
Accounting Students' Predilection Toward Digitalisation: A Qualitative Approach

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Abstract

The digitalisation of the accounting profession is leading to changes in the accounting education by integrating more IT-related topics in response to the business environment's shifting needs. The relevant literature regarding accounting education currently focuses on introducing more IT-related subjects into the curricula; however, less attention has been paid to the undergraduates' predilection toward digitalisation.

As in Romania the accounting faculties offer the specialisation accounting and management information systems, the present study aims to examine the accounting students' attitude toward management information system subjects and provide a glimpse regarding the preference of choosing the research field. A qualitative approach has been selected, organising semi-structured interviews, focusing on the undergraduates' experience with IT-related subjects.

The findings indicate that the students' experience has been determined by various factors, such as previous education, the online context, personal preferences regarding the professors, sense of connectedness, and English fluency. Although the participants appreciate the importance of the management information systems subjects, they seem to have a limited understanding of the practical use in an accounting context. The study contributes to the understanding of the accounting students' predilection toward digitalisation and its findings can be leveraged by both educators and management to improve the future practitioners' experience.

Key words: accounting education; management information systems; digitalisation; undergraduates' perception.

JEL Classification: A22, I22, M15, M41

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Introduction

Digitalisation plays a vital role in the international accounting profession and the professional bodies along with the academic environment readapted their curricula, so that future accounting practitioners will have a solid knowledge base and continue to provide valuable information to the management, stakeholders and shareholders in a highly digitalised environment. While the need for awareness regarding the digitalisation of accounting processes is a continuous concern in the relevant literature (Apostolou, Dorminey and Hassell, 2022), up to now, far too little attention has been paid to the predilection of accounting students toward digitalisation. Although previous studies focused on the students' perception regarding the digitalisation of the profession (Iordan et al., 2022; Stanciu and Pugna, 2020), the factors affecting the predilection toward IT-related subjects have not been analysed.

The term digitalisation, used frequently throughout this paper, refers to the process in which the accounting-related activities are accomplished mainly with the use of IT solutions and technologies. Therefore, this paper does not aim to analyse the impact of the pandemic on the academic education from the point of view of using IT solutions in the context of carrying out activities in an online format and the predilection of students about this format. The purpose of this paper is to explore the predilection of accounting students toward Management Information Systems (MIS) subjects available in the bachelor program curricula.

In Romania, as regulated by the Ministry of Education, within the field of undergraduate studies in Accounting, there is only one specialization: Accounting and Management Information Systems, where the curricula are focus mainly on accounting and MIS subjects. This aspect represents an opportunity to investigate students' predilection toward MIS and understand the factors that determine future accountants to engage more in building sufficient digital skills to respond to the requirements of an already highly digitalised profession in a continuous transformation supported by the adoption of disruptive emerging technologies.

This study uses a qualitative approach to investigate students' predilection toward digitalisation by examining the factors that determine students' preference regarding IT-related topics. As this research is exploratory in nature, it investigates, with the help of semi-structured interviews, the predilection toward digitalisation.

This paper has been divided into four parts. The first part examines the relevant literature on the accounting students' predilection toward digitalisation, while the second part focuses on the methodology used to conduct this research. In the third part we analyse the information obtained from the interviews and in the last part we present our conclusions, limitations, and future research directions.

1. Literature review

The digitalisation of the accounting profession continues to represent a current concern of researchers as in almost (if not all) the accounting processes, IT solutions are being used to automate the tasks, decrease the time spent, eliminate redundancies, and reduce errors (Agostino, Saliterer and Steccolini, 2022; Bhimani, 2021).

Given the large volume of information produced that must be processed in a timely manner, companies started to adopt new solutions to harness the data and as a response to the market needs, the academia and professional bodies adjusted their curricula to include new technologies that will prepare the future practitioners to respond to the business needs (Berikol and Killi, 2021; Stancheva-Todorova and Dimitrova, 2021).

