideration were the first to have an international certification of quality in Europe, resulting in a growing awareness on the part of the management of this School, the largest in the country in Accounting, to maintain continuous evaluation measures. It is worth mentioning the fact that every six months there is an external evaluation, by accredited auditors, who attend the classes in progress and, together with the students, try to understand their performance and the evaluation of the curricular units.

It is also important to point out that every semester, the students themselves evaluate both the model and the teachers and the planning. They

are called upon to propose suggestions for future improvements.

The constant availability of the ERP they use in their company, allows them to remotely access, and consult the tasks performed, the documents in their company's information system.

This situation instils in students the urgency of knowing and understanding what digital accounting is.

### 3.2. Study discussion

In this study, we use the methodology of action research, since it aims at collecting and analyzing data to reflect on the current state of the situation under analysis and identify aspects that may change.

Of the 8 classes existent in these course units in the year 2019, with an average of 29/30 students per class, 60 students participated in this study.

During the working sessions in which the researchers were in contact with the students, it was possible for them to observe, analyze and reflect on certain aspects considered fundamental for the success of the learning of these students.

It is intended that students develop the skills acquired throughout the course in the other course units, in the business simulation environment. The development of the work sessions allows them to experience problems and real business life situations, for example, the need to seek funding for their company or, hiring workers.

In this way, students are called to reflect on the knowledge acquired in other disciplines and put it into practice in order to accomplish the tasks/activities that are assigned to them as managers of their company.

In this school year, new technological tools were implemented in order to follow the evolution of accounting in the digital age.

#### Planning

The first phase of action research - planning - consists in the preparation of classes, enhancing an environment close to the business reality, both in technological and operational terms.

The planning of all work sessions - 30 in each school semester - is carried out at the beginning of each semester and within the current business and accounting context, namely within the framework defined by the Order of Certified Accountants. In this way, fortnightly session planning meetings

are held where the tasks to be performed by the students are defined.

#### Action

Action is the phase where students and teachers start to work in team.

The second phase - action - coincides with the part-session (30 hours per semester) at which the tasks proposed in the previous phase are carried out, and the documents are collected and processed. In these sessions, there is also part of the third phase - observation and analysis of the business processes that students are called upon to study and develop. After the completion of the tasks set out in the script for each work session, students are called upon to reflect on them and to present, in the following session, the difficulties they have experienced in carrying them out, so that they have a real sense of how their skills are evolving (fourth phase).

At the level of technological context there are several technologies affecting the curriculum unit. The students constitute a virtual company and work with an existing ERP in the business market. Two classrooms with 31 computers, 16 printers, 15 scanners, 16 telephones each are available to work during the school year. Technologies are an "enabler", they are an acquired assumption from the outset so that students do not have specific concerns with the technologies, but rather with the organizational process. It is not the objective of the course unit that students have technical computer knowledge, but rather operational.

The environment is thus simulated and identical to the business reality; the volume of documents handled seeks to be identical to that of large business realities.

The concept of document is very broad. It can be understood as a physical or electronic document; it can be a doc, xls, html, pdf extension file ... it can be an image, video, or a telephone record.

The documents handled operationally are very diverse, seeking to cover all kinds of documents analyzed by an accounting professional. Thus, the students work on legal documents (employment contracts, purchase and sale contracts, deeds), accounting (invoices, debit notes, credit notes, current account, financial statements, ...), tax documents - electronic VAT (Value Added Tax) returns, IRC (Corporate Income Tax), Investment Maps, IES (Simplified Business Information) - other documentation (advertising, national and/or

international press periodicals, listings...). They also include documents to support the curriculum unit (slides, business plans, scripts, details of tasks, processes (PRO's), support documents (A's), among others.

During the sessions, there are several ways of collecting documents. The document can come from the other applications of the integrated management system (e.g.: invoices, memos, receipts, miscellaneous maps), via email and via scanning. All these forms are simulated with the respective technological supports (mails, scanners, telephone). As in organizations, several documents circulate by paper, for this each company owns a locker where the physical files and other materials are kept between lessons.

The treatment of a document passes through its electronic classification for archive management and subsequent research. The set of attributes for document classification/search are for example subject, folder, keyword, entry date, reference date, entity, among others.

All documents organized in the ERP are evaluated. The punctual evaluation evolves the assessment twice in the semester, of the physical and digital archive. The teacher performs this assessment, with a personalized feedback given to each group – company.

