

# **IMPROVING THE LEARNING METHODOLOGY FOR THE HIGHER ACCOUNTING EDUCATION IN ROMANIA**

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**Abstract:** : Financial reporting will become more efficient and also it will be accomplished in real time in the near future especially due to the generalization of using the mobile technology and an important traffic data network, as well. To will-survive on a market increasingly competitive with a tendency of guidance towards international convergence, the accounting profession will have to bear the substantial changes that must begin with the accounting education. The main purpose of this study is to outline a plan for the changes to be applied to teaching methods for higher accounting education to meet the changes that occur in the accounting market.

**JEL classification:** M41.

**Key words:** critical; accounting education; financial reporting; IT&C technologies; accounting software; usability of IT technologies

## **1. INTRODUCTION**

Current business environment, in which IT is ubiquitous, required a high level of attention and changing the accounting profession (B. Lamberton et al., 2005). In addition, has imposed graduates entering the labor market to possess IT skills at least on medium level (Y. Chen, 2005), and that because the computer represents a productivity tool that is part of the working environment of accountants (Larres and Oyelere, 1999).

After all, in a society where the IT technologies have reached practically everywhere, the accounting profession went through a phase of substantial changes. In a matter of fact, many changes in business environment reveal uncertainties and concerns about the future of liberal accounting profession. Nowadays, the accounting activity is carried out in a saturated market and increasingly competitive, but highly fragmented, while maintaining the tendency of international accounting convergence.

Along with widespread use of mobile technology and faster network grow the people's expectations to have access to data anywhere and anytime. The financial reporting will be much faster and, eventually, provided in real time. A few years ago, e-accounting was considered by all a new development direction in accounting

computerization. If we add to e-accounting an Internet connection and a subscription to a virtual accounting service, we achieve a cloud accounting service.

Unlike traditional accounting - where primary documents and records exist, in main, on paper – in e-accounting, source documents and accounting records are only in electronic format, this meaning their dematerialization. Such a tendency accelerates the rhythm at which the accountants try to carry on their activity and also facilitate, by default, the emergence of potential errors and frauds as concerns creating information.

## **2. OBJECTIVES**

Taking into account the constant changes in IT&C field, the IT skills are really important both for the accountants having great experience and for those that scarcely join the profession. In this regard, B. Lamberton et al. (2005) expect that the interests and professional skills of accountant to comprise a successful combination between the knowledge of accounting and those of IT. However, it was found that accounting practitioners do not seem to be willing to adapt to changes in informational technology field and, thus, achieve performance in a working environment based on technology.

B. Lamberton et al. (2005) claim the statement of Wheeler et al. (2004), according to which the accounting education could be a filtering process, by favoring certain personality characteristics, with the effect that the people who choose a specialization with accounting profile might not be willing to acquire IT skills. To strengthen this argument, B. Lamberton et al. (2005) assert that if a large number of individuals choose to pursue a career in accounting, hoping thus they might elude the modern informational technologies. In this case, could appear some discrepancies, sometimes important, between the accountant's expectations and requirements of the workplace in terms of the need for computerization of accounting work.

The request for highest possible level of IT skills for accountants is more obvious than ever before. According to Johnson and Johnson (1995), the increasing demand of accountants having important knowledge in IT during 1973 - 1995 was really dramatic: only 1% of employers in 1973 and 6% in 1983 considered as being necessary the IT skills for employment in job offers, while in 1993, over half of the job offers of employers had referred to the IT skills. Nowadays it is absolutely unacceptable for an accountant to not have at least minimum IT knowledge. Generally speaking, any chartered accountant must have knowledge and IT skills, basically IT is perceived as a basic skill of a professional accountant (Larres et al, 2003).

IT skills knowledge of Certified Accountants practitioners represents an indicator for the minimum level of IT knowledge that must be taught in schools accounting. According to Bothrick (1996), to verify whether a course is appropriate must first ascertain whether practitioners have these skills. If so, the course is suitable for students. Researchers as Bromson et al (1993), Larres and Oyelere (1999), Raval (1989), Albin and Crocket (1991) suggested that IT skills should be integrated in each accounting course in higher education. This aim can be achieved only if the teachers themselves prove such skills.