Previous literature has highlighted that despite the fact that universities have updated their curricula and integrated more IT-related subjects, the undergraduate accounting degree programs are still not completely helping students to develop the required competencies (Bayerlein and Timpson, 2017). This aspect might be caused by the fact that despite the inclusion in the curricula of some subjects, the information presented and the skills developed are sometimes superficial (Gușe and Mangiuc, 2022).

Notwithstanding the students' acknowledgement of the importance of digitalisation in the accounting profession (Felski and Empey, 2020; Jackson, Michelson and Munir, 2022), researchers have uncovered some differences of opinion regarding the desirable competencies that future accountants should master (Aryanti and Adhariani, 2020), which leads to the idea that the undergraduates may not have sufficient information regarding the market requirements.

Most current undergraduate students are considered members of Generation Z, which has been surrounded by rapid technological changes and advancements from a young age. Therefore, they are considered "authentic digital natives who are a hyper cognitive generation with

different student profiles than before” (Hernandez de Menendez, Escobar Díaz and Morales Menendez, 2020, p. 1) and are increasing the need for change in an environment with global competition between universities.

Compared with other undergraduate accounting programs from other countries that provide some IT-related subjects, in Romania all accounting faculties have the unique specialisation Accounting and Management Information Systems, where the students are trained in both fields. The purpose of these programs is to create a solid foundation of knowledge for the graduates in an attempt to address the market’ expectations. This context allows us to examine students’ predilection toward digitalisation in a more detailed manner.

2. Research methodology

This study sought answers to the following research questions:

RQ1: *What are the main challenges encountered by students regarding MIS subjects?*

RQ2: *What determines accounting students to avoid writing their graduation paper in the MIS field?*

RQ3: *Do the students have sufficient knowledge of the importance of the skills developed during MIS courses?*

2.1. Institutional context: a description of the MIS curricula

In order to provide the institutional context, we first describe the curricula of the faculty of Accounting and Management Information Systems from the Bucharest University of Economic Studies and the choices that students have to make regarding the bachelor paper. As in the case of other faculties in Romania that offer this specialisation, in the curricula, there are seven mandatory and one optional subject in the MIS field, starting from basic digital skills, such as the MS Office package, especially Excel – one course, then focusing on Relational Databases - two courses, along with Programming Languages- one course, Web Design – one course, System Design – one course and Business Intelligence – one course. For the optional subjects, the students can select one of the three available courses, such as Accounting Information Systems, Technologies for Accounting Software

Development, and Management of Virtual Enterprise. The last two mandatory courses are scheduled for the final year of the program, while all the others, including the optional course, are planned for the first two years.

At the end of the second year, according to the procedures in place, the students have to select or propose a bachelor paper title and select, if desired, one coordinator. If no coordinator is selected, one will be provided. There are three departments that propose the titles for the bachelor papers: Accounting, Management Information Systems, and Financial and Economic Analysis and Valuation; the students are completely free to select any of the departments and title for the future paper.

2.2. Participants' selection

Considering the purpose of the research, namely to analyse students’ predilection toward digitalisation, when selecting the participants, we chose from the initial list of students, available on the faculty website, 41 possible participants who have opted to write their graduation paper in the accounting field, all with different coordinators. Selecting exclusively students that have decided to write their graduation paper in the accounting field, given the fact that they also received training in the MIS field, provides a better understanding on the challenges encountered and the factors that affect the predilection toward digitalisation. We contacted the participants by email, and 14 students accepted to participate in the research. They have previously been informed about the subject of the study; however, the questions have not been provided prior to the discussion. The interviews took place online, during March 9-18, 2022.

All participants are students of the Bucharest University of Economic Studies (BUES), within the Bachelor’s program Accounting and Management Information Systems (**Table no. 1**). The choice of the educational institution was made according to the World Ranking of universities, published by Times Higher Education (2022), where, according to the ranking, BUES is, in terms of performance, the first university in Romania that offers study programs in the field of Accounting and Finance.

