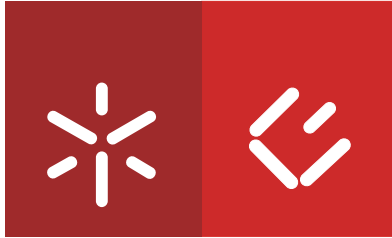


Universidade do Minho
Escola de Economia e Gestão

Maria Cláudia Rocha do Couto Teixeira

**Learning and Studying Introductory
Accounting in Portuguese Higher
Education**



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Tese de Doutoramento em Contabilidade

Trabalho realizado sob a orientação da
Professora Doutora Delfina Rosa da Rocha Gomes
e da
Professora Doutora Janete da Silva Borges

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ABSTRACT

The current thesis addresses questions and issues relating to learning and studying introductory accounting within Portuguese higher education. For this purpose, the research adopts the Students' Approaches to Learning (SAL) theoretical framework and uses both quantitative and qualitative research methods. The thesis consists of four essays.

The first essay reviews the students' approaches to learning perspective, focusing on its background and development, and provides a deepened understanding of key concepts within student learning literature. It also reviews the existing literature on accounting education, particularly that which adopted the students' approaches to learning conceptual framework, focusing on introductory accounting research. Finally, it reviews the Portuguese context in which the study was carried out.

The second essay focuses on students' conceptions of learning, approaches to studying and preferences for teaching. For this purpose, it adopts a quantitative research approach and uses the ASSIST inventory. The findings suggest a dissonant pattern of learning concerning students' conceptions of learning and preferences for teaching.

The third essay examines students' conceptions of accounting and their motivations, expectations and preparedness for higher education. Therefore, the ELAcc inventory and the *Motives, Expectations and Preparedness for University* questionnaire were used to assess the mentioned aspects. The findings reveal that although accounting students feel more enthusiastic with the idea of studying accounting than non-accounting students; they lack academic confidence, and other features relating to intellectual growth and independent learner skills when compared with non-accounting students.

Finally, the fourth essay examines aspects of learning and studying introductory accounting subject matters. In addition, it examines students' learning outcomes concerning several accounting concepts. The study focuses on qualitative data collected from students' answers to a semi-structured interview about their learning and studying experiences in general, and in particular, within the subject of introductory accounting. To do so, it uses a phenomenographic research approach. The findings confirm some of the results and conclusions reported in the previous essays, and pose several other questions relating to the learning and studying of introductory accounting in this particular context.

RESUMO

A presente tese aborda questões e aspectos relativos à aprendizagem e ao estudo no âmbito da introdução à contabilidade no ensino superior em Portugal. Para esse efeito, a pesquisa adopta o referencial teórico das Abordagens dos Alunos à Aprendizagem (SAL) e recorre tanto a métodos de pesquisa quantitativos como a métodos qualitativos. A tese é composta por quatro ensaios.

O primeiro ensaio analisa o referencial teórico SAL, centrando-se no seu enquadramento e desenvolvimento, e fornece um entendimento aprofundado de conceitos-chave no âmbito da literatura relativa à aprendizagem dos alunos. Analisa, igualmente, a literatura relativa ao ensino da contabilidade, em especial aquela que adopta o referencial SAL, centrando-se na investigação relativa às disciplinas de introdução à contabilidade. Por fim, analisa o contexto português, no qual a pesquisa foi desenvolvida.

O segundo ensaio analisa as concepções de aprendizagem, abordagens ao estudo e aprendizagem e preferências por diferentes estilos de ensino características dos estudantes em causa. Para tal, adopta-se uma abordagem quantitativa e utiliza o questionário ASSIST. Os resultados sugerem a existência de um padrão de aprendizagem de natureza dissonante no âmbito das concepções de aprendizagem e preferências por diferentes estilos de ensino.

O terceiro ensaio examina as percepções da contabilidade, bem como as motivações, expectativas e preparação para o ensino superior dos alunos em causa. Para o efeito, são utilizados os questionários: ELAcc e *Motives, Expectations and Preparedness for University*. Os resultados sugerem que, apesar de os alunos dos cursos de contabilidade sentirem um maior entusiasmo pelo estudo da contabilidade do que os alunos de outros cursos, estes revelam uma falta de confiança a nível das suas capacidades académicas, assim como a falta outros aspectos relacionados com competências a nível do crescimento intelectual e independência no estudo.

Por fim, o quarto ensaio analisa questões relacionadas com a aprendizagem e estudo no domínio das disciplinas de introdução à contabilidade. Examina, igualmente, os resultados da aprendizagem relativamente a vários conceitos contabilísticos. A informação foi recolhida por via de entrevistas semi-estruturadas sobre a aprendizagem e o estudo em geral, e aprendizagem e o estudo no contexto da introdução à contabilidade. Para tal, recorre-se à abordagem fenomenográfica. Os resultados confirmam alguns dos resultados e conclusões apresentados nos ensaios anteriores e colocam várias outras questões relacionadas com a aprendizagem e o estudo das disciplinas de introdução à contabilidade neste contexto em particular.

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ABBREVIATIONS

AAA	American Accounting Association
ASI	Approaches to Studying Inventory
ASSIST	Approaches and Study Skills Inventory for Students
CTOC	Câmara dos Técnicos Oficiais de Contas (The Former OTOC)
ELAcc	Expectations of Learning Accounting Inventory
ETL Project	Enhancing Teaching-Learning Environments in Undergraduate Courses Project
EU	European Union
FASB	Financial Accounting Standards Board
IAS/IFRS	International Accounting Standards/International Financial Reporting Standards
IASB	International Accounting Standards Board
IES	International Education Standards
IFAC	International Federation of Accountants
ILS	Inventory of Learning Styles
MCTES	Ministério da Ciência, Tecnologia e Ensino Superior (The Portuguese Ministry of Science, Technology and Higher Education)
OECD	Organisation for Economic Cooperation and Development
OROC	Ordem dos Revisores Oficiais de Contas (The Portuguese Official Professional Body of Auditors)
OTOC	Ordem dos Técnicos Oficiais de Contas (The Portuguese Official Professional Body of Chartered Accountants)
P&L	The Profit and Loss Account
RASI	Revised Approaches to Studying Inventory
SAL	Students' Approaches to Learning
SNC	Sistema de Normalização Contabilística (The Portuguese Accounting Standardisation System)
UK	United Kingdom
US/USA	United States/United States of America

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INTRODUCTION

CONTEXT AND MOTIVATION

Within the international setting, there has been great debate about the role of accounting education, in particular since the early 1990s. Introductory accounting courses are considered among the most important within the learning of accounting. And, this has been acknowledged in the literature, at least, over the last six decades (e.g. Weiser, 1966 and Duff *et al.*, 2010). Nevertheless, introductory accounting has been subject to considerable criticism as to its “narrow content, technical focus, use of transmissive models of teaching, and inattention to the development of students’ generic skills” (Palm and Bisman, 2010, p. 179). In addition, the accountancy profession alerts and informs accounting education about the current context in which accountants work. In fact, nowadays, accountants act in a highly demanding environment, which requires the development of multiple professional and personal skills (Heeter, 2010). In line with these arguments, accounting researchers draw attention to the importance of developing students’ critical thinking, and other skills that promote deep patterns of learning. Thus, some support the inclusion in the introductory accounting syllabus of the discussion of wider issues and perspectives (e.g. Ferguson *et al.*, 2005, 2008).

Researchers within accounting education frequently draw on educational psychology research in order to investigate aspects and issues relating to student learning. In particular, the *Students’ Approaches to Learning* (SAL) perspective has been widely adopted in accounting education studies. This theoretical framework has been extensively applied within multiple disciplinary areas and cultural contexts. Its usefulness has been consistently demonstrated and it has generated a body of research which, over time, has enhanced the quality of student learning (Trigwell *et al.*, 2012). This line of research has provided evidence of “relations between students’ approaches to study, their prior experiences of teaching and learning, their perceptions of current learning contexts and the quality of the outcomes of their learning” (Trigwell *et al.*, 2012, pp. 811, 812). It identified students’ patterns of learning as being essentially of a deep or surface nature.

In Portugal, to our best knowledge, this is the first research which adopts the students’ approaches to learning conceptual framework within the accounting education context, more specifically, within introductory accounting. Therefore, assessing its appropriateness within this particular context is one of the motivations of the current thesis.

In general, introductory accounting modules are taught to first-year students. These students' learning experiences are mostly related to secondary school learning environments. And these environments have significantly different characteristics when compared with higher education learning environments (Christie *et al.*, 2006 and Gibney *et al.*, 2011). Nevertheless, students' perceptions and reactions to the learning environment they experience are diverse. Among these reactions appear dissonant patterns of learning, illustrated by students revealing an intention to understand the learning material while adopting surface processes of learning. Dissonant patterns of learning are more common when students enter a new phase of education and may result from students failing to react appropriately to a changing educational environment or, in contrast, be motivated by the learning environment itself. (e.g. Entwistle and Peterson, 2004).

In Portugal, the dramatic expansion felt in higher education since the early 1970s, initiated a phase of significant change in terms of its structure and aims. Over the last decades, the need to justify public funding and improve learning environments and learning outcomes were at the top of higher education priorities. Nevertheless, these changes have put great pressure on the Portuguese higher education system. In addition, in the last decade, higher education has adapted itself to the Bologna process paradigm. In particular, one of its aims is to create a student-centered learning environment. Nonetheless, higher education institutions face several restrictions as to funding and other resources, as well as several multidimensional problems (Rosa *et al.*, 2001 and Veiga and Amaral, 2009). The aforementioned aspects increase the complexity of higher education learning environments. And this is also the case for introductory accounting taught in Portuguese higher education. Indeed, introductory accounting is taught to large numbers of students with heterogeneous backgrounds. Therefore, investigating the students' experience of learning introductory accounting within this complex context is another motivation for the current thesis.

Furthermore, drawing on investigations into student learning, accounting education researchers have developed specific research instruments to examine aspects of learning within accounting subject matters (e.g. Lucas and Meyer, 2005; Duff *et al.*, 2010). The use of these research instruments has provided useful findings about students' conceptions of accounting for both accounting educators and accounting education. For example, evidence revealed that introductory accounting students perceive accounting differently and that

these perceptions affect their learning behaviour and, ultimately, their learning outcomes. Other studies focused on first-year accounting students' motivations, expectations and preparedness for higher education and created specific questionnaires to investigate the mentioned aspects (e.g. Byrne and Flood, 2005). These studies also provided valuable insight into factors which are antecedents of students' approaches to learning. Taking into consideration this body of research, the current thesis aims to assess their use within the context of introductory accounting in Portuguese higher education. At the time of writing and to the best of our knowledge, this was the first time these research instruments had been used in the Portuguese context.

Overall, the thesis aims to provide a meaningful overview of the learning and studying of introductory accounting within Portuguese higher education. It draws on research within student learning literature and accounting education. It aims to address questions relating to student learning within this specific context. It also aims to analyse students' learning outcomes as to specific topics of the introductory accounting syllabus in order to relate them to aspects of learning.

Finally, as a lecturer of introductory accounting modules for over ten years in Portuguese higher education, I developed a natural interest in aspects relating to student learning within this subject matter. Also, as a former student of introductory accounting, I had my own conceptions of learning, approaches to studying and preferences for learning environments, as well as conceptions of accounting and perceptions about introductory accounting courses. Therefore, I felt highly motivated to investigate those of Portuguese students.

PURPOSE AND RESEARCH QUESTIONS

The current thesis seeks to address questions and aspects related to learning and studying introductory accounting in Portuguese higher education. It specifically aims to investigate general aspects of learning within this setting. For this purpose, the research adopts the students' approaches to learning (SAL) theoretical framework. Data was collected through the use of questionnaires and semi-structured interviews involving students from a variety of higher education institutions. These institutions were universities and polytechnics both from the public and private sectors, thus covering the whole range of institutions within the Portuguese higher education system.

The question it seeks to address is that of how students experience the learning and studying of introductory accounting in Portuguese higher education. In particular, the research seeks to investigate:

1. The body of research which adopts the students' approaches to learning perspective within the student learning literature and accounting education research, along with its main findings and conclusions. The context of introductory accounting courses within the international setting and within Portuguese higher education. Furthermore, it seeks to examine:
 - a. The extent to which this theoretical framework can be useful and applied to the current research.
2. Whether the students' approaches to learning perspective provides reliable insight into student learning within introductory accounting in Portuguese higher education. Furthermore, it aims to identify:
 - a. Students' approaches to studying;
 - b. Students' conceptions of learning and preferences for teaching;
 - c. And, the nature of the relationship between the mentioned aspects of learning within this specific context.
3. Whether accounting education conceptual frameworks and research instruments provide useful insight into the learning of introductory accounting in Portuguese higher education. And, it aims to identify:
 - a. Students' conceptions of accounting and expectations of learning accounting;
 - b. Students' motivations, expectations and preparedness for higher education.
4. Students' learning experiences concerning the learning of introductory accounting. Moreover, it seeks to analyse:
 - a. The relationship between the ways in which students describe and explain accounting concepts and their learning profiles.

RESEARCH METHODOLOGY

Quantitative Research Approach

In order to identify variation between students in a statistical sense, a quantitative research approach is adopted in Essays 2 and 3. Therefore, students' patterns of learning as well as aspects relating to the learning of introductory accounting were analysed through the use of three research instruments. The statistical procedures and data analyses were carried out using the Statistical Package for the Social Sciences (SPSS) 19 and SPSS 20.

In Essay 2, data was collected using the *Approaches and Study Skills Inventory for Students* (ASSIST) inventory. The ASSIST research instrument, developed by Professor Noel Entwistle and his colleagues (Tait *et al.*, 1998), was used to measure the approaches to studying, conceptions of learning and preferences for teaching among Portuguese students of introductory accounting in higher education. Permission to use the inventory was granted by Professor Noel Entwistle; and the Portuguese version of the instrument was developed by Professor Elisa Chaleta (Chaleta *et al.*, 2010) [see Appendix A]. Professor Elisa Chaleta was contacted and permission was obtained to use this translated version of the instrument.

ASSIST was distributed to 430 students of introductory accounting from across five higher education institutions. The students' participation was voluntary and this was stated both verbally, by lecturers in class, and in the questionnaire they completed. Data was collected in class. This process was closely followed up by the members of the research team. In order to validate the use of ASSIST with Portuguese students of introductory accounting, the reliability and validity of the instrument was tested. The internal reliability of the instrument was measured using Cronbach alpha coefficients; and factor analysis was carried out to explore the factor structure of ASSIST subscales and assess the validity of the instrument in this particular context.

In Essay 3, two different research instruments were used: the *Expectations of Learning Accounting* (ELAcc) inventory (Lucas and Meyer, 2005 and Duff *et al.*, 2010); and the *Motives, Expectations and Preparedness for University* questionnaire (Byrne and Flood, 2005). Permission for using and translating ELAcc was given by Professor Ursula Lucas. The ELAcc inventory was translated into Portuguese [see Appendix B]. The method used for translating the ELAcc inventory was based on the functionalist approach,

focusing on the function of the translated text (e.g. Munday, 2001). In addition, an initial pilot test was carried out in order to assess the internal consistency of the subscales of the translated version. The results of the pilot test were considered satisfactory in order to proceed with the collection of data.

ELAcc was distributed to 743 students of introductory accounting from across the five higher education institutions. Data was collected in class and the students' participation was voluntary. This process was closely followed up by the members of the research team. The reliability and validity of the ELAcc inventory was tested in order to validate the instrument within Portuguese higher education. The internal reliability of the inventory was measured using Cronbach alpha coefficients and factor analysis was carried out to explore its factor structure.

As to the *Motives, Expectations and Preparedness for University* questionnaire, permission for using and translating the inventory was given by Professor Marann Byrne. Similarly, the translation process was based on the functionalist approach and a pilot test was carried out in order to evaluate the Portuguese version of the questionnaire. Afterwards, the questionnaire [see Appendix C] was distributed to 336 students of introductory accounting from across the five institutions. Data was collected in class and the students' participation was voluntary. The process was closely followed up by the members of the research team.

Qualitative Research Approach

According to Svensson (1997, p. 160), "the term phenomenography was first used by Ference Marton in 1981". In a quest for "describing conceptions of the world around us", Marton (1981, pp. 177, 180) described phenomenography as the research approach "which aims at description, analysis and understanding of experiences; that is, research which is directed towards experiential description". Accordingly, people experience and perceive phenomena and the world in different ways. Thus, phenomenography "must be sensitive to the individuality of conceptions of the world – it must be grounded in the lived experience of its research participants" (Ashworth and Lucas, 2000, p. 297). Its main purpose is to investigate the qualitatively different ways in which people experience and understand various phenomena or aspects of the world (e.g. Marton, 1981; Marton *et al.*, 1997; Svensson, 1997; Säljö, 1997; Booth, 1997; Marton and Pong, 2005; Hallett, 2010;

Åkerlind, 2012). And it argues that “irrespective of the nature of the phenomenon, there are always a limited number of ways in which the phenomenon is experienced” (Hallett, 2010, p. 228). To some extent, this research approach emerged as a reaction against, and an alternative to, positivistic and quantitative research approaches (Svensson, 1997). However, in the current study, this research approach is adopted as complementary to the quantitative research developed in Essays 2 and 3, in order to deepen the understanding of a complex phenomenon.