Along the time, various studies were accomplished to determine the most important IT skills required for the accounting profession. Studies performed by Davis and Leich (1988), Bain et al (2002), Burnett (2003), Coy and O Grady (1992) and Theuri and Gunn (1998) have focused to inquire accounting teachers, employers and practitioners about the IT skills for the junior accountants. The result of these studies consists in a list of tools that the students of IT accounting faculties need to know. In

main, such kind of list must comprise the skills in using spreadsheets, word processors, Windows operating environment, accounting packages, communications programs and web browsers. Anyway, most of the employers and practitioners have considered as very important the ability of junior accountants of knowing and using as well as possible the most important features of the spreadsheets (Davis and Leich, 1988, Coy and O Grady, 1992; Edmonds, 1988, Bain et al., 2002; Meer and Adams, 1996; Burnett, 2003).

Only a few studies have placed first the teacher's ability to use spreadsheets for accountants (Meer and Adams, 1996). That controversy of opinions could be simply a reflection of the general belief of some teachers according to which the IT technologies have to be studied only on conceptual level without having to focus on the limited field of the technical training (Bromson et al., 1993). The views of employers, teachers and practitioners have a direct impact on the IT skills to be taught in higher education.

However, the curricula of higher education ignores in a great extent the use of computer as an important tool in learning process, in main, as a result of the budgetary constraints and also due to lack of time (Al-Khadash, Al-Bishtawi, 2010). Many studies have aimed at the relationship between students' perception towards the IT skills in accounting and other variables such as the previous experience in using computers.

The previous studies on using computers during teaching the disciplines of accounting, have shown that the use of computers is, either irrelevant in the learning process of accounting concepts (Ng and Er, 1989), or doesn't lead to higher competence in accounting, as was emerged from the studies of Baxter (1974) and Arnett (1976). Basically, these authors have studied the differences between the exams marks of the experimental groups that have used layout software and the control group that, in turn, did not use at all the computer.

The study carried out by Al-Khadash and Al-Bishtawi aimed the impact of computer use during the accounting courses (as teaching tool) on the attitude relating to the perception of students toward IT skills. The study's results showed that such a course has a real influence as regards the student's perception on the IT skills. In fact, the use of computers in accounting courses is meant to help the students for acquiring the skills required by the accounting profession. Al-Khadash and Al-Bishtawi (2010) have linked this assertion with idea that the students must demonstrate a positive attitude towards the use of computer, as much as possible.

The results of the study accomplished by Austin (1989) which concerned the effects of using computer and worksheets of spreadsheet processor during the introductory course of accounting (this is the basis of accounting) on performance and behavior have revealed there is no large differences on performance or addressing the open questions between the control group and the experimental group.

### **3. METHODOLOGY**

After the initial processing of the statistical data obtained by applying the interview technique, 223 usable responses were obtained from the master students who are participating at professional or research master programs held by the Faculty of Accounting and Management Information System of Bucharest Academy of Economic Studies.

Of the 223 usable responses, 73.1% came from respondents who graduated the Faculty of Accounting and Management Information Systems of the Academy of Economic Studies of Bucharest, 20.2% came from respondents who graduated other

faculties with an „accounting” specialization and 6.7% came from respondents who graduate other faculties without an „accounting” specialization.

We chose to present (for certain questions) only the results obtained from the respondents who are currently working in the accounting field in order to highlight the impact of the accounting education on the way in which accounting graduates fill in the accounting profession and on the way in which they perform their tasks.

**Teaching of the accounting disciplines:** more than half of the respondents stated that the accounting disciplines are taught in a more theoretical manner, practical examples being very rare. Fewer than 25% of the respondents stated that the accounting disciplines are taught by presenting both theoretical and practical examples. However, the practical examples presented during lectures and seminars refer to accounting practices and techniques that are not applicable in our country. An example of this would be that some teachers put the emphasis on presenting the US GAAP or IFRS instead of the national accounting practices. The respondents that are currently working in the accounting field also stated that in 80% of the cases, the accounting disciplines are taught theoretically, without any real example.

**The degree of use of the computer during accounting lectures and seminars:** over 80% of the respondents stated that during accounting seminars and lectures, the computer is not considered a teaching tool, being used far too little, just for PowerPoint presentations.