Table no. 1. Participants' profile

Participant ID	Gender	Age	High School profile	Work experience (accounting)	Interview length (min.)
Interviewee 1	F	22	Mathematics-Informatics	-	16
Interviewee 2	F	21	Economics	-	24
Interviewee 3	M	22	Economics	-	19
Interviewee 4	M	22	Mathematics-Informatics	1 year	49
Interviewee 5	F	22	Philology	1 month	30
Interviewee 6	F	22	Mathematics-Informatics	-	37
Interviewee 7	F	27	Mathematics-Informatics	5 years	30
Interviewee 8	F	22	Natural Sciences	-	19
Interviewee 9	F	22	Economics	6 months	22
Interviewee 10	F	23	Economics	-	27
Interviewee 11	F	22	Economics	-	28
Interviewee 12	M	26	Theology	1 year	38
Interviewee 13	F	21	Mathematics-Informatics	1 year	21
Interviewee 14	M	22	Social Sciences	-	23

Source: Authors' own projection

2.3. Interview design and data analysis

To respond to the research questions, we conducted semi-structured interviews with the 14 students who accepted the invitation. By using this approach, the participants were able to provide elaborate responses and thus increase the understanding of the investigated topic using qualitative narratives (Gendron and Spira, 2010). In qualitative research, the objective is to "tap into the knowledge of those who have the requisite experience, first-hand knowledge, and understanding to provide meaningful insight into the issue being investigated" (Malsch and Salterio, 2016, p. 6); therefore, the literature regarding sample sizes varies, focusing on the fact that the sample "should therefore include as many cases as are needed with a view to the research question, but it should not model itself on quantitative standards" (Schreier, 2018, p. 90) and the researchers should use saturation as a criterion. To determine the appropriate sample size required, we applied the algorithm proposed by Francis et al. (2010), thus establishing a minimum number of 10 participants for the initial analysis and three more subsequent interviews, from which no additional information would result from those previously collected. Thus, in this study, saturation was reached at the 11th participant, continuing with three more interviews from the time saturation was identified. During the interviews, the respondents were asked 12 questions, probes being used when necessary. The categories on which the interview

focused were the following: general demographic information, reasons for selecting the bachelor program, the main challenges regarding the MIS curricula, reasons for not selecting the graduation paper in the MIS field, and proposed changes to the curricula.

All the interviews have been recorded, as the participants accepted this approach, and afterwards the audio files were transcript to reduce the time and assist the researchers analyse the obtained information through a recursive process of category identification and open coding, with the purpose of capturing the respondents' ideas.

3. Results and discussions

The results will be discussed in terms of the major themes presented in the research questions.

3.1. Challenges encountered while studying MIS subjects

Although the analysed curricula assume no previous exposure of the students to MIS-related subjects, sometimes the undergraduates felt the need to have an additional background regarding the topics, mostly in terms of the MS Office package. As prior literature highlighted (Lee et al., 2018), this represents one of the most required digital skills in the accounting profession,

especially proficient skills with spreadsheet programs. Given the fact that some participants were more exposed in high school to IT-related subjects, depending on the profile graduated, some of them managed to adapt easier, while for others the topics were perceived as relatively difficult, as highlighted during the interviews:

- *Although in high school we had some IT subjects, the information provided were too general so the first serious practice I had was during the undergraduate program. It was quite difficult for me and I think it would have been easier to have a solid background from high-school. (Interview 2);*
- *During the tutorials, I often fell behind and, instead of focusing on the logic, I was paying more attention to write the syntax correctly. (Interview 8);*
- *It was extremely hard to adapt as I did not have previous knowledge regarding these topics, the logic was somehow hard to follow. (Interview 12).*

Another aspect that created challenges for the participants was the transition from face-to-face classes to online, as an impact of the pandemic. This context allowed students to work on their own devices and be more productive (*I have worked much better in the online context as I was able to use a decent computer. If during courses we had no access to computers, online I was able to work even during courses as the professor explained the subjects. – Interview 3*), while others were negatively impacted, mostly because they did not manage to stay focused during the activities (*In the first year, while we had the activities in person, I felt no need to check my phone during the classes; however, at home, I was continuously distracted. – Interview 10*).