Although “there are rather distinct types of phenomenography” (Greasley and Ashworth, 2007, p. 822), phenomenography is a relatively “recent research tradition, developed mainly within the discipline of Education” (Svensson, 1997, p. 159). In particular, three major lines of inquiry have been developed within this approach to educational research: (i) “more general aspects of learning, concentrating on the qualitative differences in the approach to, and outcome of, learning”; (ii) “learning within a disciplinary context and on student conceptions of subject matter”, and (iii) the learning within the everyday context, that is, “how individuals conceive of various aspects of life” (Ashworth and Lucas, 1998, p. 416). As described in Ashworth and Lucas (2000, p. 295), “phenomenography is a methodology which has been quietly influential in research on higher education, having been the basis of many studies of approaches to learning and student understandings of a wide range of concepts in a variety of disciplines”. This is also the case for research into the subject matter of introductory accounting (e.g. Lucas, 1998, 2001, 2002; Mladenovic, 2000).

Therefore, to explore and understand how students in Portuguese higher education experience the learning and studying of introductory accounting disciplines, it was decided to adopt a phenomenographic approach in Essay 4 (e.g. Marton, 1981; Marton *et al.*, 1997; Svensson, 1997; Säljö, 1997; Booth, 1997; Marton and Pong, 2005; Åkerlind, 2012). This research approach was selected because the main purpose of the essay was to collect students’ own perspectives (and experiences) on aspects of learning (e.g. conceptions of learning, approaches to studying and preferences for teaching) within learning in general, and within the learning of the subject of introductory accounting. In addition, it aimed to assess learning outcomes and examine their relationship with the previously mentioned aspects of learning. The analysis aimed at focusing on the findings reported in the previous essays, including those reported in the literature review.

Phenomenographic analysis is usually based on data collected from interviews (Åkerlind, 2012). Thus, semi-structured interviews were carried out based on an interview schedule [see Appendix D] but attuned to the answers given by students during the interview process. Therefore, the interviews were designed and conducted so as to allow students to fully discuss and describe their learning experiences (Lucas, 2000). That is, when students wanted to express or expand their views on a particular theme, they were encouraged to do so. If an explanation or idea was not sufficiently clear, then students were asked to further explain or detail it. In addition, the notion that there were no ‘right’ or ‘wrong’ answers was expressed to the students. And, students’ feelings and ideas about the aspects under analysis were explored in an informal way and without putting pressure in terms of expectations as to their answers. In summary, the interview process was conducted by means of a ‘conversational partnership’ in which the interviewer assisted the students’ process of reflection (Ashworth and Lucas, 2000, p. 302). The process of analysing the data followed the literature which offers some guidance on how to conduct phenomenographic research (e.g. Ashworth and Lucas, 2000; Åkerlind, 2012).

Despite the fact that the number of interviews (ten interviews) does not allow for the generalisation of the findings, it served to triangulate the data and to help to understand and corroborate prior evidence. In addition, it provided further data and revealed new insight into the learning of introductory accounting and its curriculum (Ashworth and Lucas, 1998; Lucas, 2000), thus, revealing lines of inquiry for future research.

EXPECTED CONTRIBUTIONS

This thesis seeks to contribute to the body of research which focuses on student learning. It aims to develop a better understanding of aspects of learning and studying within introductory accounting. Furthermore, it aims to contribute to accounting education research; and, in particular, the body of research which adopts the students’ approaches to learning theoretical framework. For this purpose, it critically reviews the relevant literature for the development of the study, and provides further empirical evidence concerning aspects of learning within introductory accounting. In doing so, it seeks to assess the extent to which the theoretical framework adopted can be useful and applied to the current context.

In addition, the thesis seeks to contribute to accounting education and accounting professional bodies in a number of ways. It aims to enhance the understanding of the learning profile of students of introductory accounting in Portuguese higher education. It also aims to examine the different contexts in which introductory accounting is taught (i.e. the diversified range of degree programmes). In addition, it seeks to assess the usefulness of the research instruments used in the current research within this specific context. Furthermore, it seeks to provide useful insight into the students' experience of learning and studying introductory accounting; and to examine their knowledge of essential accounting concepts for the exercise of the accountancy profession. Finally, the thesis aims to provide a constructive overview on aspects of learning and studying within Portuguese higher education.

STRUCTURE

Apart from introduction and concluding remarks, the thesis consists of four essays. The essential literature review is presented in Essay 1 and the results of the empirical studies are reported in three essays (Essays 2, 3 and 4), as follows:

Essay 1: Students' Approaches to Learning: a Literature Review;

Essay 2: Students' Approaches to Learning: an Empirical Study;

Essay 3: Contextual Features and Background of Approaches to Learning;

Essay 4: The Learning of Introductory Accounting: the Students' Experiences.

The first essay reviews the literature essential to inform the empirical studies reported in Essays 2, 3 and 4. It develops a threefold analysis. That is, it reviews the students' approaches to learning conceptual framework within educational psychology and within accounting education research and, finally, it reviews the Portuguese context within which the research was conducted.

The second essay specifically draws on educational psychology research and assesses students' approaches to studying, conceptions of learning and preferences for teaching using Entwistle's model of approaches to learning and the *Approaches and Study Skills Inventory for Students* (ASSIST) inventory.

The third essay investigates students' conceptions of accounting, and their motivations, expectations and preparedness for going to higher education. Data was collected through questionnaires developed within accounting education research, namely: the *Expectations of Learning Accounting* (ELAcc) inventory; and the *Motives, Expectations and Preparedness for University* questionnaire.

The fourth essay examines several aspects of the learning and studying of introductory accounting subject matters within Portuguese higher education, including the aforementioned aspects of learning. It draws on the phenomenographic research paradigm. The analysis was carried out based on both educational psychology and accounting education literature.

As illustrated in Table 1, the particular moment at the time of the data collection reflects the different stages concerning students' learning experiences within introductory accounting in higher education. Thus, Essay 2 focuses on students' past learning experiences, which are prior to the study of introductory accounting. Essay 3 examines the contextual factors and background of approaches to learning, which operate (act or are in play) during the learning of introductory accounting. Finally, Essay 4 analyses the aforementioned aspects after the study of introductory accounting.

Table 1 - Scope and Features of the Empirical Studies

Essay 2	Students' answers reflect their past learning experiences (i.e. prior to the study of introductory accounting), namely, their approaches to studying, conceptions of learning and perceptions of the learning environment (e.g. preferences for teaching).
Essay 3	Students' answers reflect their views during the process of learning introductory accounting. These reveal their conceptions of accounting at the beginning and at the end of introductory accounting courses, as well as their motivations, expectations and preparedness for going to higher education.
Essay 4	Students' answers reflect their learning experiences after attending introductory accounting modules. These reflect aspects of learning and studying in general, and learning and studying introductory accounting, in particular. Moreover, these reveal their conceptions of accounting and their knowledge of accounting concepts (i.e. learning outcomes).

In the next chapter Essay 1 is presented.

ESSAY 1

Students' Approaches to Learning: a Literature Review

1. INTRODUCTION

The role and relevance of accounting education and research has been acknowledged in the literature. In addition, it has been highlighted that introductory accounting is one of the most important subjects within the learning of accounting.

Research in accounting education significantly draws on educational psychology research and its theoretical frameworks. The model of student learning argues that students' past learning experiences influence their present and future learning experiences. Therefore, students' learning experiences in secondary school influence their learning experiences in higher education. The students' approaches to learning (SAL) theoretical framework has been widely applied in educational psychology as well as in other subject areas. It has also been applied within accounting in general, and introductory accounting in particular. This conceptual framework argues that students' conceptions of learning and their perceptions of the learning environment, including their preferences for teaching, affect students' learning behaviour and their learning outcomes. The literature has also reported dissonant patterns of learning. Dissonance is often related to first-year students and reflects problems between students' conceptions of learning, study practices and the learning environment. It generally affects students' learning outcomes in a negative way. In addition, there is evidence of disciplinary variation concerning aspects of learning and that the students' conceptions of the subject matter also play an important role within student learning.

The current study examines aspects of learning and studying introductory accounting in Portuguese higher education. It specifically focuses on students' patterns of learning within introductory accounting courses in several degree programmes. For this purpose, it adopts a theoretical framework borrowed from educational psychology, the students' approaches to learning (SAL). It also adopts accounting education conceptual frameworks so as to assess students' conceptions of accounting as well as their motivations, expectations and preparedness for higher education. Finally, it analyses students' learning outcomes by examining their knowledge about several accounting concepts and the qualitatively different ways students adopt while explaining those concepts. It also analyses several other aspects relating to the learning and studying of the introductory accounting subject matter in Portuguese higher education. Taking into account the aforementioned aspects, the current essay reviews the literature essential to inform the empirical studies reported in Essays 2, 3 and 4.

2. THE STUDENTS' APPROACHES TO LEARNING PERSPECTIVE

In this section the students' approaches to learning perspective is reviewed focusing on conceptions of learning, perceptions of the learning environment with a particular focus on teaching preferences and conceptions of the subject matter, approaches to learning, and, finally, the phenomenon of dissonance.

2.1. STUDENT LEARNING AND STUDENTS' APPROACHES TO LEARNING¹

Due to increasing numbers of students in higher education, student learning has become one of the main areas of interest within research in higher education (Kandlbinder, 2012). Student learning literature has investigated, among other aspects, students' conceptions of learning and identified similarities and differences in the way students learn and study (e.g. Biggs, 1979; Säljö, 1979; Marton, 1981; Meyer, 1991; Meyer *et al.*, 1994; Prosser *et al.*, 1994; Tait and Entwistle, 1996; Kember, 1996; Marton and Säljö, 1997; Ramsden, 1997; Vermunt, 1998; Trigwell *et al.*, 1999; Entwistle *et al.*, 2000; Entwistle and Peterson, 2004; Vermunt and Vermetten, 2004; McCune and Hounsell, 2005; Trigwell and Ashwin, 2006; Richardson, 2007, 2011).

Aspects of learning and studying in higher education have been examined using contrasting theoretical perspectives (e.g. Entwistle, 1997; Entwistle and McCune, 2004). Thus, several questionnaires, such as the *Inventory of Learning Styles* (ILS) developed by Vermunt (1998) and the *Approaches and Study Skills Inventory for Students* (ASSIST) developed by Entwistle and his colleagues (e.g. Tait *et al.*, 1998), emerged within educational psychology research aiming at assessing how students learn and study. Indeed, research into student learning, study strategies and learning processes was carried out based both on the literature in “information processing in cognitive psychology; and qualitative interpretation of students' approaches to learning” (Coffield *et al.*, 2004, p. 101).

To some extent, this circumstance caused conceptual confusion as it led to the use of “overlapping terms describing apparently similar aspects of learning and studying in higher education” (Entwistle and McCune, 2004, p. 325). For example, according to Coffield *et al.* (2004, p. 103), “for Vermunt, the terms ‘approach to learning’ and ‘learning style’ are synonymous”. Also, the concept of ‘style’ has been used with different

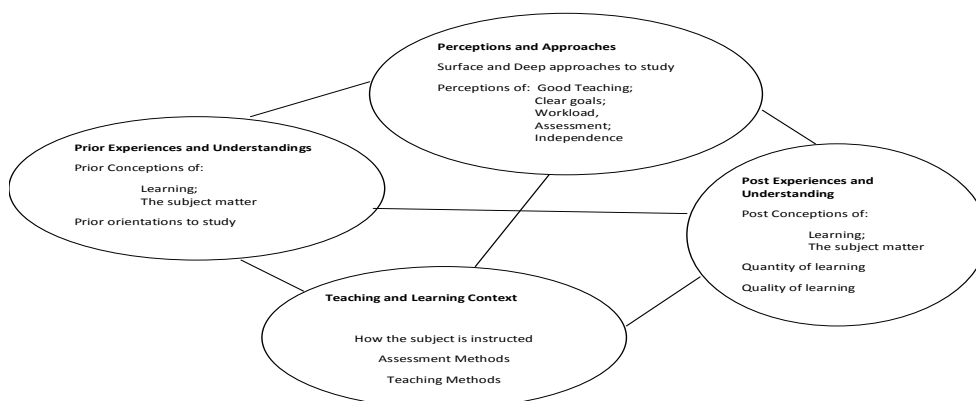
¹ This topic is reviewed based on the literature review presented in Teixeira, Gomes and Borges (2013), “The Approaches to Studying of Portuguese Students of Introductory Accounting”, *Accounting Education: an International Journal*, Vol. 22, No. 2, pp. 193-210.

meanings, combining aspects of personality and ability (Entwistle and McCune, 2004). As Entwistle (1991, p. 201) states, “confusion has crept in with additional terms being used to describe overlapping concepts”.

This gives an overview of the difficulties that one can find in identifying the conceptual bases within this stream of literature, caused, in part, by differences in labeling (Entwistle, 1991; Peterson *et al.*, 2009). Nevertheless, over the years, many of the issues in question have been clarified and some terminology has been changed to avoid overlap with concepts from other areas of research (Entwistle, 1991). This was partially due to a great deal of research carried out, for example, in the UK, not only by individuals alone but integrated into research programmes, such as the ETL Project [“Enhancing Teaching-Learning Environments in Undergraduate Courses (ETL) Project, funded under the Teaching and Learning Research Programme by the UK Economics and Social Research Council” (McCune and Hounsell, 2005, p. 256)].

The model of student learning suggests that students commence their higher education studies already possessing prior learning experiences and understandings. These prior experiences are in permanent interaction with their perceptions of the learning environment/context and their approaches to learning when studying the subject matter; as well as with their post learning experiences and understandings (Crawford *et al.*, 1998a). Thus, the past, present and future awareness/activity of the students is seen as interacting in a continuum (see Figure 1).

Figure 1 - Model of Student Learning



Source : Crawford *et al.* (1998b, p.457)

The research tradition known as ‘students’ approaches to learning’ (SAL) (e.g. Cano

and Berbén, 2009) or as ‘approaches to student learning’ (Trigwell and Prosser, 2004, p. 410) is one of the most important lines of research within student learning literature. Indeed, according to Kandlbinder (2012, p. 8), “the search for a theoretical model of learning seems largely to have been settled with student approaches to learning coming to dominate discussions on higher education teaching and learning”. And, in particular, Marton’s description of deep and surface approaches to learning (Marton, 1981) has become dominant within the literature.

Students’ approaches to learning research is “characterized as being based on bottom-up models of learning generated from the perspective of the students’ learning experiences” (Cano and Berbén, 2009, p. 135). In contrast with ‘learning style’ models, ‘approaches to learning’ are not rigid or fixed as they change according to the students’ perception of the requirements of the task as well as the learning environment (Coffield *et al.*, 2004). This perspective is associated with students’ intrinsic/extrinsic motivations, conceptions of learning and perceptions of the teaching-learning environment (e.g. Ramsden, 1979, 1997; Trigwell and Prosser, 1991; Crawford *et al.*, 1998a), and is grounded in different research methods. Indeed, this stream of research has built its body of knowledge using both qualitative and quantitative methods and perspectives. For example, the studies based on qualitative analysis applied essentially phenomenographic procedures (e.g. Marton, 1981; Prosser *et al.*, 1994; Prosser and Trigwell, 1997; Lucas, 2001); research based on quantitative analysis used surveys and questionnaires (e.g. Entwistle *et al.*, 2000; Biggs *et al.*, 2001; Lucas and Meyer, 2005; Flood and Wilson, 2008); and, finally, mixed approaches have been applied, using both qualitative and quantitative research methods (e.g. Minasian-Batmanian *et al.*, 2006; Ellis *et al.*, 2008).

Empirical evidence has shown that “the way students in higher education conceive of learning relates to the way they approach their studies and consequently to the quality of their learning outcomes” (Prosser *et al.*, 1994, p. 217). Similarly, the ways in which students’ perceive the context of teaching-learning determine their approaches to learning and studying, which, in turn, affect the quality of their learning outcomes (Ramsden, 1997; Ramsden *et al.*, 2007). These findings identified “relationships between students’ approaches to studying, their conceptions of learning, and their perceptions of the academic context”, and have “provided a variety of concepts, methods and findings that are of both theoretical interest and practical relevance” (Richardson, 2005, p. 673).

In addition, the literature indicates that it is important to consider subject area

specificity and its effect on student learning as there is evidence of disciplinary variation in aspects of learning, such as conceptions of, and approaches to, learning (Ramsden, 1997). For example, concerning students' approaches to learning, Parpala *et al.* (2010, p. 270) identify a specific pattern: "students in the sciences and applied sciences are more inclined to adopt a surface approach to learning, whereas those in the humanities and social sciences are more inclined to adopt a deep approach to learning". As for teachers' approaches to teaching, Ramsden (1997, p. 208) mentions that "it appears that lecturers in science departments are more likely to prefer formal, structured approaches to teaching and assessment"; whereas "in arts and social sciences, teachers endorse more flexible and individualistic methods". Also, Prosser *et al.* (2003) noted that teachers in the sciences and engineering seem to exhibit more dissonance in their teaching than teachers in the arts and social sciences. They also posit that this circumstance "may partly explain why students' ratings of their experiences in the sciences and engineering are often lower than those for arts and social sciences" (Prosser *et al.*, 2003, p. 47).

In line with this rationale, Lucas and Meyer (2005, p.180) stress the importance and need for research that investigates "the types of conceptions held by students and which might impact upon their approaches to learning within specific contexts". In fact, there is evidence that suggests that students' perceptions and conceptions of the disciplinary area/subject matter they study represent a key aspect within their perceptions of the learning context. According to Lucas and Meyer (2005), these conceptions include: conceptions of learning and conceptions of the subject being learned. In addition, the authors mention that the motivations for studying a particular subject matter or disciplinary area play an important role in students' learning behaviour.