**The extent in which at the management information systems disciplines accounting techniques were presented:** 20.6% of the respondents stated that at these disciplines, accounting techniques were never presented, 58.7% of the respondents stated that only a few accounting techniques were presented, 7.6% of the respondents stated that a sufficient number of accounting techniques was presented, 7.2% of the respondents stated that various accounting techniques were presented and 5.8% of the respondents stated that many accounting techniques were presented.

**The usability of including accounting software examples in the curricula of the higher accounting education:** 65.5% of the respondents rated as very useful the idea of studying accounting software as part of the higher accounting education curricula. Over 90% of the respondents that are working in the accounting fields rated the idea of studying accounting software as a must for the higher accounting education curricula.

**IT skill level:** 78.5% of the respondents stated that their IT skills are average, 10.8% stated that their IT skills are at a beginner level and 10.8% of the respondents stated that their IT skills are advanced. 93% of the respondents who graduated faculties without an „accounting” specialization, 73.3% of the respondents who graduated faculties with an „accounting” specialization and 78.52% of the respondents who graduated the Faculty of the Accounting and Management Information Systems stated that their IT skills are average. Most of the respondents that stated that their IT skills are at a beginner level graduated faculties with an „accounting” specialization (24.4%), followed by those who graduated the Faculty of the Accounting and Management Information Systems (7.36%) and by those who graduated faculties without an „accounting” specialization (7%). Only 14.11% of the respondents who graduated the Faculty of the Accounting and Management Information Systems and 2.2% of the respondents who graduated faculties with an „accounting” specialization consider that they have advanced IT skills.

**Using webographie for projects:** 26.9% of the respondents stated that they are using webographie very often for the projects, 27.4% of the respondents stated that they are using webographie often and 15% of the respondents stated that the almost never use webographie for projects.

**ANELIS for research:** an alarming percentage of 47.1% of the respondents do not know what the ANELIS databases are 12.6% of the respondents have never used the ANELIS databases, 29.2% of the respondents used them on rare occasions and 11.2% used them frequently.

**Cloud computing during the faculty:** 80.7% of the respondents have never heard of this concept during their faculty studies.

**The field in which they work:** only 38.6% of the respondents work in the accounting field, 37.7% of the respondents are not working yet, 8.5% of the respondents are working in services, 9.4% of the respondents are working in IT and 5.8% of the respondents are working in the banking field.

### **The use of spreadsheet software in analyzing and synthesizing financial data:**

**Using formulas in a spreadsheet:** 48% of the respondents are using a spreadsheet software daily in order to perform calculations, 17.5% of the respondents are using spreadsheet software quite a lot, 15.2% of the respondents consider that they are using spreadsheet software enough, 10.8% of the respondents are using spreadsheet software occasionally and 8.5% of the respondents do not use spreadsheet software.

For the respondents that are working in the accounting field, the results can be found below:

67% of the respondents that graduated faculties without an „accounting” specialization, 32.1% of the respondents that graduated faculties with an „accounting” specialization and 45.38% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software very much in order to perform their daily work tasks.

17.58% of the respondents that graduated faculties with an „accounting” specialization and 12.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software a lot in order to perform their daily work tasks.

31% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software „quite enough” in order to perform their daily work tasks.

33% of the respondents that graduated faculties without an „accounting” specialization, 10.56% of the respondents that graduated faculties with an „accounting” specialization and 7.8% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software on rare occasions in order to perform their daily work tasks.

10.56% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems never use spreadsheet software to perform their work tasks.

**Consulting databases:** 7.6% of the respondents never use spreadsheet software to consult databases, 15.7% of the respondents use spreadsheet software occasionally,

26% of the respondents use spreadsheet software enough, 30% of the respondents use spreadsheet software a lot and 20.6% use spreadsheet software daily. For the respondents that are working in the accounting field, the results can be found below:

5.6% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems never use this feature of the spreadsheet software.

21.05% of the respondents that graduated faculties with an „accounting” specialization and 12.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using this spreadsheet software feature occasionally.

26.31% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using „quite a lot” this feature of the spreadsheet software.

67% of the respondents that graduated faculties without an „accounting” specialization, 21.05% of the respondents that graduated faculties with an „accounting” specialization and 26.56% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using a lot this feature of the spreadsheet software.