As explained above each three, our lesson is compulsory to the students to attend. The students have two lessons in a 5 days week, in alternated days, they work in a team, manage a simulated company, with a specific business plan. The company must achieve a certain performance implied on the business plan given to the students at the beginning of the semester. Every lesson, the company has several tasks or activities to do, which the “coordination and the teachers” study previously and build a “script” which the students have at their disposal two sessions in advance in order to prepare the work to be done (planning phase one).

In each lesson, the students organize themselves to deliver the activities predicted in the script and already prepared before the lesson. They use an ERP software that is in use in the labour market, they have two computers, one scanner, one printer and a phone.

The activities/tasks were created (on the planning phase) depending on the skills that “we understand”, the future professional must have at

the end of the Course. Technical skills in accounting, management, financial issues, law, auditing, taxes treatment, etc., are always present in each lesson. Also, at the same time, some skills like communication, leadership, teamwork, resilience, achieving goals, research information and take decisions, make plans, etc., are treated in specific activities/tasks.

These technical and “non-technical” tasks are going to be described.

### **The session guide and the tasks: where are the activities/tasks and why**

To the group of all the decisions and tasks corresponds the general guide (of all the companies), which in turn is subdivided into a total guide per company, into a guide per company/session (to the students) and into a guide per classroom/session (to the teachers).

It is from the guide per company/session that the students, within the scope of the respective business plan, become aware of the tasks that they are expected to perform in each session.

The instructions indicated in the guide of each session prevail over all the other information of general and specific character, presented in other documents, namely in the curricular unit support notebook and in the Business Plan.

These guides are in electronic format.

The tasks to perform are of various types:

- Expressly indicated in the guide to be effectively performed in a given session;
- Performed in a given session by the imposition of the compliance of legal deadlines (for instance the delivery of the periodic VAT Declaration, among others);
- Performed in a given session by the imposition of the good rules (for instance, payment of a debt on the appropriate term, attend in a determined moment for the collection of a debt, among others);
- Resulting of a decision made by the group in reaction to some kind of event, or considered by the group as suitable for the pursuit of the proposed objectives.

Information reaches companies in various forms (paper, fax, e-mail, telephone, video, among others), is managed in an integrated way, and a digital archive is created.

## Analysis Phase

After exposing the planning phases (technological and operational) and the action phase (types of documents handled, forms of document collection, electronic document classification) we proceeded to analysis and reflection.

### Task 001 – Registration of the Constitution, Company opening and Start of Activity

Line nº	Description	Routine	Email	Dossier	GIIM*			Company **
					Nature	Key-word	File	
001	Scan the request of the certificate of admissibility	001		D3	PZ	DOCUMENT	O01	
002	Scan the schedule of the public deed	001		D3	PZ	DOCUMENT	O01	
003	Scan the informative elements – companies	001		D3	PZ	DOCUMENT	O01	
004	Scan the deposit note for the company's constitution	001		D3	PZ	DOCUMENT	O01	
005	Scan the Social Pact	001		D3	PZ	DOCUMENT	O01	
006	Formalization act of the company's constitution public deed	014		D3	PZ	DOCUMENT	O01	

\*GIIM – Gestão Integrada de Informação e Multimédia (Integrated Management of information and multimedia)

\*\* Company: identification of the entity of the document (supplier, client, bank, [employees](#),...)

### Task 028 – Print the minutes' book\*

Line nº	Description	Routine	Email	Dossier	GIIM			Company
					Nature	Key-word	File	
001	Print the General Assembly minutes' book	023		D3			O03	
002	Print the Management/Administrative Council minutes' book	023		D3			O02	

\*This "books" to do the writing of all the meeting of the company are printed and filed on the physical files, whenever an "Ata" of the meeting is done, the document is printed and duly signed by the presents, scanned and filed on the page of the "book"

**Figure 1 – Tasks Examples**

All documents can be consulted at anytime and anywhere using the remote access connection. Remotely students can access their virtual company for the purpose of consulting information about their company (financial, accounting, legal, contractual information, among others) in order to make the best management decisions. Information on the course unit can also be consulted regarding the organisation/planning of sessions and/or feedback from teachers in relation to evaluation and operational procedures for the improvement/ correction of tasks performed in sessions.