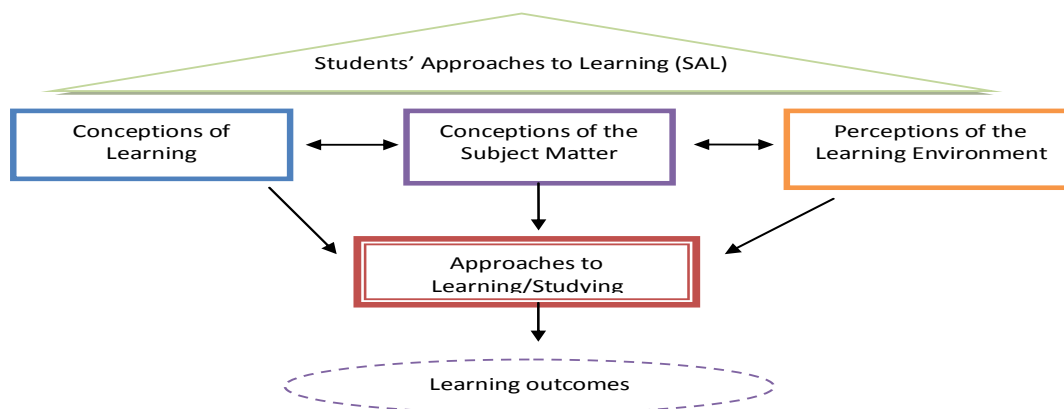
Nevertheless, little research has been carried out on this particular aspect (Crawford *et al.*, 1998b). Some studies analysed the relationship between students' conceptions of the subject and their adoption of accumulative (surface) or transformative (deep) learning processes. For example, Crawford *et al.* (1998a, p. 455) examined the relationship between first-year students' conceptions of mathematics and their experiences of learning it, and report that "differences in students' conceptions of mathematics were shown to be related to their approaches to learning mathematics, their experiences of studying the subject and their performance on assessments". Lucas and Meyer (2005), analysed business studies and accounting students' conceptions of, and motivations to learn, introductory accounting, and found that these students started their studies of introductory accounting possessing very

different perceptions of accounting. Their findings reveal a relationship between conceptions of introductory accounting and transformative and accumulative learning processes.

Recently, Ashwin and Trigwell (2012, p. 450) highlighted the role of what the authors called ‘evoked prior experience’, which “may include all or part of the detailed understanding of the subject matter, a way of conceiving of the key concepts and a way of conceiving of the nature of the subject itself”. Ashwin and Trigwell (2012, p. 451) concluded that “rather than generic conceptions of learning being of primary concern, it is the conceptions of learning that are evoked within particular teaching and learning contexts that are likely to be related to the approaches to learning that students take in those contexts”. Yet, there is no consensus within research as to where conceptions of the subject matter should be placed in the model. In fact, the literature relates conceptions of the subject matter to both conceptions of learning (e.g. Ashwin and Trigwell, 2012) and perceptions of the learning environment (e.g. Ramsden, 1997; Crawford *et al.*, 1998b).

Taking into consideration the aforementioned aspects, and based on Lucas and Meyer (2005) and Cano and Berbén (2009), Figure 2 illustrates the students’ approaches to learning perspective.

Figure 2 - The Students’ Approaches to Learning Perspective



Some argue that the underlying principles and relationships within the approaches to learning model are not so straightforward or likely to be generalised as “attempts to apply this model to other cultural contexts have yielded results which appear to contradict some of its fundamental assumptions” (Haggis, 2003, p. 93). Nevertheless, it is still one of the most influential models of student learning within educational psychology literature (e.g. Coffield *et al.*, 2004).

2.2. CONCEPTIONS OF LEARNING

The student learning literature describes ‘conceptions of learning’ as “the ways in which students conceive of what learning is and what its outcome might be” (Ellis *et al.*, 2008, p. 268). Therefore, “conceptions of learning are individual constructions arising from knowledge and experience” (Cano, 2005, p. 202). Students’ conceptions of learning have been analysed in distinctive ways (Ashwin and Trigwell, 2012). The first group of studies on conceptions of learning draw on phenomenographic research, thus, focusing on the experience of the learner (e.g. Marton and Säljö, 1979; Säljö, 1979). For example, Säljö (1979) interviewed participants with different educational backgrounds and examined what learning meant to them (Cano, 2005). More recently, quantitative methods have been applied in order to access a greater volume of data, as is the case of the ASSIST inventory (ASSIST, 1997).

The literature generally acknowledges two distinctive conceptions of learning. These are: learning as the acquisition of unrelated ‘bits of knowledge’ and learning as “a change in one’s conception of some aspect of reality” (Dahlgren and Marton, 1978, p. 26). Entwistle and Peterson (2004, p. 411) explain the scope of the different conceptions of learning which are reflected in six categories. Accordingly, acquiring factual information and memorising what has to be learned involves and depends on remembering it (e.g. rote learning), which reflects a perception of learning as “the process of accumulating the separate ‘pieces’ of knowledge provided, ready-made, from a teacher or other source”. Applying and using knowledge reflects the idea of information as “having a purpose beyond acquisition: it also has to be applied”. Only when people perceive “learning as involving the effort to make sense of ideas for themselves by relating it to their previous knowledge and experience, information becomes transformed into personal meaning”. Then, understanding what has been learned involves learning as “seeing things in an importantly different light, and so becomes fully transformative”. The last category reflects the perception of learning leading to “a more fundamental change: changing as a person”.

These categories can be labeled as follows: “(1) increasing one’s knowledge, (2) memorising and reproducing; (3) applying, (4) understanding, (5) seeing something in a different way and (6) changing as a person” (Cano, 2005, p. 202). While the first three categories relate to learning as reproducing, the last three categories relate to learning as transforming (e.g. ASSIST, 1997).

Research has provided evidence that students' conceptions of learning play an important role in students' learning behaviour, as these conceptions tend to influence students' approaches to learning (e.g. Edmunds and Richardson, 2009). In fact, the literature frequently argues that students who display conceptions of learning as the transformation of information are likely to adopt a deep approach to learning; whereas students who conceive learning as simply increasing/reproducing knowledge tend to adopt a surface approach to learning (Cano and Berbén, 2009).

2.3. PERCEPTIONS OF THE LEARNING ENVIRONMENT

Students' perceptions of the learning context have also been pointed out as a factor that has an impact on student learning (e.g. Ramsden, 1979, 1983; Trigwell and Prosser, 1991, 2004; Ramsden *et al.*, 2007). For example, Ramsden (1979, p. 426) reports that students highlight "the critical importance of the teaching and assessment environment" and reveal that "enthusiasm on the part of a lecturer encouraged them to put more effort into a subject and enjoy it more"; in contrast, they stress that a "threatening teaching environment creates anxiety and students learn nothing". In another study, Ramsden (1997, p. 198) argues that "a student's perception of the learning context is an integral part of his or her experience of learning"; and that the subject matter being taught (and researched) in an academic department, the teaching methods, assessment and course content and structure, are some of the elements of that learning environment.

The literature provides evidence that suggests that surface approaches to learning are usually adopted in learning contexts "which arise anxiety over assessment demands (e.g. perceived excessive workload, emphasis on accurate recall, threatening learning situations, lack of intrinsic interest in the subject matter combined with a need to pass"; while deep approaches to learning are related to "effective teaching, interest in the topic, and the opportunity to pursue particular subjects in depth" (Ramsden, 1983, p. 696). In line with this, Trigwell and Ashwin (2006, p. 255) found evidence that "students who perceived a less appropriate workload, teaching that is less good, an inappropriate assessment system and unclear goals and standards, adopted more of a surface approach to learning than their colleagues in the same environment". In particular, Trigwell and Prosser (2004, p. 410) report that "students' perceptions of the quality of the teaching they received was related to the quality of their approach to learning". The authors found that, on the one hand, higher scores on surface approaches to studying/learning were related to higher scores on preferences for

teaching as information transmission. On the other hand, preferences for teaching as transforming (or as producing a conceptual change) were positively correlated with students' deep approaches to learning and negatively correlated with students' surface approaches to learning. Hence, students' preferences for teaching seem to have an impact on their approaches to learning and studying. In addition, students' perceptions and conceptions of both the disciplinary area and subject matter represent key aspects as to their perceptions of the learning context; and seem to influence their learning behaviour (e.g. Ramsden, 1979, 1997; Lucas and Meyer, 2005). These aspects will be explored in the next subsection.

2.4. SUBJECT AREA AND CONCEPTIONS OF THE SUBJECT MATTER

As previously noted, research provides evidence that suggests that disciplinary contexts have an impact on student learning behaviour (e.g. Dahlgren and Marton, 1978; Ramsden, 1997; Entwistle *et al.*, 2000; Prosser *et al.*, 2003; Entwistle, 2004; McCune and Hounsell, 2005; Ramsden *et al.*, 2007; Parpala *et al.*, 2010; Mikkonen *et al.*, 2013). McCune and Hounsell (2005, p. 257) refer to “ways of thinking and practicing in a subject area, to describe the richness, depth and breadth of what students might learn through engagement with a given subject area in a specific context”. Also, Ramsden (1979) identifies subject area - along with teaching, course organisation, and assessment methods - as one of the elements of the learning context/environment.

Disciplinary contexts (or subject areas) encompass particular bodies of knowledge, language, norms, rituals and practices, which result in specific learning tasks and demands (e.g. Ramsden, 1997; McCune and Hounsell, 2005). In fact, a typical contrast is made between natural and applied science *versus* arts and social science; as well as between professional and non-professional courses. From a students' point of view, “learning tasks in science are typically described as hierarchical, logical, and rule-and procedure-governed”; while “arts and social science tasks are seen to require interpretation, comparison, generalisation, and to be more self-governed and easier” (Ramsden, 1997, p. 208, 209). Also, “formal teaching methods, limited choice of topics, clear goals for learning, and vocational relevance are associated with operation learning and science departments”; while, “informal teaching methods, unclear goals, and so on, are related to arts and social science departments” (Ramsden, 1997, p. 209). In line with this rationale, after examining students' learning behaviour among veterinary medicine and humanities programmes, Mikkonen *et al.* (2013, p. 71) reported that “a heavy workload was found to hinder interest-based studying in veterinary

medicine, whereas clear future goals helped these students to remain committed”. In contrast, while “individual interest played an important role in the humanities, a lack of future goals diminished students’ commitments to their studies” (Mikkonen *et al.*, 2013, p. 71).

Only a few studies have focused on the relationship between students’ conceptions of the subject matter and their adoption of accumulative (surface) or transformative (deep) learning processes. Within science some studies focused on students’ conceptions of specific disciplines so as to relate them to aspects of learning within science modules (e.g. Crawford *et al.*, 1998a,b; Cano and Berbén, 2009; Minasian-Batmanian *et al.*, 2006; Quinnell *et al.*, 2012). These studies argue that the conceptions of the subject matter combined with the approaches to learning/studying within that specific context affect the learning outcomes and overall success in the learning process. For example, Crawford *et al.* (1994) carried out a phenomenographic study and analysed students’ open-ended written statements about what they thought mathematics was, as well as their experience of learning it. When identifying the categories of description, the authors found that students would describe mathematics as a fragmented body of knowledge or by means of a cohesive view of mathematics. Fragmented conceptions of mathematics would reflect a perspective of mathematics, essentially, as numbers, rules and formulae; whereas cohesive conceptions of mathematics would express the idea of mathematics as being a way of thinking, either for solving complex problems or for providing new insights for understanding the world. Drawing on the previous findings, Crawford *et al.* (1998a) developed a questionnaire, the *Conceptions of Mathematics Questionnaire*. The reliability and validity of the questionnaire was tested through Cronbach alpha values and factor analysis. Also, correlation analysis and cluster analysis were carried out to identify subgroups of students with similar behaviour.

Afterwards, based on the approaches to learning perspective, Crawford *et al.* (1998b, p. 456) examined “the variation in the way mathematics students conceive of the nature of the subject matter they are studying” and how these conceptions would “relate to their other experiences of studying and to the outcomes of their studies”. Crawford *et al.* (1998b, p. 459) conceived that “students who adopt a surface approach to learning mathematics do so with the intention of reproducing the mathematics to satisfy assessment tasks while students who adopt a deep approach to learning mathematics focus on learning to understanding”. Their analysis was based on the model of student learning but with an emphasis on students’ conceptions of mathematics. Thus, in order to explore students’ conceptions of mathematics and their

approaches to learning and studying it, data was gathered using the *Conceptions of Mathematics Questionnaire* in conjunction with a modified version of the *Study Process Questionnaire* (developed by Biggs, 1987). To illustrate the distinct approaches to learning/studying considered in the questionnaire, an item related to the surface approach would be: “I think it’s only worth studying the mathematics that I know will be examined”; in contrast, an item related to a deep approach would be: “I find that studying mathematics is as interesting as a good novel or movie” (Crawford *et al.*, 1998b, p. 460).

The students’ perceptions of the teaching and learning environment were also examined. For that purpose, a modified version of the *Course Experience Questionnaire* (developed by Ramsden, 1990) was used to assess students’ experiences of learning mathematics in higher education. These reflected students’ perceptions as to how good the teaching was, whether there were clear goals and the workload was adequate, the nature of the assessment and whether students had freedom in learning. Finally, students’ final marks in their first-year mathematics course alongside their overall ranking for university admission were taken into account. The authors concluded that the “students’ conceptions’ of mathematics are associated with their approaches to learning mathematics and to their perceptions of the teaching and learning environment” (Crawford *et al.*, 1998b, p. 465). Accordingly, students possessing cohesive conceptions of mathematics adopt deep approaches to learning and “perceive the learning environment as more satisfactory and fulfilling than do students reporting fragmented conceptions” (Crawford *et al.*, 1998b, p. 465). In addition, they also tend to achieve better learning outcomes when compared with students who possess fragmented conceptions of mathematics. In brief, the findings revealed that fragmented conceptions of mathematics were connected with surface approaches to learning mathematics, alongside perceptions of assessment as evaluating reproduction and high levels of workload. In contrast, cohesive conceptions of mathematics were linked to deep approaches to learning the subject of mathematics, along with perceptions of good teaching, clear subject goals and independent learning. Other studies using Crawford’s *et al.* (1998a) questionnaire report similar relationships between conceptions of mathematics and approaches to learning (e.g. Cano and Berbén, 2009).

Quinnell *et al.* (2012) analysed first-year students’ conceptions of biology and highlight the importance of identifying a ‘learner profile’ according to the subject area. The authors believe that this might be an important tool to enhance understanding about how

students approach their learning in different disciplinary settings. Minasian-Batmanian *et al.* (2006, p. 1887) examined the relationship between first-year students' conceptions of biochemistry and the way these students approach learning and studying. The authors report that students who displayed cohesive conceptions of biochemistry were found to adopt deeper approaches to studying than those who displayed fragmented conceptions of the subject matter. Minasian-Batmanian *et al.* (2006, p. 1887) argue that "improved conceptions may provide crucial motivation for students to achieve deeper learning". A similar pattern of learning behaviour was found in Bliuc *et al.* (2010) within a political science course.

Within accounting only a few studies have investigated students' conceptions of introductory accounting and expectations of learning accounting (e.g. Lucas and Meyer, 2004, 2005; Duff *et al.*, 2010). These studies used both qualitative and quantitative research methods, and sought to identify discipline-specific conceptions and motivations within introductory accounting and their relationship with the adoption of accumulative (surface) or transformative (deep) learning processes (e.g. Duff *et al.*, 2010). Therefore, building on the findings of phenomenographic studies (e.g. Asworth and Lucas, 2000; Lucas, 2001), the *Expectations of Learning Accounting* (ELAcc) inventory was developed (Lucas and Meyer, 2005). Among other conclusions, the studies highlight that the power (and impact) of negative perspectives (preconceptions/stereotypes) of accounting should be taken into consideration, especially regarding non-accounting students (e.g. Lucas and Meyer, 2004).

2.5. APPROACHES TO STUDYING AND LEARNING

As previously mentioned, students' approaches to studying have also been examined within the approaches to learning conceptual framework. It has been found that approaches to studying are "substantially affected by students' perceptions of their teaching-learning environments" (Entwistle and McCune, 2004, p. 333), as well as "influenced by their conceptions of learning" (Edmunds and Richardson, 2009, p. 295). These will, ultimately, affect students' learning outcomes (e.g. Trigwell *et al.*, 2012).

Entwistle *et al.* (1979) identified three distinctive approaches to studying: the deep approach, the surface approach and the strategic approach (see Figure 3). Noel Entwistle is acknowledged to be one of the most influential researchers within student learning and, in particular, within the approaches to studying and learning theoretical framework (e.g. Coffield *et al.*, 2004; Ramsden, 2005; Trigwell and Prosser, 2005). His publications "have become

among the most highly cited in the field” (Ramsden, 2005, p. 199) and, among other developments, his work led to devising “Approaches to Studying Inventory – a questionnaire with groupings of similar items which produces scores on a series of scales” (Entwistle, 1997, p. 21). Further developments in research contributed to the devise of its latest version, the Approaches and Study Skills Inventory for Students (ASSIST) (Tait *et al.*, 1998). The most commonly used version of the inventory is its short version, which is a more accessible form of the inventory² (ASSIST, 1997).

Figure 3 - The Elements of Approaches to Studying



Source: Adapted from ASSIST (1997)

This body of research has consistently demonstrated its value and has provided a guiding framework to enhance student learning (e.g. Trigwell *et al.*, 2012). Nevertheless, it still faces criticism as, for example, some authors claim that students’ approaches to studying are not fully represented by “descriptions of ‘depth’ or ‘superficiality’” (Greasley and Ashworth, 2007, p. 840).

Within the students’ approaches to learning literature the terms ‘approaches to learning’ and ‘approaches to studying’ are often referred to as synonymous or mentioned together as complements³ (e.g. Marton *et al.*, 1997; Entwistle and Peterson, 2004; Entwistle and McCune, 2004; McCune and Hounsell, 2005; Greasley and Ashworth, 2007). For

² Prior versions and forms of the inventory are only available in research reports (Entwistle and McCune, 2004).