33% of the respondents that graduated faculties without an „accounting” specialization, 26.33% of the respondents that graduated faculties with an „accounting” specialization and 20.32% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using daily this feature of the spreadsheet software.

**Importing data from specific applications:** 9.9% of the respondents never use spreadsheet software to import data from other applications, 14.3% of the respondents are using this feature of spreadsheet software occasionally, 35.9% of the respondents are using enough this feature, 26% of the respondents are using this feature a lot and 13.9% of the respondents are using this feature daily. For the respondents that are working in the accounting field, the results can be found below:

33% of the respondents that graduated faculties without an „accounting” specialization and 29.68% of the respondents who graduated the Faculty of Accounting and Management Information Systems never use this feature of the spreadsheet software when handling financial data.

5.26% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using this feature of the spreadsheet software only on rare occasions.

33% of the respondents that graduated faculties without an „accounting” specialization, 47.36% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using this feature of the spreadsheet software quite enough when it comes to handling financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 26.31% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting

and Management Information Systems are using this feature of the spreadsheet software a lot for handling financial data.

21.07% of the respondents that graduated faculties with an „accounting” specialization and 9.45% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using this feature of the spreadsheet software on a daily basis.

**Charts:** 9% of the respondents never use spreadsheet software to create or edit charts, 35.9% of the respondents use spreadsheet software only to edit small sections of the charts that they create using different software, 36.3% of the respondents use spreadsheet software to create simple charts, 15.2% of the respondents use spreadsheet software to create simple and sometimes more complex charts and 3.6% of the respondents use spreadsheet software to create all types of charts. For the respondents that are working in the accounting field, the results can be found below:

67% of the respondents that graduated faculties without an „accounting” specialization, 10.52% of the respondents that graduated faculties with an „accounting” specialization and 4.68% of the respondents who graduated the Faculty of Accounting and Management Information Systems never use spreadsheet software to create or edit charts.

52.63% of the respondents that graduated faculties with an „accounting” specialization and 34.37% of the respondents who graduated the Faculty of Accounting and Management Information Systems use spreadsheet software only to edit small sections of the charts that they create using different software.

33% of the respondents that graduated faculties without an „accounting” specialization, 26.31% of the respondents that graduated faculties with an „accounting” specialization and 32.81% of the respondents who graduated the Faculty of Accounting and Management Information Systems use spreadsheet software to create simple charts.

10.54% of the respondents that graduated faculties with an „accounting” specialization and 21.85% of the respondents who graduated the Faculty of Accounting and Management Information Systems use spreadsheet software to create simple and sometimes more complex charts.

6.29% of the respondents who graduated the Faculty of Accounting and Management Information Systems use spreadsheet software to create all types of charts.

**Synthesizing data:** 3.6% of the respondents are using spreadsheet software occasionally to synthesize financial data, 23.8% of the respondents are using spreadsheet software enough when it comes to synthesizing financial data, 26.5% of the respondents are using spreadsheet software quite a lot for synthesizing financial data and 46.2% of the respondents are using spreadsheet software daily for synthesizing their financial data. For the respondents that are working in the accounting field, the results can be found below:

33% of the respondents that graduated faculties without an „accounting” specialization, 5.26% of the respondents that graduated faculties with an „accounting” specialization and 1.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software occasionally to synthesize financial data.

5.26% of the respondents that graduated faculties with an „accounting” specialization and 29.68% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software enough when it comes to synthesizing financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 78.94% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software quite a lot for synthesizing financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 10.54% of the respondents that graduated faculties with an „accounting” specialization and 54.82% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using spreadsheet software daily for synthesizing their financial data.

**Forecasts, optimizations and scenarios:** 43.9% of the respondents never use the decision support feature of the spreadsheet software, 10.7% of the respondents are using the decision support feature of the spreadsheet software occasionally, 21.5% of the respondents are using the decision support feature of the spreadsheet software enough, 21.5% of the respondents are using the decision support feature of the spreadsheet software quite a lot and 2.2% of the respondents are using the decision support feature of the spreadsheet software daily. For the respondents that are working in the accounting field, the results can be found below:

All of the respondents that graduated faculties without an „accounting” specialization, 47.36% of the respondents that graduated faculties with an „accounting” specialization and 45.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems never use the decision support feature of the spreadsheet software.