### INSTRUCTION FOR THE THEME WORK: IVA (Value Added Tax)

The theme's development will be presented in a written document composed, at most, by eight pages (type of letter Arial or Times new roman, size 12, space and a half between lines), distributed of the following way:

**1<sup>st</sup> page:** Cover

**2<sup>nd</sup> page:** Index

**3<sup>rd</sup> page/8<sup>th</sup> page:** Introduction, Development of the Theme, and Conclusions

**Attachments**

#### Attention:

The non-compliance of the number of pages here indicated will lead to a penalization in the work assessment of 40%.

The theme must be treated in the following aspects:

1. Financial settlement
2. Intracommunity transmissions
3. Exports
4. Exempt transactions
5. Intracommunity acquisitions
6. Deductions
  - a. Investments
  - b. Inventories
  - c. Other goods and services
7. Regularizations
8. Reports
9. Liquidations and deductions with the islands
10. Reimbursements
11. Payments to the state
12. Recapitulative

**Figure 2 – Reflection Task/Activity**

Once certain tasks have been carried out, students are offered relevant subjects of accounting practice, which they explore, within established rules (planning) and present to their classmates. They are then evaluated on their performance in developing and dealing with the subject assigned to them and on written and oral communication. The classmates are called to ask questions on the subject in order to generate a healthy discussion that leads to reflection, supported by the teacher, in the classroom.

Access to documents may not be equal to all users, so as in the business world, there is a set of electronic security such as limitation of access to "folders", documents or even part of documents and control of the tasks to be performed on the document per user. Some documents may contain sensitive information, such as personal data, and need to be specially processed in terms of data protection.

### Reflection phase

The reflection phase is crucial in this process allowing us to draw conclusions about the action investigation. Organizations have to follow the era of rapid and mass dematerialization.

Students are required to be comfortable handling and processing documents in digital format, following the technological organizational evolution. It becomes fundamental to bring these



developments to teaching in order to keep up with the constant changes in technologies. These developments make possible to manage large volumes of information in terms of databases and contributes to the emergence of digital accounting, thus facilitating timely access to information.

At the end of each semester, students are provided with a DVD with all the digital information of the virtual company, as well as their videos presenting topics proposed by the curricular unit.

Some reflections lead to the identification of issues for improvement.

Students do not easily absorb some of the tasks because they are difficult to simulate, the context is simulated and has no real world dimension. The simulation of several documents resulting from activities of a daily life routine in a company, such as, bank operations, invoicing, payments, salaries, taxes declarations, factoring, among others, allows students to deal and treat these documents in paper and in digital format. The artificial intelligence behind the computers and ERP in use, gives students the right to access balance sheets and accounting statements to do their critical thinking and act, as managers of their own companies, according to the information provided and handled by them, for example, the financial reports of the accounting statements.

Another reflection taken in the curricular unit is the possible integration of cell phones in this type of teaching, creating for example, a Mobile app so that students can access the documentation and accounting maps of their virtual companies and/or the curricular unit.

#### 4. Conclusions

This work contributes to the teaching of accounting in the environment 4.0. The Business Simulation Project unit, with a strong and current technological base, provides a learning space, based on the simulation of the typical organisational environment of an entity with an advanced management profile, which involves students in the application of knowledge that throughout the course is emerging in a multidisciplinary and interdisciplinary way.

“School learner expectations are changing. They require ready access to collaboration tools and content. As a result, educational institutions must show significant leadership to embrace such

challenges and provide greater inter-operability between the organisation and student platforms, as well as 24/7 access to secure, reliable networks and the ability to create, deliver, and share content across the institution on any number of devices.” [13]

The European Commission wants higher education to modernise its pedagogical methods in order to be able to enhance the skills necessary for the performance of 21st century professions, so that there is a permanent link between what is taught in schools and international competitiveness. [14]

“The European Commission acknowledges that Europe must become much more ‘Cloud active’ to stay competitive in the global economy. It has tackled major barriers surrounding legal issues, data security and copyright. Computer systems provide a quick, reliable, 24/7 service, which requires a different service model.” [13]

This study has some limitations, arising from the methodology itself - it cannot be generalized. As a suggestion for future research, we consider it is urgent to extend the study to other higher schools of accounting and management in order to understand if they are focused on this reality, if they can provide these skills. We also suggest investigating what kind of teaching and learning environments enhance digital skills training in the digital accounting era.

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