³ Entwistle and McCune (2004, p.337) mention the “Approaches to Learning and Studying Inventory”, Entwistle and Peterson (2004, p.415) identify the “defining features of approaches to learning and studying”; and McCune and Hounsell (2005, p.256) draw on “research relating to students’ approaches to learning and studying”.

example, McCune and Hounsell (2005, p. 256) explain that “the approaches describe qualitatively different ways of learning and studying, encompassing both students’ intentions when studying and the learning processes they employ”. And, according to Greasley and Ashworth (2007, p. 825), “an approach to studying is a student understanding of the way in which learning is to be tackled.” Some other times these terms are presented as referring to different concepts. For example, Entwistle and Smith (2002) distinguish the two terms when stating that ‘approaches to learning’ are influenced by, for example, prior knowledge and intellectual abilities, while ‘approaches to studying’ are influenced by attitude to course, motivation, work habits and study skills. Also, Entwistle (2000) argues that the strategic approach is related to the way students act in everyday study situations, thus, it would be better described as an approach to studying. The same idea is conveyed in Entwistle and McCune (2004).

This circumstance is likely due to the conceptual overlap mentioned in 2.1. subsection and the conceptual developments within this area of research. Taking into account the mainstream understanding, in this study, the term students’ approaches to studying refers to what students say they do when studying and learning, and it includes both strategy (what is done) and intention (why it is done).

2.6. THE PHENOMENON OF DISSONANCE

Research also reports dissonance in student learning patterns (e.g. Meyer, 2000; Cliff, 2000; Vermunt and Verloop, 2000; Lindblom-Ylänne and Lonka, 2000; Entwistle *et al.*, 2000; Meyer and Shanahan, 2003; Boulton-Lewis *et al.*, 2003; Long, 2003; Vermunt and Minnaert, 2003; Vermunt and Vermetten, 2004; Entwistle and Peterson, 2004; Cano 2005; Fyrenius *et al.*, 2007; Lindblom-Ylänne, 2008; Gijbels *et al.*, 2008; Parpala *et al.*, 2010; Quinnell *et al.*, 2012). This research has analysed the relationship between students’ perceptions of the academic environment, their conceptions of learning and approaches to studying, and has found *dissonant study orchestrations* (Meyer, 2000, p. 5). It has applied both quantitative and qualitative research methods and perspectives (Meyer and Shanahan, 2003), and has collected data “*via* interviews, written descriptions, or coded inventory responses” (Meyer, 2000, p. 5).

In the early 1990s, the term study orchestration was introduced in the literature on student learning (e.g. Meyer *et al.*, 1990; Meyer, 1991) to illustrate “the unique nature of individual approaches to studying viewed primarily as a qualitative responsive approach to

a qualitatively perceived educational context” (Meyer, 1991, p. 297). The concept of *study orchestration* refers to “the contextualised study approach adopted by individual students or by groups of students” (Meyer, 1991, p. 297). The combinations of approaches to learning reflect students’ conceptions of learning and their perceptions of the learning context. Ideally, “the various combinations of approaches to learning form a coherent whole in which different elements fit together theoretically” (Parpala *et al.*, 2010, p. 270). This is referred to as *conceptual consonance* (Meyer, 2000). However, evidence shows combinations of approaches/orchestrations that indicate disintegrated patterns of learning behaviour (Lonka *et al.*, 2004), thus, exhibiting degrees of *conceptual dissonance* (Meyer, 2000).

The phenomenon of dissonance has been described as “a mismatch between approaches to studying and perceptions of the learning environment, or between internal and external regulation of studying” (Entwistle *et al.*, 2000, p. 44). As explained by Prosser *et al.* (2003, p. 38), an “incoherent pattern of learning is used when, for example, a surface approach is used with perceptions supporting a deep approach.” This can be illustrated when someone attempts “to simultaneously set out to seek meaning and to do so with an intention to rote learn or ‘cram and dump’ without comprehension” (Meyer and Shanahan, 2003, p. 5). Boulton-Lewis *et al.* (2003, p. 85) carried out a phenomenographic investigation into conceptions of learning and ways of learning and found “students who exhibited dissonance between their core conceptions and some of the ways in which they learned”. For example, data has shown that there were students who held a core conception of learning as *personal growth* or as *change in thinking and understanding*; however, these students used predominantly organisation and memorisation strategies (Boulton-Lewis *et al.*, 2003). The theoretically incoherent learning patterns can be illustrated/represented by, for example, a lack of differentiation within learning aspects or a lack of integration between those aspects. As pointed out by Vermunt and Minnaert (2003, p. 51), a “*lack of differentiation* within learning strategies, learning conceptions and learning orientations means that students do not see the difference between various ways of processing learning materials, different ways of regulating one’s own learning, different views on learning, and various motives for learning”; and “a *disintegration* between the learning strategies students use and their learning conceptions and orientations means that the learning activities students undertake are not in line with their views on learning and their learning motives and goals.”

Non-coherent associations between approaches, conceptions and strategies suggest the existence of problems of adaptation to the learning environment (Lindblom-Ylänne, 2004). The literature identifies possible causes for the dissonant pattern of behaviour. Entwistle *et al.* (2000, p. 45) posit that the unexpected linkages between approaches to learning and perceptions of the learning environment might be related to “a tension between personal intentions and either the general learning environment provided or the pressures to conform to external assessment requirements”. Similarly, Lindblom-Ylänne (2008) and Lindblom-Ylänne and Lonka (2001) argue that the conflict between students’ own goals and regulation *versus* the learning environment might be the cause for the theoretically atypical combinations of approaches to studying, conceptions of learning and perceptions of the learning environment. In addition, as described by Lonka *et al.* (2004, p. 309), “the interplay between student regulation and external regulation of learning may provoke either congruence or friction between learning and teaching strategies”. In the case of dissonance, “patterns of learning engagement are *in conflict* with the demands of the learning environment” (Meyer and Shanahan, 2001, p. 128). Lindblom-Ylänne and Lonka (2001, p. 122) analysed individual ways of interacting with the learning environment and provide examples of (and reasons for) dissonant ways/behaviour: (i) “a student who searches for meaning and understanding may end up studying in a learning environment where learning goals are set by the teachers and the curriculum”; or (ii) “a student who is externally regulated by the demands of the learning environment may be frustrated in a curriculum where students are expected to set their own goals and actively regulate their own learning”. The worst (of the) scenario(s) being the one where students adopt deep study strategies and practices and experience a ‘destructive friction’ with the learning environment. For example, in Lindblom-Ylänne (2008, p. 9), students who expressed dissonant study orchestrations reported that “their learning environment forced them to study more superficially than they would normally do”. According to Lindblom-Ylänne (2008, p. 8), “active and self-regulated students may not be satisfied with their studying in the traditional learning environment”; and “severe conflicts seem to arise, because the demands of the learning environment and the students’ personal goals are not congruent.” Further interpretations are presented to explain study approach dissonance. For example, Long (2003, p. 33,34) posits that “it may be that the disjointed approaches of some represent a long-standing (lack of) method in their study habit; for others they may result from a failure to react appropriately to a changing educational setting or from a poorly developed

metacognitive sense”. Gijbels *et al.* (2008) argue that “students probably need time to get used to the new approach and to adapt both their perceptions and study approaches”. Hazel *et al.* (2002, p. 747) point out that “it is a more holistic issue and that the dissonance needs to be addressed in relation to issues of prior knowledge.” In contrast, Vermunt and Minnaert (2003) believe that, in some cases, theoretically incongruent patterns might result from specific circumstances, such as those resulting from an innovative, student-oriented way of teaching/learning environment. These atypical patterns may prove to be needed for the learner to change and grow during adaptive periods. From this point of view, dissonance can reflect a normal behaviour under certain circumstances, such as those characteristic of the periods of adaptation and development. As a result, Vermunt and Minnaert (2003) suggest that the issue of dissonance deserves further attention and demands a revision of the general theory.

Dissonance is often associated with low achievement or study outcomes and may also have affective consequences (e.g. Hazel *et al.*, 2002; Vermunt and Vermetten, 2004; Meyer and Shanahan, 2004). Inner conflicts between beliefs and behaviour quite often reflect (or lead to) high levels of dissatisfaction and tension. Nevertheless, Lindblom-Ylänne and Lonka (2000) have found dissonant study orchestrations in high-achieving university students. The literature also reports that this phenomenon is more common when students enter a new phase of education, for example, at the beginning of higher education (e.g. Cliff, 2000; Meyer, 2000; Vermunt and Vermetten, 2004). In this respect, Meyer (1991, p. 315) reports that, concerning “first-year students manifesting disintegrated orchestrations, it has been concluded that some individuals are *unable* to reflect on intrinsically satisfying learning experiences at all; it would appear that they have *never* experienced deep-level learning and there is no referential basis on which to build.” According to Meyer (1991, p. 313), these students are ‘at risk’ of dropping out of higher education, therefore, the author claims that “it is clear that if intervention for ‘at risk’ students is going to be attempted it needs, for some, to start on the first day of registration”.

Dissonance has been observed within disciplinary areas, such as engineering, psychology, law, biology, medicine, arts and social science subjects (e.g. Entwistle *et al.*, 2000; Lindblom-Ylänne and Lonka, 2001; Lindblom-Ylänne, 2003; Prosser *et al.*, 2003; Fyrenius *et al.*, 2007; Quinnell *et al.*, 2012). For example, Lindblom-Ylänne and Lonka (2001, p. 138) report that medicine students, whose study orchestrations were dissonant, revealed that they changed their study habits throughout their medical studies. In addition,

according to Fyrenius *et al.* (2007, p. 152), within medical programmes (e.g. medicine), a professional orientation has been identified, showing “the student appreciating only knowledge that is directly applicable”. Also, within introductory accounting, Lucas and Meyer (2005) found that some subscales of the *Reflections on Learning Inventory* (RoLI) did not perform as expected. In particular, the ‘Memorising and Rehearsal’ (MAR) subscale, concerning business students, loaded on both the accumulative factor and the transformative factor. The authors explain that, “the MAR subscale essentially refers to a repetitive process of committing to memory material that does not make sense, or the meaning of which is not clear” (Lucas and Meyer, 2005, p. 197). Thus, based on prior phenomenographic studies carried out with students and lecturers of introductory accounting (e.g. Lucas, 2000), the authors argue that accounting literature “identifies this type of learning process as very common within the learning of accounting, and one that is not deemed to be inappropriate by either lecturers or students” (Lucas and Meyer, 2005, p. 197). The authors posited that perhaps this subscale “is not the best way to differentiate between accumulative and transformative learning processes” or “alternatively, it may be that there is a significant element of dissonant study orchestration amongst some students” (Lucas and Meyer, 2005, p. 197). However, despite the fact that students’ patterns of behaviour may change according to subject area, this circumstance reflects problems between students’ study practices and the learning environment (e.g. Lonka *et al.*, 2004; Lindblom-Ylänne, 2004, 2003). Therefore, it is important to further investigate the phenomenon of dissonance within discipline-specific contexts.

The literature also reports the difficulties that research on dissonance faces relating to the methodologies applied (e.g. Meyer, 2000; Long, 2003; Meyer and Shanahan, 2003) and proposes theoretical frameworks in order to explore dissonance (e.g. Cano, 2005; Meyer, 2000). For example, Lindblom-Ylänne (2003) highlights that some of the dissonant study orchestrations cannot be captured when using quantitative research methods (e.g. cluster or factor analysis). The author argues that these dissonant patterns of behaviour can only be found when adopting qualitative research methods, such as phenomenographic procedures. In contrast, Meyer (2000, p. 7, 17) points out that the establishment of ‘dissonance’ as a category of description within phenomenographic analysis, is unlikely to happen, because it defies the “pre-determined logical relationships” and the “imposed ‘logical or hierarchical connectedness’ requirements”. This circumstance poses challenges for phenomenographic studies, as dissonant elements may not be selected for analysis.

In order to increase consistency in the demonstration and interpretation of dissonance, Meyer (2000, p. 7) proposes a combination of methods: that is, “a suspected ‘dissonant’ observation based on an inventory response pattern, for example, can be validated via interview data”. Therefore, combining quantitative and qualitative research methods may help to overcome the mentioned difficulties and, as a result, help to better understand the phenomena of dissonance. In light of this, Entwistle *et al.* (2000) argue that the precise nature of dissonance is worth further investigation. In fact, understanding the phenomenon of dissonance represents a key aspect in student learning and an important challenge for higher education (Long, 2003).

3. STUDENTS' APPROACHES TO LEARNING WITHIN ACCOUNTING

This section reviews aspects relating to accounting education literature and describes the importance of introductory accounting modules within accounting education. Finally, it reviews students' approaches to learning within accounting, focusing on introductory accounting research.

3.1. ACCOUNTING EDUCATION LITERATURE

The next subsections compare accounting research in general with accounting education research; analyse the role and relevance of accounting education and research; and identify core lines of research and the most applied research methods.

3.1.1. Research Trends in Accounting and Accounting Education

Accounting research in general has been subject to several criticism as more recent trends in research seem to increasingly ignore ideas drawn from other disciplines and, thus, becoming more insular and self-referential (e.g. Biehl *et al.*, 2006; Hopwood, 2007; Cooper and Morgan, 2008; Oler *et al.*, 2010). Journal rankings and publishing patterns and criteria have also been subject to criticism (e.g. Mathews, 2007; Wilson *et al.*, 2008; Sangster, 2011).

Accounting research trends concerning topics and methodologies have been recently analysed by Oler *et al.* (2010). The authors examined studies published in six top accounting journals between 1960 and 2007, and their findings support the concerns about the decreasing level of diversity in accounting research. The authors noted that “the growing body of accounting research draws increasingly from both finance and economics” and that “financial accounting topics and archival methodologies are becoming more dominant over time relative to other topics and methodologies” (Oler *et al.*, 2010, p. 635). Nevertheless, the financial crisis has raised questions regarding the validity and usefulness of the application of econometric techniques in finance (e.g. Ashton *et al.*, 2009). Furthermore, according to Hopwood (2009, p.797), the economic and financial crisis pointed out “the rather limited focus of much current accounting research” as “too much intellectual inquiry in the area of accounting seems to operate within the parameters set by practice rather than questioning and challenging these, at least from time to time”.

Concerning research topics, this trend has also been reported by Hahn (2007), as the author investigated which theories were being more commonly used in accounting

doctoral dissertations. Hahn (2007) randomly selected the period from 2000 to 2003 to examine the accounting doctoral dissertations within the UMI dissertation database⁴. The author concluded that accounting dissertations investigate theories borrowed mainly from the disciplines of economics and finance (e.g. the efficient market hypothesis, the capital asset pricing model, and the discounted cash flow valuation model). Then, and to a much lesser extent, dissertations test theories borrowed from psychology and sociology (e.g. the learning theory and culture theory). Oler *et al.* (2010, p. 666) identify a few circumstances that promoted this tendency, such as “the creation of massive databases of stock returns and financial statement information” and the “advances in computing technology to use these databases”. However, the authors state that, “if one topic or methodology becomes overly dominant to the detriment of other topics or methodologies, then the entire profession may suffer, as researchers focus on a shrinking set of ‘acceptable’ papers” (Oler *et al.*, 2010, p. 642).

In line with these ideas, several authors support the use of other methodologies. For example, Cooper and Morgan (2008) stress the advantages of expanding the use of case study methodology as evidence shows a lack of interest from researchers concerning case-based research. Also, in accounting history research, Walker (2008, p. 296) encourages both “methodological innovation and plurality”, as well as “the sustained application of new approaches”.

This narrow perspective and tendency is not so evident in accounting education research as it has been applying theories and models drawn from other disciplines, such as educational psychology literature (e.g. the approaches to learning and learning styles literature). For example, regarding the British context, Ashton *et al.* (2009, p. 204) stated that “research in the accounting education area continues to expand and deepen in its scope and theoretical sophistication”. And this assessment is quite meaningful as accounting education research has been mostly produced in the US and the UK (e.g. Paisey and Paisey, 2004; Watson *et al.*, 2007; Apostolou *et al.*, 2007; Marriott *et al.*, 2012).

Another area of concern is related to the practical relevance of accounting research. Indeed, as Cooper and Morgan (2008, p. 159) mention, “accounting research is periodically challenged about its practical relevance and its progressive scientific

⁴ The UMI dissertation database is a digital dissertation database published by ProQuest LLC.

achievements”. On the one hand, accounting research is said to perpetuate the gap between academics and practitioners (e.g. Oler *et al.*, 2010; Kaplan, 2011). On the other hand, many claim that both accounting education and research should put a greater “emphasis on the broader issues that can make accounting a field of liberal learning” (Zeff, 1989, p.168); and that researchers should “retain a healthy tolerance for research approaches other than their own” (Zeff, 1989, p. 172).

Again, this tendency is not so evident within the accounting education area. In fact, due to its nature, accounting education research has observed and followed closely the evolution of the accounting profession, as well as the environment in which accounting operates. According to Ashton *et al.* (2009, p. 204), within the British context, “there are significant research networks developing and studying both academic and professional areas of accounting education and training, with crossovers between the two”. However, many argue that this approach to research leads to the “increasing use of formal empiricism and mathematical model building”, contributing to a “neglect of classical research methods, such as historical research” (Dewing and Russell, 1998, p. 298).

3.1.2. The Role and Relevance of Accounting Education and Research

The role and relevance of accounting education have been highlighted by several accounting organisations [e.g. American Accounting Association (AAA), International Federation of Accountants (IFAC) and International Accounting Standards Board (IASB)] and the academia in general (e.g. Beattie *et al.*, 1997; Beattie and Goodacre, 2004; Boyce, 2004; McGoun *et al.*, 2007; Wilson *et al.*, 2008; Ashton *et al.*, 2009; McPhail *et al.*, 2010; McKernan, 2011; Lucas, 2011).