26.31% of the respondents that graduated faculties with an „accounting” specialization and 5.38% of the respondents who graduated the Faculty of Accounting and Management Information Systems of the respondents are using the decision support feature of the spreadsheet software occasionally.

26.32% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using the decision support feature of the spreadsheet software enough.

29% of the respondents who graduated the Faculty of Accounting and Management Information Systems are using the decision support feature of the spreadsheet software daily.

**The connection between the current tasks of work and the disciplines studied:**

**Law:** 16.3% of the respondents stated that the connection between this discipline and the work tasks is very weak, 47.7% of the respondents stated that the connection between this discipline and the work tasks is weak, 24.4% of the respondents stated that the connection between this discipline and the work tasks is medium and 11.6% of the respondents stated that the connection between this discipline and the work tasks is very strong.

33% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 15.6% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.



31.57% of the respondents that graduated faculties with an „accounting” specialization and 54.68% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 31.57% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

21.08% of the respondents that graduated faculties with an „accounting” specialization and 9.41% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very strong.

**Financial accounting:** 7% of the respondents stated that the connection between this discipline and the work tasks is medium, 20.9% of the respondents stated that the connection between this discipline and the work tasks is strong and 72.1% of the respondents stated that the connection between this discipline and the work tasks is very strong.

67% of the respondents that graduated faculties without an „accounting” specialization and 21.05% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is medium.

31.57% of the respondents that graduated faculties with an „accounting” specialization and 18.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

33% of the respondents that graduated faculties without an „accounting” specialization, 47.38% of the respondents that graduated faculties with an „accounting” specialization and 81.25% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very strong.

**Cost accounting:** 2.3% of the respondents stated that the connection between this discipline and the work tasks is very weak, 20.9% of the respondents stated that the connection between this discipline and the work tasks is weak, 19.8% of the respondents stated that the connection between this discipline and the work tasks is medium, 50% of the respondents stated that the connection between this discipline and the work tasks is strong and 7% of the respondents stated that the connection between this discipline and the work tasks is very strong.

5.26% of the respondents that graduated faculties with an „accounting” specialization and 1.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

67% of the respondents that graduated faculties without an „accounting” specialization, 36.84% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

15.78% of the respondents that graduated faculties with an „accounting” specialization and 62.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

26.34% of the respondents that graduated faculties with an „accounting” specialization and 1.69% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very strong.

**Business control:** 7% of the respondents stated that the connection between this discipline and the work tasks is very weak, 45.3% of the respondents stated that the connection between this discipline and the work tasks is weak, 22.1% of the respondents stated that the connection between this discipline and the work tasks is medium, 24.4% of the respondents stated that the connection between this discipline and the work tasks is strong and 1.2% of the respondents stated that the connection between this discipline and the work tasks is very strong.

67% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 1.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 52.63% of the respondents that graduated faculties with an „accounting” specialization and 43.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

15.78% of the respondents that graduated faculties with an „accounting” specialization and 25% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

10.52% of the respondents that graduated faculties with an „accounting” specialization and 29.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

5.29% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is very strong.

**Internal Audit:** 5.8% of the respondents stated that the connection between this discipline and the work tasks is very weak, 41.9% of the respondents stated that the connection between this discipline and the work tasks is weak, 25.6% of the respondents stated that the connection between this discipline and the work tasks is medium, 25.6% of the respondents stated that the connection between this discipline and the work tasks is strong and 1.2% of the respondents stated that the connection between this discipline and the work tasks is very strong.

26.31% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is very weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 31.57% of the respondents that graduated faculties with an „accounting” specialization and 45.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

67% of the respondents that graduated faculties without an „accounting” specialization, 21.05% of the respondents that graduated faculties with an „accounting” specialization and 25% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

15.78% of the respondents that graduated faculties with an „accounting” specialization and 29.69% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

5.29% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is very strong.

**Economic and Financial Analysis:** 1.2% of the respondents stated that the connection between this discipline and the work tasks is very weak, 8.1% of the respondents stated that the connection between this discipline and the work tasks is weak, 17.4% of the respondents stated that the connection between this discipline and the work tasks is medium, 53.5% of the respondents stated that the connection between this discipline and the work tasks is strong and 19.8% of the respondents stated that the connection between this discipline and the work tasks is very strong.