Most subjects included in the MIS curricula use some syntaxes in English, and while some participants consider having sufficient skills to understand the code behind some applications, for other students this created some challenges (*sometimes following a syntax in English was difficult as I was not familiar with some of the terms. I think that if I had a better level of proficiency in English, I would have perceived the subjects as being easier. – Interview 2*).

Even though the program has a dual specialisation, most of the activities are allocated for accounting topics, having a much more limited number of activities for the MIS subjects. Due to this context, the students sometimes perceived the volume of information provided during MIS activities as being considerably higher compared to the accounting-related subjects, as highlighted in the following interviews:

- *I felt like there were not enough activities allocated, there were many requirements during MIS subjects in a relatively short period of time, I personally needed more information to be able to develop the proper skills. – Interview 3;*
- *Sometimes the professor explained some concept while we were also working on developing some applications, I preferred to have more laboratory activities allocated as there was not enough time to understand the theoretical background and to also apply those concepts in practice. – Interview 4.*

One more recurrent challenge highlighted by the participants was related to the lack of a sense of connectedness, especially in the online context. Although the respondents appreciated that the level of support provided was sufficient (*MIS professors were always happy to help. – Interview 1; The professors always asked us if the information provided were clear enough – Interview 8; I felt free to ask anything, no matter how trivial the topic was – Interview 13*), some of them perceived the online context as unsuitable (*The professors were relatively distant - Interview 5; I selected this faculty after graduating from another specialisation [Theology] as I wanted to have a secure place of work and despite the fact that jobs in the IT field are better paid, some of the professors created a tense atmosphere during the activities and thus determined me to pay less attention to the topics – Interview 12*).

3.2. Selection of the field for the graduation paper

Analysing the students' distribution according to the field chosen for their graduation paper, available on the faculty's website, it was possible to see that slightly more than 10% of the graduates (73 out of 714) chosen a bachelor's thesis in the IG field; therefore, we considered appropriate to investigate whether this aspect can provide more meaningful information regarding students' predilection toward digitalisation. All the participants are writing their graduation papers in the accounting field and they were asked to provide some reasons why they decided not to have their paper in the MIS field, as the majority assessed the experience with MIS subjects to be more than acceptable, also having participants that selected the undergraduate program, especially for the MIS subjects (*I analysed the curricula regarding the MIS subjects and I applied for this faculty. – Interview 3; I opted for this specialisation more for the MIS part as I*

liked these topics in high-school. – Interview 4; Initially I was thinking to apply for a program with more IT-related subjects; however, from a pragmatic point of view I opted for this program as it provided both IT-related topics and accounting, which is a vital part for all economic activities. – Interview 6).

After analysing the data collected during the interviews, the following themes emerged regarding the selection of the field:

- Peers' experience with a particular professor – some of the students stated that when selecting the field and the coordinator they relied more on the experience of their older peers: *I have not worked in the past with the coordinator, but some colleagues from the students' association I am part of advised me to ask this professor to coordinate my paper as she provided them with the support needed.* – Interview 1; *During the online context we created study groups and my peers had a great opinion about their coordinator, so I decided to ask her.* – Interview 5;

- Personal experience with a particular professor – when selecting a title for the graduation paper and a professor, the students are not restricted to collaborate only with certain professors; they can ask for anyone on the list of available coordinators. Nevertheless, it seems that the professors that managed to create a greater sense of connectedness are preferred by the students: *I selected first the coordinator as during the activities we had, she always presented the concepts in a practical manner and demonstrated a persistency regarding the requirements during the semester.* – Interview 6; *I wanted to work with this coordinator as during the activities he managed to create an engaging environment and I consider that he contributed greatly to both my personal and professional development.* – Interview 12;

- Relevance of the field regarding the (future) profession – as some of the students are already working in the accounting field, they considered it appropriate to select a paper in this field in order to increase their professional skills (*I selected a topic that will help with my professional development, although I work in accounting for about a year, I felt like I do not have sufficient knowledge regarding this topic (taxation).* – Interview 4; *I wanted something that will help me at my job, although I think that a paper in the MIS field would have been interesting, I had to focus first on the actual professional needs.* – Interview 7). In other cases, the participants selected the topic having in mind their future profession (I

want to get a job after I graduate and I think this topic will help me develop new skills [non-financial reporting]. – Interview 10;