New insights into accounting education and proposals for change have been frequently urged as accounting and society change (e.g. Humphrey *et al.*, 1996; Dewing and Russell, 1998; McPhail, 1999; Vafeas, 2009; Fogarty, 2010; Paisey and Paisey, 2010; Sangster, 2010; Molisa, 2011). However, within research this attention has been increasing essentially over the last two decades (e.g. Jackling *et al.*, 2013). In fact, as noted by Apostolou *et al.* (2010), accounting education research has registered a substantial increase especially from 1997 onwards.

In particular, concerning specific themes such as approaches to learning, Lucas and Mladenovic (2004) acknowledge an increasing interest in this particular area, in contrast

with a previous research assessment carried out by Lucas (1996). Lucas and Mladenovic (2004, p. 405) noted that “there is now an international body of researchers working in this area”. To illustrate this increasing interest, for example, Beattie *et al.* (1997, p. 10) “call for a programme of research in accounting education which investigates empirically the role of learning approaches within the accounting discipline”. More recently, Lucas (2011) draws attention to the nature of a scholarship of teaching and learning within accounting, mentioning the role of approaches to learning and teaching. And, Boyce *et al.* (2012, p. 49), based on prior studies (e.g. Lucas 2001; English *et al.*, 2004), call for the strengthening of educational strategies that enhance deep approaches to learning, in order to “encourage students to make sense of their learning, to determine inter-relationships, and to apply underlying principles to their study of accounting in a social context”.

This increasing interest was supported by (or resulted from) the increasing importance that accounting education has received from international accounting organisations [e.g. IFAC and IASB], especially from the 1990s onwards, along with the launching of accounting education academic journals, such as the *Accounting Education: an International Journal*⁵, *Journal of Accounting Education* and *Issues in Accounting Education*. In addition, the recommendations of the Accounting Education Change Commission (1990) in order to persuade educators to “abandon strict preparer approaches and adopt more user-oriented approaches in financial accounting curricula” have had a strong impact on the content of accounting courses as subjects relating to ethics, business strategy, corporate governance and financial analysis were introduced to accounting education (McGoun *et al.*, 2007, p. 358). This circumstance increased the scope for accounting education research. Indeed, as McGoun *et al.* (2007, p. 358) point out, “traditional accounting education has focused primarily on the preparation of financial statements. For decades, university credits have been awarded for courses that train students in the clerical nuances of advanced bookkeeping techniques”.

Nevertheless, discouraging trends have been also acknowledged in accounting education and research, especially those stemming from the “strengthening of the standard-setting and a more rigorous enforcement of accreditation standards” (Dewing and Russell, 1998, p. 291). Indeed, based on the US experience reported by Zeff (1989), Dewing and

⁵ The journal was launched in 1992 (Jackling *et al.*, 2013), and at that time it was named *Accounting Education*.

Russell (1998) identify similar areas of concern within the UK. These were the following: “the concern over the effectiveness of the standard-setting process”, alongside “the plan to exercise a greater degree of rigour in the accreditation of tertiary accounting curricula, so that students might receive a greater number of exemptions from the examinations of professional accountancy institutes”; plus “the trend to impose more rigorous standards in the evaluation of academic research, as reflected in the University Grants Committee’s decision to establish ‘research gradings’ of academic departments” (Dewing and Russell, 1998, p. 291, 292).

In addition, the accounting curriculum and mainstream textbooks recommended on accounting courses have been subject to criticism, as the former usually does not encompass research or encourages the development of accounting research skills (e.g. Zeff, 1989; Simon and Alexander, 1997), and the latter do not include ‘wider issues’ in accounting education and rather inform from a single theoretical perspective (e.g. Dewing and Russell, 1998; Boyce, 2002, 2004; Ferguson *et al.*, 2005, 2007, 2011; Boyce *et al.*, 2012). It is claimed that their content remains stagnant over changes in the business and accounting environments. Concerning textbooks, Palm and Bisman (2010, p. 180) argue that their “traditional content is often narrowly focused and overly concerned with the technicalities of the double entry system, emphasising memorisation of accounting pronouncements and procedures”. Some argue that by adopting an accounting-history based approach, key themes such as double entry bookkeeping, would be studied in ways that “would encourage accounting students to think critically about accounting information at later stages of their studies”; avoiding a “blind acceptance of accounting information as ‘truth’” (Sangster, 2010, p. 23) .

Hence, many claim that accounting education should be removed from the control of the accounting profession as it “obstructs the emergence of critical and reflective thought” (Dewing and Russell, 1998, p. 301); and question the value of the process of research evaluation (e.g. Research Assessment Exercises in the UK) as it mostly seems to promote the ‘publish or perish’ climate within academia.

Along with a lively debate (and criticism) about the role of accounting education in society and its practical value for business (e.g. Vafeas, 2009), accounting education research has shown a strong concern about its usefulness and relevance so as to provide

meaningful insights, trying to bridge the gap between academics, practitioners and society (e.g. Paisey and Paisey, 2004; Ashton *et al.*, 2009; Jackling *et al.*, 2013).

3.1.3. Research Lines and Methods in Accounting Education

The categorisation of the main lines of research in accounting education is not straightforward or consensual (e.g. Paisey and Paisey, 2004; Watson *et al.*, 2007; Apostolou *et al.*, 2010; Jackling *et al.*, 2013). To some extent, the differences found in the categorisation of the studies are due to the fact that many of them address more than one issue related to different categories, and it is not always easy to determine which one is the predominant/principal issue. Nevertheless, most literature review studies identify traditional lines of research, methodologies applied and main conclusions, as well as suggestions for further investigation (e.g. Paisey and Paisey, 2004; Watson *et al.*, 2007; Apostolou *et al.*, 2010; Jackling *et al.*, 2013). Accordingly, the traditional lines of research in accounting education encompass areas, such as: accounting curricula, course content and programme structures; course delivery and teaching methods; students' conceptions of learning and approaches to learning and studying; faculty issues; and student recruitment and job selection.

As previously noted, several concerns have been expressed regarding the current trends in accounting research as to its topics and methodologies. Evidence shows that financial accounting topics drawn from economics and finance have proved to be dominant topics of research over the years. This has not been so evident within accounting education. Nevertheless, accounting education literature mentions the need to apply research methodologies that have not been so frequently employed, such as action research or comparative studies; as well as to expand current lines of research, and extend the research to emerging issues or undeveloped areas (e.g. Paisey and Paisey, 2004; Watson *et al.*, 2007; Apostolou *et al.*, 2010; Jackling *et al.*, 2013). Another matter of concern is the need to contextualise accounting education research. Indeed, Cooper (1994) draws attention to the importance of the cultural and historical context of accounting education.

Regarding the methodologies used in accounting education research, taking into account the papers published in *Accounting Education: an International Journal* from 1992 to 2001, Paisey and Paisey (2004, p. 86) state that “most papers (86%) adopted one dominant method”. The authors found that 61% of the studies applied essentially

qualitative methods against 39% that used quantitative methods. Afterwards, with reference to the period from 2002 to 2011, Jackling *et al.* (2013) report that 48% of the studies employed primarily qualitative methods against 52% which employed quantitative methods. Currently, the proportion of studies employing primarily qualitative methods and employing primarily quantitative methods seems to be balanced. Nevertheless, researchers are encouraged to employ a mixed methods approach “in order to increase research rigour” (Paisey and Paisey, 2004; Jackilng *et al.*, 2013, p. 33).

In short, taking into account the categorisation presented in Paisey and Paisey (2004) and Jackling *et al.* (2013), the qualitative research methods applied in accounting education have been primarily: *literature review providing a critical analysis* (e.g. Beattie *et al.*, 1997; Duff and McKinstry, 2007; Lister, 2010); *case study* (e.g. Hughes and Berry, 2000; Weil *et al.*, 2004; Marriott and Lau, 2008; Boyce *et al.*, 2012; Beattie *et al.*, 2012); *developing a model* (e.g. Sangster and Wilson, 1991; Etter *et al.*, 2000; Fogarty, 2010; Drake, 2011; Irving, 2011); *opinion statement* (e.g. Wilson *et al.*, 2008; Evans and Fraser, 2010; Sangster, 2011); *action research* (e.g. Paisey and Paisey, 2005; Doran *et al.*, 2011); *comparative study* (e.g. McKee *et al.*, 1992; Normand and Cummings, 2005; Sugahara and Boland, 2010; Byrne *et al.*, 2012); *interviews* (e.g. Ferguson *et al.*, 2007; Gallhofer *et al.*, 2009; McPhail *et al.*, 2010; Lucas and Tan, 2013); *historical study* (e.g. Chua, 1996; Boyce, 2002; Quatronne, 2009; Carnegie, 2009; Sangster and Scataglinibelghitar, 2010); *phenomenographic studies* (e.g. Lucas, 2000, 2001; Lucas and Meyer, 2005; Sin *et al.*, 2012); *focus groups* (e.g. Mladenovic, 2000; Marriott and Lau, 2008; Ferguson *et al.*, 2008; Barratt *et al.*, 2011); and *content analysis* (e.g. Rezaee *et al.*, 2006; Ferguson *et al.*, 2005; Bates and Whittington, 2009; Sugahara and Wilson, 2013).

The quantitative research methods have been, essentially, *questionnaires* and *statistical analysis of data* (e.g. Marriott and Marriott, 2003; Cullen *et al.*, 2004; Duff *et al.*, 2004; Byrne *et al.*, 2004b; Lucas and Meyer, 2005; Flood and Wilson, 2008; Ballantine *et al.*, 2008; McPhail *et al.*, 2010; Andon, *et al.*, 2010; Marriott *et al.*, 2011; Collison *et al.*, 2011; Gray and Murray, 2011; Crawford *et al.*, 2011; Rowbottom, 2013).

3.2. THE IMPORTANCE OF INTRODUCTORY ACCOUNTING

The importance of introductory accounting has been highlighted within accounting education literature, at least, over the last six decades (e.g. Weiser, 1966; Smith, 1973; Dilley *et al.*, 1983; Tho, 1994; Lucas and Meyer, 2005; Collison *et al.*, 2011). Nevertheless, as previously noted, a great deal of research has been encouraged by increasing calls for change in accounting education. Especially since the early 1990s, there has been a lot of debate about the role of accounting education. And, in particular, introductory accounting has been subject to considerable criticism as to its “narrow content, technical focus, use of transmissive models of teaching, and inattention to the development of students’ generic skills” (Palm and Bisman, 2010, p. 179). The ongoing debate about the “appropriateness of focusing on the technical aspects of accounting rather than on the usefulness of accounting information to assist decision-making” is common within accounting education in many countries (Palm and Bisman, 2010, p. 183).

The literature relating to introductory accounting⁶ has focused on several aspects over the years. For example, it has examined issues relating to curriculum content and sequence (e.g. Doucet *et al.*, 1998; Palm and Bisman, 2010); the role of language and writing in a first-year accounting course (e.g. Almer *et al.*, 1998; English *et al.*, 1999; Krom and Williams, 2011); the ways of improving student motivation, performance and retention (e.g. Etter *et al.*, 2000; De Lange *et al.*, 2003; David *et al.*, 2003); the content and sequence of textbooks (e.g. Sullivan and Benke, 1997; Wouters, 2008; Ferguson *et al.*, 2009), and textbook reading behaviour in introductory accounting students (e.g. Phillips and Phillips, 2007). The approaches to learning literature originated influential work within introductory accounting as well. For example, research has focused on: first-year accounting students’ learning behaviour (e.g. Lucas, 1998, 2000, 2001; Mladenovic, 2000; Byrne and Flood, 2004; Byrne *et al.*, 2002; Lucas and Meyer, 2005) and their motivations, expectations and preparedness for higher education (e.g. Byrne and Flood, 2005, 2008; Byrne *et al.*, 2012); students’ conceptions of learning accounting (e.g. Leveson, 2004), and

⁶ Introductory-level courses in accounting (Oswick and Barber, 1998) are usually referred to as ‘introductory accounting’ (e.g. Mladenovic, 2000; Lucas, 2001; Lucas and Meyer, 2005), ‘elementary accounting or principles of accounting’ (e.g. Lucas, 2000; Palm and Bisman, 2010), or ‘introductory financial accounting’ (e.g. Phillips and Phillips, 2007; Marriott and Lau, 2008; Collison *et al.*, 2011).

conceptions of accounting and expectations of learning the subject of introductory accounting (e.g. Lucas and Meyer, 2005; Duff *et al.*, 2010). Furthermore, there has been some empirical research on introductory accounting students' perspectives of the accountancy profession (e.g. Fisher and Murphy, 1995; Saemann and Crooker, 1999; Marriott and Marriot, 2003; Tan and Laswad, 2006).

These studies have been carried out mainly in English-speaking countries, such as the UK (e.g. Oswick and Barber, 1998; Lucas, 1998, 2000, 2001, 2002; Lucas and Meyer, 2005; Ferguson *et al.*, 2005), the US (e.g. Cheng and Saemann, 1997; Saemann and Crooker, 1999; Etter *et al.*, 2000; Murdoch and Guy, 2002; Phillips and Phillips, 2007; Bealing *et al.*, 2009; Krom and Williams, 2011), Australia (e.g. De Lange *et al.*, 2003; English *et al.*, 2004; Palm and Bisman, 2010; Barratt *et al.*, 2011), Ireland (e.g. Byrne *et al.*, 2002; Byrne and Flood, 2005, 2008) and New Zealand (e.g. Keef, 1992; Tan and Laswad, 2006; 2009).

Introductory courses in accounting are considered to be among the most important courses within the learning of accounting as they provide “students with knowledge and experience in using accounting information as a decision-making tool” (Etter *et al.*, 2000, p. 355). These courses are likely to represent the first contact with the subject of accounting for the majority of accounting students; and likely to be the first and, simultaneously, the last contact with accounting for many non-accounting students (e.g. engineering and sports management). In most cases, introductory accounting is compulsory for non-accounting students (e.g. business programmes). Therefore, according to Lucas (2000, p. 479), the importance of introductory accounting courses “lies in the way in which they may prepare accounting students for subsequent studies and non-accounting students for their future encounters with accounting in the world of work”.

In addition, Etter *et al.* (2000, p. 356) state that “students' experiences in introductory accounting can confirm or dispel prior opinions about accounting, and can be an important factor in deciding whether or not to major in accounting”. This observation is also supported by other researchers (e.g. Mladenovic, 2000; Geiger and Ogilby, 2000). Similarly, research has investigated introductory accounting students' conceptions of accounting and found that students have misconceptions about the nature of accounting (e.g. Mladenovic, 2000; Lucas, 2000). According to Lucas and Meyer (2005), these misconceptions - i.e. perceptions that accounting is “primarily numerical, objective and

involving little judgment” - seem to be linked “to a focus on learning the technique, rather than on learning the organising, or underlying conceptual, framework of accounting” (Lucas and Mladenovic, 2007, p. 243). In line with this, many argue that introductory accounting “should offer a broad introduction to the discipline, taught from the users’ perspective instead of the preparers’ perspective” (Palm and Bisman, 2010, p. 183). They believe that adopting a users’ approach would better assist students in understanding accounting concepts and accounting information. In contrast, others believe that students will better achieve this goal through a certain degree of technical accounting knowledge whether students become preparers or users of accounting information (Dyson, 1997).

This is, indeed, one of the major criticisms made towards introductory accounting curriculum and textbooks, and a great challenge for accounting education. The user *versus* preparer approach has been discussed within accounting education over the years (e.g. Bernardi and Bean, 1999; Palm and Bisman, 2010). And, this debate includes the analysis and distinction between introductory accounting being taught to accounting students and/or non-accounting students. In fact, there is a conflict between the perspectives of the accountancy profession/employers and the lecturers/researchers as to the desired/ideal content and focus of introductory accounting courses. On the one hand, the former argue that a strong focus on technical knowledge and skills, such as bookkeeping, is essential (Bui and Porter, 2010). On the other hand, the latter argue that introductory accounting should focus on concepts and theories, “providing a broad-based instruction to accounting and developing core competencies in students, rather than a narrow bookkeeping perspective offered under the traditional approach” (e.g. Mladenovic, 2000, p. 137).

Nevertheless, some authors propose different approaches to the teaching/learning of accounting technical matters. For example, Sangster (2010, p. 23), acknowledging the importance of the technical accounting knowledge for accounting graduates, proposes a history-based approach to the learning of bookkeeping, encouraging “critical thinking concerning the validity of accounting information”. Other authors have focused on the content and purpose of introductory accounting textbooks (e.g. Ferguson *et al.*, 2005, 2008; Collison *et al.*, 2011). They have looked at the students’ perspectives (Ferguson *et al.*, 2010b) and the lectures’ perspectives (Ferguson *et al.*, 2007). Among other aspects, the authors support the discussion of wider societal issues and perspectives on themes, such as society or the environment, within introductory accounting textbooks, as a way of

developing students' critical awareness of the accounting context and issues. This would contribute to the development of students' deep approaches to learning within introductory accounting (e.g. Ferguson *et al.*, 2005, 2008). On a different level, Collison *et al.* (2011, p. 47) suggest that accounting education, through the introductory accounting textbooks, "is acting as a conduit for views more commonly held in Anglo-American societies".