5.26% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is very weak.

33% of the respondents that graduated faculties without an „accounting” specialization and 31.57% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is weak.

67% of the respondents that graduated faculties without an „accounting” specialization, 21.05% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

21.05% of the respondents that graduated faculties with an „accounting” specialization and 66% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

21.07% of the respondents that graduated faculties with an „accounting” specialization and 20% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very strong.

**Marketing:** 67.4% of the respondents stated that the connection between this discipline and the work tasks is very weak, 15.1% of the respondents stated that the connection between this discipline and the work tasks is weak, 16.3% of the respondents stated that the connection between this discipline and the work tasks is medium and 1.2% of the respondents stated that the connection between this discipline and the work tasks is strong.

67% of the respondents that graduated faculties without an „accounting” specialization, 68.42% of the respondents that graduated faculties with an „accounting” specialization and 67.18% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 21.05% of the respondents that graduated faculties with an „accounting” specialization and 12.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

10.53% of the respondents that graduated faculties with an „accounting” specialization and 18.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

1.57% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

**Office software:** 22.1% of the respondents stated that the connection between this discipline and the work tasks is medium, 39.5% of the respondents stated that the connection between this discipline and the work tasks is strong and 38.4% of the respondents stated that the connection between this discipline and the work tasks is very strong.

31.57% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

33% of the respondents that graduated faculties without an „accounting” specialization, 26.31% of the respondents that graduated faculties with an „accounting” specialization and 43.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

67% of the respondents that graduated faculties without an „accounting” specialization, of the respondents that graduated faculties with an „accounting” specialization and 39.54% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very strong.

**Databases:** 20.9% of the respondents stated that the connection between this discipline and the work tasks is very weak, 48.8% of the respondents stated that the connection between this discipline and the work tasks is weak, 26.7% of the respondents stated that the connection between this discipline and the work tasks is medium, 2.3% of the respondents stated that the connection between this discipline and

the work tasks is strong and 1.2% of the respondents stated that the connection between this discipline and the work tasks is very strong.

67% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

21.05% of the respondents that graduated faculties with an „accounting” specialization and 59.37% of the respondents who graduated the Faculty of Accounting and Management Information Systems respondents stated that the connection between this discipline and the work tasks is weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 47.36% of the respondents that graduated faculties with an „accounting” specialization and 20.31% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

10.52% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is strong.

5.29% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is very strong.

**Decision support systems:** 64% of the respondents stated that the connection between this discipline and the work tasks is very weak, 14% of the respondents stated that the connection between this discipline and the work tasks is weak, 18.6% of the respondents stated that the connection between this discipline and the work tasks is medium and 3.5% of the respondents stated that the connection between this discipline and the work tasks is strong.

All of the respondents that graduated faculties without an „accounting” specialization, 47.36% of the respondents that graduated faculties with an „accounting” specialization and 67.18% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

15.78% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

21.05% of the respondents that graduated faculties with an „accounting” specialization and 18.82% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

15.78% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is strong.

**Management systems:** 8.1% of the respondents stated that the connection between this discipline and the work tasks is very weak, 39.55% of the respondents stated that the connection between this discipline and the work tasks is weak, 32.6% of the respondents stated that the connection between this discipline and the work tasks is

medium, 17.4% of the respondents stated that the connection between this discipline and the work tasks is strong and 2.3% of the respondents stated that the connection between this discipline and the work tasks is very strong.

67% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 12% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 26.31% of the respondents that graduated faculties with an „accounting” specialization and 43.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

21.05% of the respondents that graduated faculties with an „accounting” specialization and 37.5% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

26.31% of the respondents that graduated faculties with an „accounting” specialization and 15.63% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is strong.

10.55% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is very strong.

**Management:** 53.5% of the respondents stated that the connection between this discipline and the work tasks is very weak, 18.6% of the respondents stated that the connection between this discipline and the work tasks is weak, 18.6% of the respondents stated that the connection between this discipline and the work tasks is medium, 8.1% of the respondents stated that the connection between this discipline and the work tasks is strong and 1.2% of the respondents stated that the connection between this discipline and the work tasks is very strong.

33% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 65.6% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

67% of the respondents that graduated faculties without an „accounting” specialization, 26.31% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

21.05% of the respondents that graduated faculties with an „accounting” specialization and 18.75% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

36.86% of the respondents that graduated faculties with an „accounting” specialization stated that the connection between this discipline and the work tasks is strong.

1.65% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very strong.

**Statistics and Econometrics:** 55.8% of the respondents stated that the connection between this discipline and the work tasks is very weak, 27.9% of the respondents stated that the connection between this discipline and the work tasks is weak and 16.3% of the respondents stated that the connection between this discipline and the work tasks is medium.

67% of the respondents that graduated faculties without an „accounting” specialization, 15.78% of the respondents that graduated faculties with an „accounting” specialization and 67.18% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is very weak.

78.94% of the respondents that graduated faculties with an „accounting” specialization and 14% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is weak.

33% of the respondents that graduated faculties without an „accounting” specialization, 5.28% of the respondents that graduated faculties with an „accounting” specialization and 18.82% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that the connection between this discipline and the work tasks is medium.

#### **4. ANALYSES**

##### **Extent that some knowledge contributes to the analysis and processing of accounting data:**

Creating and using a database: 12% of the respondents stated that this capability does not help them in the analysis and processing of the financial data, 16.3% of the respondents stated that this capability helps them very little in the analysis and processing of the financial data, 37.2% of the respondents stated that this capability helps them somewhat in the analysis and processing of the financial data, 19.8% of the respondents stated that this capability helps them a lot in the analysis and processing of the financial data and 14% of the respondents stated that this capability helps them greatly in the analysis and processing of the financial data.

5.26% of the respondents that graduated faculties with an „accounting” specialization and 15.62% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability does not help them in the analysis and processing of the financial data.

21.8% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them very little in the analysis and processing of the financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 73.68% of the respondents that graduated faculties with an „accounting” specialization and 26.56% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them somewhat in the analysis and processing of the financial data.

67% of the respondents that graduated faculties without an „accounting” specialization and 23.43% of the respondents who graduated the Faculty of Accounting

and Management Information Systems stated that this capability helps them a lot in the analysis and processing of the financial data.

21.06% of the respondents that graduated faculties with an „accounting” specialization and 12.59% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them greatly in the analysis and processing of the financial data.

Programming: 39.5% of the respondents stated that this capability does not help them in the analysis and processing of the financial data, 23.3% of the respondents stated that this capability helps them very little in the analysis and processing of the financial data, 15.1% of the respondents stated that this capability helps them somewhat in the analysis and processing of the financial data, 12.8% of the respondents stated that this capability helps them a lot in the analysis and processing of the financial data and 9.3% of the respondents stated that this capability helps them greatly in the analysis and processing of the financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 31.57% of the respondents that graduated faculties with an „accounting” specialization and 42.1% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability does not help them in the analysis and processing of the financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 42.1% of the respondents that graduated faculties with an „accounting” specialization and 17.18% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them very little in the analysis and processing of the financial data.

33% of the respondents that graduated faculties without an „accounting” specialization, 26.33% of the respondents that graduated faculties with an „accounting” specialization and 10.9% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them somewhat in the analysis and processing of the financial data.

17.18% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them a lot in the analysis and processing of the financial data.

12.34% of the respondents who graduated the Faculty of Accounting and Management Information Systems stated that this capability helps them greatly in the analysis and processing of the financial data.

## **5. CONCLUSIONS**

The study accomplished by the research team and presented in this paper has identified the extent in which master students who participates at professional or research master programs held by the Faculty of Accounting and Management Information Systems of Bucharest Academy of Economic Studies are using spreadsheet software for performing specific accounting tasks. This study also highlights the connections between the disciplines studied at the university and the daily work tasks that they must perform and the extent in which specific IT skills contribute to the analysis and processing of the financial data. The 223 usable responses were analyzed using several statistical tests.

The survey shows that less than half of the master students that participate at professional or research master programs held by the Faculty of Accounting and



Management Information Systems do not know how to fully use spreadsheet software. Regarding the connections between several disciplines studied at the university and the daily work tasks, the survey shows that only a few of the disciplines that are mandatory in the curricula have a real connection with the practice.

Although the informational technologies skills are increasingly searched by the employers, more than half of the master students that participated in this survey strongly believe that this knowledge does not help them too much for analyzing and also processing the accounting data.

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