- Perceived level of proficiency in the MIS field – even though the respondents have successfully passed the MIS exams, some of them consider having a limited set of skills in this field: *There were too many skills for me to develop if I have opted for a paper in this field.* – Interview 2; *I think that the graduation paper is something that shows your proficiency in a particular field, to be honest, I think that a paper in the MIS field will require more compared with my set of skills.* – Interview 9; *I did not even consider the MIS field as the online context made me feel that I was not prepared enough.* – Interview 11;

- Lack of information regarding the requirements of a graduation paper in the MIS field – although the students can inquire the professors for additional information regarding a topic, the majority do not engage in this approach, thus leading to uncertainty: *No one in my group had their paper in the MIS field, I am not quite sure what a topic from this field would require.* – Interview 8; *I think that there is much more information that I can leverage in the accounting field. The other students said that a paper in the MIS field would require more effort, and I did not have a clear understanding of the demands for such a paper.* – Interview 14.

3.3. MIS skills' relevance

As presented in the objectives, the MIS subjects are designed to help future practitioners have a sufficient level of understanding of the technologies with which they will more likely work with. As previous literature has emphasised, subjects such as Relational Databases where the students are trained to use SQL – a structured querying language, have practical applications in the accounting field (Lawson and Street, 2021; Tojiboyev et al., 2022) and subjects such as Programming Languages and Business Intelligence are helping students to create a solid base in terms of data analytics. The other two subjects, Systems and Web Design, have the purpose of facilitating the undergraduates' understanding regarding the development of accounting information systems. Nevertheless, some of the students have highlighted during the interviews that the most useful MIS-related subject for their career as future practitioners will be mostly MS Office (*Although at this moment I am in a training program, I used Excel daily, I should have been more focused on this subject as I now realise its*

importance. They will teach you some accounting concepts if needed, but they expect that you already know how to use a computer. – Interview 5; I am using Excel on a daily basis and I think the curricula should be extended. – Interview 7).

Despite the fact that the competencies of spreadsheet programs represent the most common requirement in the accounting field, regardless of the level of experience (Rîndașu, 2021), the other subjects play a vital role in a highly digitalised environment. Students' understanding regarding the importance of a particular topic may be limited due to the fact that the relevance of the skills developed in the context of the accounting profession is not clear enough (*I don't think that I will use programming languages in this profession.* – Interview 9). Moreover, some of the students have highlighted the fact that they would have preferred to use more accounting information systems AIS programs during their undergraduate studies as currently the only AIS is represented by some of the modules available in SAP.

Based on the information received from the participants, it seems that there is a current need for more collaboration between the accounting and MIS departments so that the students have a better understanding of the relevance of the IT skills developed in the accounting field.

Conclusions

The aim of the present research was to examine the accounting students' predilection toward digitalisation due

to the constant changes determined by the continuous adoption of IT-related solutions meant to improve the accounting processes. By conducting a series of interviews with senior accounting undergraduates, the findings indicate that despite having a reasonable understanding of the importance of MIS subjects in an accounting context, the students tend to consider these courses as being relatively difficult than other subjects, the preference being determined mostly by the previously developed skills, sense of connectedness with the lecturers, perceived relevance of the topic in the future profession and self-assessed level of proficiency.

The findings of this study have several important implications for future practice, as they provided valuable insights for a better understanding of the main challenges that future practitioners might face in a highly digitalised profession, thus allowing the academic environment to address the issues emphasised. Furthermore, the results lay the groundwork for future research on the factors that can determine changes of preference regarding IT-related subjects for accounting practitioners.

Since the study was limited to participants from only one university, it was not possible to evaluate the predilections of students from other universities enrolled in similar programs; however, this study should be replicated by interviewing students from more faculties offering this bachelor degree program. Moreover, further research could determine whether the findings of this study can be generalised and thus determine the effectiveness of this dual specialisation approach in the context of digitalised accounting.

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