In addition, there are a number of other factors that have been pointed out as being problematic for the learning of introductory accounting within higher education. Bui and Porter (2010) identified institutional and student factors that limit accounting education from encouraging the development of the adequate competencies students are required to acquire. For example, because of funding guidelines, universities face restrictions relating to employing staff. These restrictions often create increased workloads for teachers and large classes for students. According to Bui and Porter (2010, p. 27), these institutional constraints contribute to "the ineffectiveness of university teaching", which in turn, support criticism about accounting education not producing graduates with the knowledge, attributes and skills desired by the accounting profession. Also, students' perceptions of accounting programmes and the accounting profession represent a key aspect as they "may discourage bright, creative students from pursuing accounting degrees and joining the profession" (Bui and Porter, 2010, p. 24). In fact, Saemann and Crooker (1999, p. 1) report that "business and accounting students tend to be less creative than the general university population". The authors claim that "the perceptions of precision and thoroughness in the profession and the heavy work load in the introductory course discouraged creative personalities from pursuing an accounting major" (Saemann and Crooker, 1999, p. 1). Furthermore, evidence shows that, in some cases, students start their introductory accounting courses possessing reasonably positive expectations and attitudes towards the study of accounting and the accountancy profession, but by the end of their studies these perceptions and positive attitudes appear to significantly decline (Marriott and Marriott, 2003).

Another key aspect pointed out in the literature is the assignment of lecturers to introductory accounting modules. As Geiger and Ogilby (2000, p. 76) explain, "since the introductory accounting course is often a student's first, and potentially only, exposure to accounting, instructor assignment to this course is important, in part, because it can impact on the supply of accounting majors to both an accounting program and the accounting

profession”. In addition, the traditional approach to the teaching of introductory accounting has been subject to criticism. According to Lucas (1998, p. 192), “the conventional teaching approach is associated with ‘beating them over the head with the profit and loss accounts and balance sheets’”. And Lucas (1998, p. 192) concludes that “the teaching of accounting in this sense appears to involve a high degree of direction of the activities of the students and, appears at times, to involve a degree of conditioning of their behaviour.” Not surprisingly, the literature reports that “many students equate accounting with book-keeping and see accounting as a boring, unexciting, number crunching activity” (Palm and Bisman, 2010, p. 184). Therefore, the literature suggests that “nontraditional teaching methods, such as cooperative learning and case-based learning, are more effective in changing negative perceptions than more traditional lecture-based methods”⁷ Mladenovic (2000, p. 135). Despite that, “accounting students face a difficult challenge in accepting that accounting is not an objective science and that representing financial events through numbers is not as certain as they may think” (Lucas and Mladenovic, 2007, p. 243). This might be because, as Christensen (2008, p. 21) mentions, “too frequently, first year students encountering accounting study approach the subject with a ‘knowing’ about it which gives an undue weight to the rigour of accounting and virtually no recognition of the ambiguity and malleability of accounting”. Nevertheless, according to Mladenovic (2000, p. 148), “an alignment of teaching methods, curriculum and assessments, and directly challenging students’ perceptions, appears to be more effective in changing students’ negative perceptions than changing teaching methods as the main intervention”.

Alternative methods and interventions have been proposed for improving the teaching/learning of introductory accounting. Some focus on the development of students’ written communication skills and creative writing in order to motivate students and encourage deep approaches to learning (e.g. Almer *et al.*, 1998; English *et al.*, 2004; Barratt *et al.*, 2011; Krom and Williams, 2011). Other methods suggest the use of active learning (e.g. group activities) or research-based processes for developing students’ critical thinking (e.g. Dilley *et al.*, 1983; Murdoch and Guy, 2002; Kelly *et al.*, 2011).

⁷Mladenovic (2000, p. 135) clarifies that, “in this context, ‘negative’ perceptions refer to perceptions that are either inappropriate or unrealistic such as the perception that accounting is, in the main, mechanical and repetitive ‘number crunching’”.

The literature provides further evidence concerning aspects of learning and studying introductory accounting within higher education. For example, both Lucas and Meyer (2004, p. 461) and Lucas (2000) report that non-accounting students feel the learning of accounting as “something to be feared or which caused worry”; whereas accounting students “posses more positive motivational conceptions of accounting” associated with an inherent interest in accounting (Lucas and Meyer, 2004, p. 461). However, Bui and Porter (2010, p. 43) found that “those who had studied accounting at secondary school found the introductory accounting course boring as it essentially repeated material already studied”.

Some studies analysed the impact of gender and subject area on introductory accounting students’ learning behaviour, conceptions of accounting and perceptions of the accounting profession. For example, Lucas (2000) examined both accounting and non-accounting students’ attitudes towards the learning of the subject of accounting. The author reveals that students’ conceptions/misconceptions of accounting differ according to subject area/programme. Marriott and Marriott (2003) investigated the gender impact on students’ perceptions of accounting as a profession. They report that, in contrast with the male students’ perceptions and attitudes, “female accounting students do not find accountants to be boring people and they do not view accounting as a solitary profession” (Marriott and Marriott, 2003, p.124). Moreover, female students see accounting as a profession that is people-focused; still, “they do find accounting to be ‘just a lot of rule memorizing’” (Marriott and Marriott, 2003, p.124). Finally, some other studies focused on students’ understanding of specific accounting concepts, such as the balance sheet and profit and loss account [so as to assess how students approach learning (e.g. Lucas, 1998, 2001)] and the purpose of accounting information [so as to assess its impact on students’ perceptions in different cultures (e.g. Japan and the UK) (Collison *et al.*, 2011)].

3.3. STUDENTS’ APPROACHES TO LEARNING

Research within accounting education has been applying theories and models drawn from educational psychology literature (e.g. approaches to learning and learning styles). In particular, since the late 1990s, there is evidence of an increasing interest in the students’ approaches to learning perspective (e.g. Lucas, 1998). In fact, there have been calls for the investigation of the role of students’ approaches to learning within accounting disciplines (e.g. Beattie *et al.*, 1997; Lucas, 2011), and for the strengthening of educational

strategies that enhance deep approaches to learning (e.g. Lucas 2001; English *et al.*, 2004; Boyce *et al.*, 2012).

Hence, there is a well-established body of research which analyses student learning within accounting education (e.g. Duff, 2002, 2004; Duff *et al.*, 2004; Flood and Wilson, 2008; Ballantine *et al.*, 2008). Among other topics, the validity and reliability of ASSIST has been tested within accounting higher education (e.g. Byrne *et al.*, 2004a, 2009). Several studies have used the short version of ASSIST and its previous versions to assess students' approaches to studying (e.g. Duff, 1999, 2002, 2003, 2004; Duff *et al.*, 2004; Byrne *et al.*, 2002, 2004b, 2009; Ballantine *et al.*, 2008; Flood and Wilson, 2008). Research has also examined the impact of gender on aspects of learning, such as approaches to studying (e.g. Duff, 1999, 2002; Lucas and Meyer, 2005; Ballantine *et al.*, 2008; Flood and Wilson, 2008). These studies are different regarding their aim and scope, thus it is difficult to identify a clear pattern as to the accounting students' approaches to learning. Nevertheless, on the one hand, the literature frequently reports that accounting students tend to adopt either strategic or surface approaches over deep approaches to studying (e.g. Duff, 1999; Flood and Wilson, 2008). On the other hand, there is a general consensus about the need to encourage deep approaches to studying in order to achieve high quality learning in accounting education (e.g. Duff, 1999, 2002; Byrne *et al.*, 2004a).

Similarly, drawing on the approaches to learning literature, influential work has been developed within introductory accounting. In fact, there is a considerable body of work on introductory accounting students' learning behaviour (e.g. Lucas, 1998, 2001 2002; Byrne and Flood, 2004; Byrne *et al.*, 2002, 2009; Byrne *et al.*, 2010), conceptions of accounting (e.g. Lucas, 2000; Mladenovic, 2000; Lucas and Meyer, 2004, 2005), as well as on students' motivations, expectations and preparedness for higher education (e.g. Byrne and Flood, 2005, 2008; Arquero *et al.*, 2009; Byrne *et al.*, 2012).

With the accounting change debate as the background scenario, and in an attempt to provide answers to concerns relating to student attrition, these studies aimed at examining students' experiences of learning accounting and identifying the characteristics of the learning behaviour of those students who are at risk of academic failure. This research also aimed at constructing "a model of student learning, specific to accounting, that is sensitive to individual differences (including gender) and which can be used for inferential purposes

in terms of modelling learning outcomes” (Lucas and Meyer, 2005, p. 184). Among other things, it contributed to “the development of an approaches to studying inventory specifically for introductory accounting”, the *Expectations of Learning Accounting* (ELAcc) inventory (Lucas, 2001, p. 182; Lucas and Meyer, 2005); and the design of a questionnaire on “some of the factors which are antecedents of learning approaches” (Byrne and Flood, 2005, p. 113), the *Motives, Expectations and Preparedness for University* questionnaire.

The impact of gender and subject area has been analysed in these studies. However, there are conflicting results as to its nature and impact on student learning. For instance, Lucas and Meyer (2005) report that female students score higher than male students in most of the transformative (deep) learning processes. Moreover, Lucas and Meyer (2005, p.189) found that “male (business and accounting) students score higher than females on exam focus, which is consistent with lower scores on deep-level processes.” In contrast, Byrne and Flood (2008, p. 205, 208) found that “gender is not significantly associated with first year academic performance”; and posited that “gender differences are no longer an issue in today’s more gender-balanced world of accounting education”.

In addition, it was found that subject area has an impact on student learning, with evidence indicating that “business studies and accounting students enter their studies with quite different perceptions of accounting” (Lucas and Meyer, 2005, p.194). Moreover, accounting students tend to adopt more of a strategic approach when studying introductory accounting, while business students tend to adopt more of a surface approach. These findings draw attention to the importance of the learning environment/context where introductory accounting is taught.

The phenomenon of dissonance is reported within first-year students’ approaches to learning, with students showing “no strong preference for any particular approach” (Byrne *et al.*, 2009, p. 159). Another form of dissonance is reported in Lucas and Meyer (2005, p. 191) “by virtue of a theoretically contra-indicated positive relationship between transformative and accumulative observables”.

Nevertheless, this body of work acknowledges the need for future research to further investigate aspects of learning within introductory accounting subjects. For example, Lucas and Meyer (2005) encourage researchers to explore students’ conceptions

of, and motivations to learn, introductory accounting so as to better understand its impact on students' approaches to learning. In particular, Lucas (2000) stresses the need to examine students' conceptions of accounting and their impact on their motivation and approaches to learning by means of phenomenographic research. Also, students' negative perceptions of accounting have been examined. Drawing both on "Ramsden's contextual Model of Student Learning and Biggs' Alignment Model", Mladenovic (2000, p. 140) explores effective ways of designing introductory accounting modules in order to change students' negative perceptions of accounting. Mladenovic (2000, p. 153) recommends that researchers increase "understanding of the effect of students' negative perspectives of accounting on students' learning approaches and, therefore, on the quality of learning". From a different angle, Byrne and Flood (2005, p. 112) examine what the authors refer to as "the antecedents of learning approaches". Byrne and Flood (2005, p. 112) claim that "the exploration of factors such as students' motivations for entering higher education, their preparedness and their expectations for further study, will enhance educators' understanding of issues which affect students' learning and ultimately their achievements within higher education". In fact, although mostly resulting from secondary school education, there is evidence that "these factors impact on how students engage and approach their learning within higher education" (Byrne *et al.*, 2012, p. 142). This line of research argues that students' motives, expectations and preparedness for higher education affect students' approaches to learning, which, in turn, affect student retention in tertiary education. After the first study was conducted by Byrne and Flood (2005), a few other studies carried on examining this topic of research, replicating and expanding it into other settings (e.g. Byrne and Flood, 2008; Arquero *et al.*, 2009; Byrne *et al.*, 2012). For example, Byrne and Flood (2008, p. 209) examined the academic performance of first-year accounting students at an Irish University and found "that prior academic achievement is the most important variable in explaining first year academic performance". The authors believe that, when students do not seem to be suited or prepared for accounting programmes, extra support should be provided to them at the beginning of their studies in higher education. Overall, Byrne and Flood (2008, p. 209) found that "students with lower academic ability, no prior knowledge of accounting, a lack of confidence in their abilities, and who have no clear career goals, had poor academic performance in first year". However, Byrne and Flood (2008) acknowledge some limitations of their research. For example, the fact that the study used data from just one higher education institution; and

the risk of response bias because confidentiality/anonymity was not guaranteed so as to match students' answers to their academic performance. Then, in order to assess the importance of a range of factors in students' decision to commence their tertiary education within more than one setting, Byrne *et al.* (2012) used the questionnaire developed by Byrne and Flood (2005); and following the suggestion made by Byrne and Flood (2008) so as to replicate the study elsewhere, the authors compared the mentioned aspects in four European countries, namely, the UK, Ireland, Spain and Greece. Byrne *et al.* (2012, p. 142) concluded that "it is important that further studies extend the work to other settings and also examine the process of student learning of accounting in higher education". This overview illustrates how students' approaches to learning research in conjunction with introductory accounting subject matter represent the increasing interest in student learning within accounting education.

4. THE PORTUGUESE CONTEXT

In this section aspects of the Portuguese context will be reviewed taking into consideration the most relevant topics for the purpose of the research. The review will focus on Portuguese higher education and the Bologna process; accounting education in Portugal and introductory accounting courses; as well as studies on students' approaches to learning within the Portuguese context.

4.1. THE PORTUGUESE HIGHER EDUCATION SETTING AND THE BOLOGNA PROCESS

The Portuguese higher education system is composed of universities and polytechnics both from the private and public sectors (Santiago *et al.*, 2006; Sá *et al.*, 2011; Teixeira *et al.*, 2012). Currently, there are 134 higher education institutions: 43% are universities and 57% are polytechnics; 27% are from the public sector and 73% are from the private sector (DGEEC, 2013a). Taking into consideration the academic year of 2011/2012, there were 397,337 students enrolled in Portuguese higher education (DGEEC, 2013b).

According to the Portuguese Ministry of Science, Technology and Higher Education (*Ministério da Ciência, Tecnologia e Ensino Superior*, MCTES), “a main feature of Portuguese higher education has been its consecutive and significant growth for over thirty years – from 30,000 students in the nineteen sixties to over 400,000 in 2001. This dramatic increase began in the early 1970s” (MCTES, 2006, p. 6).

Despite the fact that the oldest university in Portugal, the University of Coimbra (established in 1290), is “one of Europe’s original seats of learning” (Moore, 2011, p. 309); one could say that, “until the mid-seventies, the Portuguese higher education system was clearly an elite system”⁸ (Teixeira *et al.*, 2012), as “before 1973, there were only four universities in Portugal” (Kerklaan *et al.*, 2008, p. 245). However, “awareness of the need to expand offer and access to higher education by the end of the 1960s led to several new

⁸ Even after that period, and based on research conducted in 1995 and 1996, Cabrito (2004, p. 43) claims that, “the Portuguese population is not fairly represented among students in higher education. A strong élitist higher education system is thus highlighted”; furthermore, the author stresses that “the Portuguese government needs urgently to promote conditions allowing for a wider range of people from both the middle and the lower classes to attend a university so as to democratize the higher education system.” Also, Clancy and Goastellec (2007, p. 149) report the “highest levels of inequality in access to higher education” for Portugal, and three other countries, in a 27-OECD country comparison. Recently, the OECD’s report on education in Portugal shows that this pattern still persists (OECD, 2012).

universities and polytechnics being established in the early 1970s” (Kerklaan *et al.*, 2008, p. 245).

Therefore, between that period and until the mid 1990s, Portuguese higher education pursued the diversification of the system [e.g. the establishment of the binary system⁹ (Kyvik, 2004)], leading to its continuous growth and expansion. Several factors contributed to such a dramatic increase, among which, and probably most significantly, the policies and recommendations for education within the Organisation for Economic Co-operation and Development (OECD), and the policies for education and research within the European Union (EU) in order to implement higher education reforms in Europe¹⁰ (e.g. MCTES, 2006).

Afterwards, more precisely, since the academic year of 1996/1997, this pace has slowed down due both to the decline in the number of applicants to higher education (as result of a decrease in birth rates); and the policies implemented to reform Portuguese higher education, aiming at improving its quality and efficiency¹¹ (Santiago *et al.*, 2006).

The massive expansion over the last decades has put great pressure on the Portuguese higher education system and demanded profound changes in terms of its structure (e.g. Correia *et al.*, 2002). The need to justify public funding and to improve the quality of the learning environments and learning outcomes were at the top of higher education policy priorities. Indeed, as quality concerns increased, several quality assessment models were developed focusing on teaching [e.g. conducted by the Portuguese National Council for the Evaluation of Higher Education: *Conselho Nacional de Avaliação do Ensino Superior*] and research [e.g. carried out by the MCTES]. In addition, based on the total quality management literature, research was conducted in order to change the traditional model of governance and management, and develop an excellence model for Portuguese higher education institutions and for institutional assessment (e.g. Rosa *et al.*, 2001, 2003, 2005).

⁹ The binary system encompasses both universities and polytechnic institutions (Santiago *et al.*, 2006).

¹⁰ According to the MCTES (2006, p. 16), “it was only after joining the EU in 1986 that Portugal invested significantly in public higher education with financial support from European funds”.

¹¹ For an overview of the Portuguese higher education system and the Bologna process see, for example, Correia *et al.* (2002), Amaral and Magalhães (2004), Kerklaan *et al.* (2008), Portela *et al.* (2009) and Veiga and Amaral (2012).

Similarly, the Bologna process, with the purpose of building a European higher education area based on a new paradigm in terms of learning and teaching, introduced several changes in the Portuguese higher education system¹². These changes included: “the creation of a comparable structure of academic degrees, mutual recognition of diplomas and course units, the assessment of academic institutions and programs based on common quality standards” (Cardoso *et al.*, 2007, p. 3).

Amongst other aspects¹³, the Bologna reform aimed at creating a student-centered learning environment; increasing student involvement; re-defining the curricula and qualification frameworks; establishing the definition of learning outcomes; supporting higher education as a public good and the lifelong learning goal (Portela *et al.*, 2009; Birtwistle, 2009). These principles contributed to the reconfiguration of Portuguese higher education.

Hence, following the instructions from the MCTES, “higher education institutions could restructure their study programs according to the Bologna principles beginning in 2006/2007, with 2008/2009 as the deadline” (Portela *et al.*, 2009, p. 467). Despite the existence of conflicting views on the effects of the implementation of the Bologna Process (e. g. Veiga and Amaral, 2012), and complaints as to its goals being implemented in ‘form’ rather than ‘in substance’ (e.g. Veiga and Amaral, 2009); “it is impressive that all European countries, both within and outside of the EU, are playing the Bologna game” (Ravinet, 2008, p. 354).

In the case of Portugal, this will to ‘play the Bologna game’ comprises both political and economic/competitive incentives. In fact, according to a former official from the Portuguese ministry for higher education:

“It is always preferable to show the others that you are doing well...of course you know there is no formal sanction, but still, it is a kind of political sanction to the bad pupil in the class...” (Ravinet, 2008, p. 362).

¹² Decree-Law 42/2005, 22nd February 2005; Decree-Law 74/2006, 24th March 2006.

¹³ “The Bologna process is a far-reaching reform that aims at creating by 2010 a European higher education area, expected to foster the mobility of citizens, the employability of graduates, and the overall development of the Continent” (Portela *et al.*, 2009, p. 466).

Additionally, encouraged by competitive advantages, Portuguese higher education institutions implemented the Bologna process (Cardoso *et al.*, 2011). Therefore, in that sense, they have similar learning environments.

Although the financial constraints represent an enormous challenge for higher education (Cardoso *et al.*, 2011), as Rosa *et al.* (2001, p. 1010) point out, “higher education institutions face several multidimensional problems”. Indeed, the broad spread of higher education to the masses increased the systems’ diversity (Veiga and Amaral, 2009), as it brought “not only a larger student population, but also a more diverse one” (Teixeira *et al.*, 2012, p. 338).

To some extent, the educational policies for secondary education have also contributed to this situation. For example, recently, the OECD reported that the graduation rates for secondary education “increased dramatically in 2009 and 2010: more than 50,000 students older than 25 graduated for the first time from upper secondary school in those years, compared to fewer than 10,000 in 2008 and between 2,000 and 3,000 in previous years” (OECD, 2012, p. 2).

Then the report continues, explaining, “this is the result of the “New Opportunities” programme, introduced by the Portuguese Government in 2005, to provide a second opportunity to those individuals who left school early or are at risk of doing so, and to assist those in the labour force who want to acquire further qualifications” (OECD, 2012, p. 2). In addition, it reveals that, in Portugal, in particular, “tertiary education brings substantial economic benefits to individuals” (OECD, 2012, p. 4). This is, indeed, highly appealing for students to continue their studies and go to higher education.

However, degree attainment and student retention in higher education remains a major preoccupation, especially concerning the first year (OECD, 2006, 2012). In fact, first-year retention is a recurring theme in higher education literature (e.g. Soares *et al.*, 2009). To a great extent, this is acknowledged to be the result of poor secondary school preparation/performance. For that reason, the OECD recommends that “policies for improving tertiary education in Portugal must be developed and implemented in close-cooperation with policies for improving performance at the school level” (OECD, 2006, § 1.26).

Another important aspect, concerning the diversity of the system and the student population, is related to the internationalisation of higher education (Kerklaan *et al.*, 2008). Aiming at developing a process of internationalisation, Portuguese higher education has put great effort into attracting students from abroad, especially, those from Portuguese-speaking countries, such as Brazil, Angola, East-Timor, Cape Verde, S. Tome & Principe, Macau and Mozambique (Kerklaan *et al.*, 2008).

In summary, nowadays, students are “recruited from a variety of socio-economic, cultural and educational backgrounds, and [...] differ in the way they experience higher education” (Sá *et al.*, 2011, p. 689). This circumstance increases the complexity of the higher education learning environments and poses problems, especially for the teaching/learning activities within these settings, characterised by the widening participation of large numbers of students with heterogeneous backgrounds.

4.2. ACCOUNTING EDUCATION AND INTRODUCTORY ACCOUNTING

In Portugal, the first evidence of accounting education is documented in the Pombaline era (Rodrigues *et al.*, 2003, 2004; Gomes, 2007; Rodrigues *et al.*, 2007; Gomes *et al.*, 2008, 2013). In 1759, in order to “provide Portuguese merchants with an adequate education in commercial affairs”, the School of Commerce was established as part of a broad educational reform, both on the secondary and university levels, conducted by the Marquis of Pombal (Gomes *et al.*, 2013, p.13). It lasted until the year of 1844.

The School of Commerce contributed to the ‘development of accounting practices and education in Portugal’ (Gomes, 2007, p. 11). Indeed, inspired by other European countries (e.g. France and England), double-entry bookkeeping was then adopted and institutionalised in Portugal; and accounting education was recognised/established as a public good (Gomes, 2007).

During that period in time, accounting education would be essentially delivered through topics/elements taught within the business and commerce disciplinary area. However, in 1888, it started becoming more autonomous, since the Decree of the 3rd of February introduced the discipline of accounting - *Contabilidade Geral e Operações Comerciais*¹⁴ - as a higher education course/module. The establishment of the *Curso*

¹⁴ Elementary Accounting and Commercial Operations.

Superior de Comércio, a degree programme in business/commerce, in 1884, was decisive for that to happen (Gonçalves, 2010).

Almost a century later, in 1979, it was established “a short cycle vocational higher education sub-system” - i.e. the Polytechnic higher education – which was “conceived to respond to manpower shortages in areas such as [...] accountancy” (Correia *et al.*, 2002, p. 458). Thus, polytechnic higher education institutions, namely, “the Higher Institutes of Accounting and Administration [...] maintained almost exclusive control of the training of accountants” (Correia *et al.*, 2002, p. 466).

Currently, this pattern still maintains, as “universities offer academic training, whereas polytechnics offer professionally oriented programmes” (Sá *et al.*, 2011, p. 693). Hence, “universities and polytechnics are still quite different regarding their types of specialization” (Teixeira *et al.*, 2012, p. 349).

As to higher education disciplinary areas (Correia *et al.*, 2002), the ‘social sciences, commerce and law’ area of specialisation encompasses degree programmes such as, economics, management and accounting. Accounting programmes are perceived as being more vocationally-oriented programmes. Therefore, traditionally, accounting programmes have been delivered by polytechnic institutions, while economics and management programmes have been delivered by universities (Correia *et al.*, 2002). However, nowadays, because of institutional competition (Kerklaan *et al.*, 2008; Teixeira *et al.*, 2012), accounting programmes are also being delivered by universities, with the University of Minho being the first university to offer an undergraduate programme in accounting in 2010.

In Portugal, as described in Rodrigues *et al.* (2003), throughout its history, accounting education has received a strong influence from the professional accounting bodies [e.g. *Ordem dos Técnicos Oficiais de Contas* (OTOC) and *Ordem dos Revisores Oficiais de Contas* (OROC)¹⁵]. In recent years, the Bologna process along with the adoption of the the international accounting standards (IAS/IFRS) according to Regulation

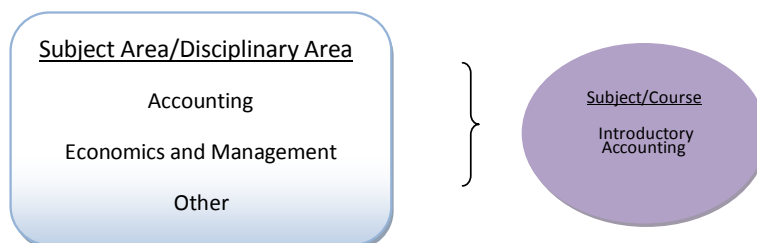
¹⁵ In Portugal, the auditing profession was officially recognised in 1972; and the chartered accountant achieved the status of a certified profession in 1995 (Rodrigues, Gomes and Craig, 2003). Thus, the official professional bodies relating to accounting/accountants and auditing/auditors, exist separately. The OTOC is the official professional body of chartered accountants and the OROC is the official professional body of auditors.

1606/2002, promoted, once more, this influence by means of the intervention of the OTOC in defining accounting education curriculum and course content (e.g. CTOC, 2006). This intervention incorporated IFAC's accounting education guidelines, such as the International Education Standards (IES) for Professional Accountants.

The MCTES (2004) also created working groups according to knowledge areas in order to study each disciplinary area context and point out key aspects and recommendations for the implementation of the Bologna process. In short, concerning accounting area, Almeida (2004) emphasises the role of the professional associations, OTOC and OROC, in the process; and identifies prior knowledge in accounting as an important factor in students' academic success and retention in higher education studies. Thus, Almeida (2004) recommended the establishment of optional accounting courses in the secondary education system so as to provide a point of first contact with the subject of accounting. In which case, secondary schools and higher education institutions should work closely to accomplish the desired outcomes. Relating to the areas of economics and management, Romão (2004) identifies accounting modules as comprising basic knowledge for management programmes and complementary knowledge for economics programmes. As to the other areas of knowledge, and to our best knowledge, no mention for accounting courses was made.

Within accounting education literature, introductory accounting encompasses courses such as elementary accounting and introductory financial accounting (e.g. Lucas, 2000; Collison *et al.*, 2011). In Portugal, these courses are taught in a variety of programmes, such as accounting, economics, management, international business, public administration, marketing, sports management and hotel management (see Figure 4).

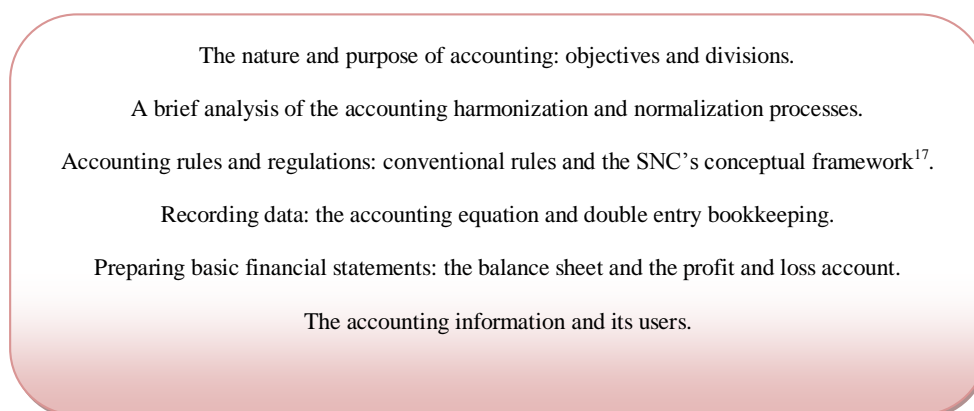
Figure 4 - Introductory Accounting within Subject Area/Disciplinary Area



Accounting courses within programmes such as accounting, economics and management programmes are similar in content and focus as they follow the accreditation requirements of the OTOC for entering the profession¹⁶. That is not the case for other programmes, such as international business, sports management and hotel management. Nevertheless, there are still great similarities between the syllabuses of introductory accounting amongst the different programmes. One could say that it is almost the same syllabus for accounting and non-accounting students.

Furthermore, the syllabus of introductory accounting within Portuguese higher education largely focuses on double-entry bookkeeping according to the Portuguese accounting standards (SNC)¹⁷ and the IAS/IFRS issued by the IASB. Therefore, most students initially approach introductory accounting through the study of double-entry bookkeeping. And, for those who do not continue their studies in accounting, this will be the main aspect they will remember about accounting. Figure 5 presents a typical outline of the course syllabus.

Figure 5 - Introductory Accounting Syllabus: Main Topics



Concerning the regime of attendance, introductory accounting courses are compulsory within accounting, economics and management programmes (Monteiro and Lopes, 2005). It is an optional subject in other programmes, such as international relations.

¹⁶ Anúncio n.º 6060/2010, Diário da República, N.º 125, 2ª Série, 30 de Junho de 2010.

¹⁷ Sistema de Normalização Contabilística (SNC). The Portuguese accounting standardisation system (SNC) is profoundly inspired by the IASB model (Guerreiro, 2011).

¹⁷ The conceptual framework of the SNC was issued in 2009 [Aviso n.º 15652/2009, Diário da República, N.º 173, 2ª Série, 7 de Setembro de 2009] and is based on the Conceptual Framework of the IASB as presented in Regulation 1606/2002 issued by the European Commission in 2002.

In general, introductory accounting is taught in the first year in accounting programmes (and in some cases, economics and management programmes); in the second year in most economics and management programmes; and, in the second or third year in the other degree programmes.

Because of all these aspects and features, introductory accounting is a reflection of the Portuguese higher education context, in the sense that, it is taught to large numbers of students with heterogeneous backgrounds.

4.3. STUDENT LEARNING: STUDENTS' APPROACHES TO LEARNING

Research into learning processes and study methods and strategies has been carried out within Portuguese higher education, for example, by Chaleta (2003), Tavares *et al.* (2003a), Rosário and Oliveira (2006), Duarte (2007), Valadas (2007), Soares *et al.* (2009); Valadas *et al.* (2009, 2010), Chaleta *et al.* (2010) and Almeida *et al.* (2011).

This research has been carried out based on different models of approaches to learning (e.g. Entwistle's model and Biggs's model), focused on more than one disciplinary area simultaneously (Valadas *et al.*, 2010), and examined mainly case studies, such as the cases of the University of Azores (Tavares *et al.*, 2003a), the University of Minho (Soares *et al.*, 2009) and the University of Aveiro (Almeida *et al.*, 2011).

Some of these studies drew on students' approaches to learning perspectives to devise inventories in close connection with, for example, *Approaches to Studying Inventory* (ASI) (Bessa e Tavares, 1998) and *Revised two-factor Study Process Questionnaire* (Rosário *et al.*, 2005); however, adapting them to the Portuguese higher education environment. Other studies created original instruments for the Portuguese context, such as the *Attitudes and Study Behaviour* (Tavares *et al.*, 2003b) and the *Inventário de Processos de Aprendizagem – Universitários* (Duarte, 2007). There are also Portuguese translations of original inventories as, for example, *Approaches and Study Skills Inventory for Students* (ASSIST), developed by Elisa Chaleta and her colleagues (Chaleta *et al.*, 2010).

An overview of some of the most recent studies within students' approaches to learning research follows. For example, Tavares *et al.* (2003b) examined the approaches to studying adopted by students from engineering, management and education (specialization in mathematics) programmes. For that purpose, the authors used a Portuguese version of the

ASI (Bessa e Tavares, 1998). They also analysed gender differences concerning students' approaches to studying. The findings showed that students tended to adopt deeper studying approaches, with female students displaying deeper approaches to studying than the male students. Nevertheless, one should note that the sample was comprised of 72% female students and 28% male students. The results also showed that students with better learning outcomes tended to show deeper approaches to studying. The authors highlight the importance of assisting students in identifying their approaches to studying as a way of improving their learning outcomes, especially when going from secondary school to higher education. Indeed, in the case of first-year students, it is common to assume that, at this point in time, these students already have adequate learning and studying behaviour. Tavares *et al.* (2003b) stress that this may not always be the case.

Rosário and Oliveira (2006) focused on students' perceptions of their learning experiences and approaches to learning. The authors used the instrument *Inventário de Processos de Estudo para universitários*, developed by Rosário and his colleagues (Rosário *et al.*, 2005). The instrument was based on the *Revised two-factor Study Process Questionnaire* (Biggs *et al.*, 2001). Six hundred and forty students were selected from three distinct programmes within an educational area delivered/offered by a private higher education institution in Porto. The findings highlight significant differences between programmes, and show that the students with lower entering marks/grades were the ones displaying higher scores in surface approaches. No significant differences were found concerning gender. The authors identified possible causes affecting students' approaches to learning. For example, Rosário and Oliveira (2006) mention that, the degree programme presenting a preference for surface approaches also had a higher workload in terms of its curricula structure than the other two programmes; that is, it had more modules in the same working schedule. Then, contrary to the general literature, the results reveal that second-year students were the ones displaying higher scores for surface approaches.

Rosário and Oliveira (2006) stress that, despite the fact that the overall results show a preference for deep approaches to learning, the percentage of students scoring on surface approaches was quite significant. This should concern those involved in the educational process. Given the results, and considering that students' approaches to learning are context-dependent, the authors recommend further investigation to assess the factors

affecting students' approaches to learning as well as their perceptions of that particular learning context.

In a previous study, Rosário (1997) used the *Student Process Questionnaire* (Biggs, 1987) to investigate the approaches to learning of students from higher education programmes, such as mathematics, architecture, international relations, law, economics and management. The results revealed that: law students favoured surface approaches to learning; architecture, international relations and management students favoured deep approaches; and economics and mathematics adopted a strategic approach to learning. In addition, students enrolled in the first year adopted more of a surface approach when compared with students in the last year, who adopted more of a deep approach to learning.

In order to investigate whether the categories of description of conceptions of learning reported in the literature (e.g. Marton, 1981; Biggs, 1987) would replicate in the Portuguese context, Duarte (2007) asked 252 geography students to write their views on 'What is learning?', 'How does learning occur?' and 'Where does learning occur?' To identify the categories of description of the conceptions of learning, data was examined through content analysis and the "use of the phenomenographic framework for interpreting data, by 'filtering' it, as much as possible, on the basis of pre-existing categories of conceptions of learning"; however, "reformulating the departure framework on the basis of emerging categories" (Duarte, 2007, p. 784).

Students' approaches to learning were also examined. For that purpose, Duarte (2007) developed a questionnaire, *Inventário de Processos de Aprendizagem – Universitários*, which is an original instrument devised for the Portuguese higher education context. The aim was to assess whether Portuguese students' approaches to learning would replicate those reported in the literature (e.g. deep, surface, strategic/achieving).

The findings provided evidence of a distinction between conceptions of learning as 'a comprehension process' and 'as knowledge accumulation' (Duarte, 2007, p. 786); thus replicating "most conceptions of learning described by phenomenographical research" (Duarte, 2007, p. 781). Nevertheless, the analysis provided evidence of non-predicted conceptions of learning. For instance, 'understanding and applying' emerged representing "learning as the understanding of knowledge and application in the real world" (Duarte, 2007, p. 786). The author posits that "it may be that learning as *understanding* (...) is more

typical of individuals who value a more theoretical kind of knowledge and that learning as *understanding and applying* (...) occurs in people who value more practical application but rooted in comprehension” (Duarte, 2007, p. 792). Finally, the results also “confirm the presence of three well-known approaches to learning: surface, deep and achieving” (Duarte, 2007, p. 781).

Soares *et al.* (2009) investigated the role of students’ academic preparedness at the beginning of their studies in higher education (which was measured by higher education access marks) and students’ learning strategies in their learning academic achievement/outcome (which was measured by grade point average at the end of the first year). The sample was composed of 445 first-year students from the University of Minho. These students were enrolled in three degree programmes, namely, economics, science/technology and humanities. The *Attitudes and Study Behaviour* instrument (Tavares *et al.*, 2003b) was used in order to assess students’ perceptions of study skills and approaches to learning, and determine its effect on their academic achievement. The impact of gender and subject area (academic field) was also examined.

Soares *et al.* (2009, p. 204) concluded that, although gender and subject area differences were found they were not the strongest factors/variables; and “academic preparation was the strongest predictor of first-year academic achievement, and only marginal additional variance was explained by learning strategies”. Nevertheless, according to the authors, further research should focus on gender and subject area. Taking into account the gender and subject area differences, Soares *et al.* (2009, p.210) argue that “students in higher education do not seem to constitute a homogeneous group, and these differences should be addressed if we wish to obtain a more precise idea of what really matters in higher education academic success”.

Valadas *et al.* (2009, 2010) examined the approaches to learning of students from several disciplinary areas at a higher education institution in the south of Portugal. For that purpose, the authors used the short version of ASSIST and developed a Portuguese version of the instrument. In order to investigate the psychometric properties of the inventory, factor analysis was carried out to test its validity within that context. In line with the procedures adopted by other researchers (e.g. Byrne *et al.*, 2004a,b; Tait *et al.*, 1998; Diseth, 2001), Valadas *et al.* (2009, 2010) did not include both ‘conceptions of learning’

and ‘teaching preferences’ in the analysis of the factorial structure of the instrument. In addition, Cronbach alpha coefficient values were calculated to test for the internal consistency of each scale and subscale of the translated version of ASSIST.

Overall, the authors conclude that “the results are consistent with the background theory on approaches to learning”; and posit that “this inventory might represent a valuable research tool for the assessment of approaches to learning among Portuguese higher education students” (Valadas *et al.*, 2010, p. 259). Finally, Valadas *et al.* (2009, 2010) acknowledge the limitations of their study, and argue that an extended analysis of students’ approaches to studying should consider more than one higher education institution, as well as the use of mixed approach research methods, combining quantitative and qualitative research methods.

Almeida *et al.* (2011) studied students’ approaches to learning, conceptions of learning and teaching and course preferences within the context of a chemistry course at the University of Aveiro. Students were enrolled in different programmes, namely, physics, environmental engineering and materials engineering. This study is part of a larger research project on the mentioned aspects of learning, and it draws on quantitative and qualitative research procedures. In this part of the research, data was gathered from 20 students through a variety of methods. For example, data was gathered from semi-structured and audio-recorded interviews; documentary analysis based on course assessments and mini-research projects; and the administration of ASSIST, which also required/included students’ names and their grades. Afterwards, all data was “analysed in relation to each other; this served to triangulate the data and to help improve the credibility of the findings and affirmations made” (Almeida, *et al.*, 2011, p. 157).

The findings showed that “students with higher grades predominantly adopted a deep approach”, and “surface learners lacked the ability to switch learning approaches according to the learning phase or according to the task” (Almeida *et al.*, 2011, p. 161). In addition, the findings show that “learners adopting a deep approach to learning prefer assessment procedures supporting understanding”; while “the students with the lowest grades revealed a preference for a type of teaching that emphasises the traditional transmission of knowledge” (Almeida *et al.*, 2011, p. 162, 165). Furthermore, the majority of students in this study showed that their prior learning experiences led them to favour the

reproduction of knowledge instead of seeking meaning and understanding. Almeida *et al.* (2011, p.166) highlight the diversity among students in higher education and state that “barriers to learning may result from several issues: incorrect perception of the learning environment, lack of awareness about the demands of the learning environment and inadequate approaches to learning”.

5. CONCLUDING REMARKS

This essay reviews the theoretical framework adopted in the thesis, the students’ approaches to learning (SAL), and deepens the understanding of key concepts within research on student learning. In doing so, the literature review illustrates the influential nature of the work developed under this line of research.

It focuses on students’ approaches to learning background and development, as well as examines studies which provide evidence of the relationships between students’ conceptions of learning, their perceptions of the learning environment, their approaches to studying and learning outcomes. The literature also reveals disciplinary area variation regarding aspects of learning and identifies the importance and impact of conceptions of the subject matter on student learning. Nevertheless, there are also reports of unexpected relationships between aspects of learning, such as conceptions of learning and perceptions of the learning environment. Thus, dissonant patterns of learning were analysed as to their causes and consequences.

The essay also examines relevant literature which adopted the students’ approaches to learning perspective within accounting education. In addition, it draws attention to the importance of introductory accounting modules in the learning of accounting, as well as aspects and features of the learning of introductory accounting. Furthermore, the essay reviews the relevant literature on the Portuguese accounting system and the Bologna process. It examines accounting education in Portugal, with a focus on introductory accounting modules. Finally, it reviews the reference studies which adopted the students’ approaches to learning perspective to examine aspects of learning in Portuguese higher education.

In the next chapter Essay 2 is presented.

ESSAY 2

STUDENTS' APPROACHES TO LEARNING: AN EMPIRICAL STUDY

STUDENTS' APPROACHES TO LEARNING: AN EMPIRICAL STUDY

This essay reports an empirical study on students' approaches to learning of Portuguese students of introductory accounting. In particular, the study examines students' approaches to studying, conceptions of learning and preferences for learning environments (e.g. preferences for teaching). The first section presents the part relating to students' approaches to studying and was published elsewhere¹⁸. The second section presents the part relating to students' conceptions of learning and preferences for teaching.

1. THE APPROACHES TO STUDYING OF STUDENTS OF INTRODUCTORY ACCOUNTING

1.1. INTRODUCTION

Research on how students learn and study resulted in the development of study strategy inventories, such as the *Approaches and Study Skills Inventory for Students* (ASSIST), which contributed to the measurement of students' study methods and approaches, providing convincing empirical evidence essential to inform policy decisions in higher education (Entwistle and McCune, 2004).

The increasing interest in the examination and measurement of the study strategies of students in higher education was, in part, due to the "increasing requirements on universities to justify public funding by demonstrating effectiveness and efficiency in their teaching" (Entwistle and McCune, 2004, p. 325). Also, the lifelong learning objective of the EU (e.g. COM, 2001:678, COM, 2008:865) demands further research in order to increase knowledge of learning and studying issues.

Concerning accounting education, the accounting change and the demand for better learning environments has become one of the major accounting policy concerns (e.g. Byrne *et al.*, 2009; Duff, 1999). Indeed, the international accounting bodies and professional organisations, such as the IFAC, frequently stated the idea that "if accounting graduates are to meet the future challenges of the profession, they must develop the knowledge, skills and competencies necessary to become independent, lifelong learners" (Byrne *et al.*, 2004a, p. 451).

In light of this, accounting lecturers and researchers believe that the intended outcome can only be achieved through the establishment/foundation of learning

¹⁸Teixeira, Gomes and Borges (2013), "The Approaches to Studying of Portuguese Students of Introductory Accounting", *Accounting Education: an International Journal*, Vol. 22, No. 2, pp. 193-210.

environments that enhance the development of students' deep learning approaches (Byrne *et al.*, 2004a). However, although the subject matters studied in accounting disciplines within the European member-states currently tend to be similar¹⁹, the learning environments tend to differ and reflect their own cultural inheritance instead (e.g. Richardson, 1994b).

The importance of the introductory disciplines in accounting and the learning environment/context in which accounting students' learning approaches are adopted, have been pointed out by several authors (e.g. Byrne and Flood, 2008; Byrne *et al.*, 2009; Lucas, 2000, 2001; Lucas and Meyer, 2005; Lucas and Mladenovic, 2009).

According to research carried out into students' experiences of learning introductory accounting within the United Kingdom, there seem to exist "two contrasting worlds of accounting", that is, "for most students it is a world of detachment and for only a few it is a world of engagement" (Lucas, 2000, p. 479). In addition, there is evidence that students with different backgrounds (according to subject area) show differences in their approaches to studying (e.g. Entwistle, 2004; Lucas and Meyer, 2004). These findings highlight the need to further research this matter as "an awareness of the nature of the student experience may provide a new way of viewing the introductory accounting curriculum and a new agenda for future research" (Lucas, 2000, p. 479).

In fact, "in order to promote more conceptual, deeper forms of learning, educators need to understand how students approach learning" (Ballantine *et al.*, 2008, p. 190). Therefore, considering the aforementioned aspects, this essay reports the results of research into the approaches to studying of Portuguese students of introductory accounting within higher education. To our knowledge, no prior research has attempted to do so.

Contrary to most studies within this area, data was collected from a wide range of institutions which, according to Apostolou *et al.* (2010, p. 182), needs to be further encouraged as "part of a more comprehensive approach to research in accounting education" that can be of value for the academy. Also, an analysis focusing on students' studying behaviour within the context of accounting disciplines being taught in distinct course areas (e.g. accounting, sports management and hotel management) was carried out

¹⁹ In part, due to the adoption and convergence with the IAS/IFRS issued by the IASB.

so as to widen the knowledge of students' studying behaviour in areas other than accounting and business.

The specific objectives of this study are: to validate the use of the short version of ASSIST within the Portuguese accounting context; to assess the approaches to studying of Portuguese students of introductory accounting in higher education; and to examine whether subject area and gender have any impact on students' studying behaviour.

The study is structured as follows. Firstly, the literature on students' approaches to learning and studying within educational psychology is reviewed focusing on Entwistle's model and the ASSIST instrument. Secondly, the literature on students' approaches to learning and studying in accounting is reviewed, focusing on research that used the ASSIST instrument. Afterwards, the empirical study is presented along with the research methodology and the analysis of the results. Finally, the conclusions and suggestions for future research are presented.

1.2. STUDENTS' APPROACHES TO LEARNING AND STUDYING

Students' approaches to studying, conceptions of learning and learning styles are concepts that have emerged from educational psychology research over the last 30 years. Research into student learning has investigated, among other aspects, students' conceptions of learning and identified similarities and differences in the way students learn and study (e.g. Biggs *et al.*, 2001; Diseth *et al.*, 2010; Entwistle *et al.*, 1979; Entwistle and Tait, 1990, 1993; Entwistle and Entwistle, 1991; Entwistle *et al.*, 2000; Entwistle and Peterson, 2004; Marton and Säljö, 1997; McCune and Hounsell, 2005; Meyer, 1991; Meyer *et al.*, 1994; Kember, 1996; Prosser *et al.*, 1994; Ramsden, 1979, 1983; Richardson, 1993, 1994a, 2007, 2011; Richardson and Woodley, 2001; Säljö, 1979; Tait and Entwistle, 1996; Tait *et al.*, 1998; Trigwell *et al.*, 1999).

This research focused on teaching and learning in higher education and provided general guidance regarding several issues, such as assessment and specific types of learning, thus enhancing understanding on teaching and learning issues (Entwistle, 2004).

As the research has progressed the existence of other key factors has been highlighted in the literature. For example, with reference to advances in this field of research, Entwistle and McCune (2004, p. 340) point out that "there is a lack of emphasis on emotion in learning", and, while the study strategy inventories reflect in some of the scales the positive forms of emotion in learning, such as academic interest and motivation,

“only a negative form – anxiety or fear of failure – has been developed explicitly”.

Despite the limitations of this area of research, namely regarding the methodologies and the study strategy inventories (Entwistle and McCune, 2004), it made several contributions as it improved student counselling and informed educators and higher education institutions (as well as the educational and political environment) that “the whole teaching-learning system affects the quality of student learning” (Entwistle, 1991, p. 202).

1.2.1. Entwistle’s Model and the ASSIST Instrument

In an attempt to identify students’ conceptions of learning and describe how they learn and approach studying, Entwistle and his colleagues developed a model that focuses on the influences on student learning and studying ‘approaches’ and ‘strategies’ rather than ‘styles’, therefore, taking into account the role of previous experiences and the context in which students learn²⁰ (Coffield *et al.*, 2004). According to Lizzio *et al.* (2002, p. 28), “Ramsden and Entwistle (1981) were the first to empirically establish a relationship between approaches to learning and perceived characteristics of the academic environment”.

In contrast with “learning style” models, “approaches to learning” are not rigid or fixed as they change according to the students’ perception of the requirements of the task as well as the learning environment. Also, “numerous studies have shown correlations between students’ deeper approaches to learning and higher quality learning outcomes” (Trigwell *et al.*, 1999, p. 57).

Following this perspective on learning, previous research has examined, essentially, the relationship between (i) students’ learning approaches and students’ perception of the learning environment (ii) students’ learning approaches and academic achievement, and (iii) students’ evaluation of teaching and perception of the learning environment and the academic outcomes.

Entwistle’s model is regarded as one of the most influential models of approaches to learning (e.g. Coffield *et al.*, 2004), and the ASSIST instrument has been widely used to assess students’ learning approaches, particularly in the UK (e.g. Ballantine *et al.*, 2008) and in its previous versions, the Approaches to Studying Inventory (ASI) and the Revised

²⁰Although the literature often focuses on the traditional contrast between ‘learning style’ models and the ‘approaches to studying’ theory, some argue for a “rapprochement between these two traditions” (Richardson, 2011, p. 288).

Approaches to Studying Inventory (RASI). This area of research emerged during the 1970s and has been led for over 30 years in the UK by Noel Entwistle at the University of Edinburgh (Coffield *et al.*, 2004).

Concerning the study strategy inventories, advances in conceptualisation introduced additional aspects of studying (e.g. the concept of strategy) which led to the revision of the previous versions of the ASSIST instrument (Entwistle, and McCune, 2004). The latest version of ASSIST aims at assessing students' (i) conceptions of learning (Part 1/A), (ii) approaches to studying (Part 2/B), and (iii) preferences for different types of course and teaching (Part 3/C). The approaches to studying section (Part 2/B) contains 52 statements/items that are combined into 13 sub-scales, which, in turn, are combined into three main scales, representing the deep approach, the strategic approach and the surface approach (ASSIST, 1997).

Elements of the deep approach include: (i) the intention to understand ideas for oneself, (ii) relating ideas to previous knowledge and experience, (iii) looking for patterns and underlying principles, (iv) checking evidence and relating it to conclusions, (v) examining logic and argument cautiously and critically, (vi) become actively interested in the course content (Entwistle, 1997, p. 19).

Elements of the strategic approach include: (i) the intention to achieve the highest possible grades, (ii) putting consistent effort into studying, (iii) finding the right conditions and materials for studying, (iv) managing time and effort effectively, (v) being alert to assessment requirements and criteria, (vi) gearing work to the perceived preferences of lecturers (Entwistle, 1997, p. 19).

Elements of the surface approach include: (i) the intention to cope with course requirements, (ii) studying without reflecting on either purpose or strategy, (iii) treating the course as unrelated bits of knowledge, (iv) memorising facts and procedures routinely, (v) finding difficulty in making sense of new ideas presented, (vi) feeling undue pressure and worry about work (Entwistle, 1997, p. 19).

Apart from criticism regarding the fact that the model does not consider the impact of factors, such as culture or "gender as a social variable" (e.g. Richardson, 1993, p. 3; Richardson, 1994b), it attempts to reflect the complexity of environmental factors that affect students' approaches to learning and studying (Coffield *et al.*, 2004). In addition,

there is evidence that suggests that ASSIST produces scores of satisfactory measurement properties when administered in different cultural contexts (e.g. Diseth, 2001; Entwistle *et al.*, 2000; Valadas *et al.*, 2010) and within specific subject areas, such as accounting and business areas (e.g. Ballantine *et al.*, 2008; Byrne *et al.*, 2004; Byrne *et al.*, 2009).

1.3. STUDENTS' APPROACHES TO LEARNING AND STUDYING IN ACCOUNTING EDUCATION

Research into students' approaches to learning and studying, and conceptions of learning, has contributed to the assessment of accounting students' methods and study approaches (e.g. Ballantine *et al.*, 2008; Byrne *et al.*, 1999; Byrne *et al.*, 2002, 2009; Duff, 1999, 2002, 2003, 2004; Duff *et al.*, 2004; Flood and Wilson, 2008; Jackling, 2005; Lucas, 2000, 2001; Lucas and Meyer, 2005).

The validity and reliability of the ASSIST instrument has been tested within the accounting higher education context (e.g. Byrne *et al.*, 2004a, 2009) and several studies have used the short version of ASSIST and its previous versions to measure students' approaches to studying (e.g. Ballantine *et al.*, 2008; Byrne *et al.*, 1999, 2002, 2009; Duff, 1999, 2002, 2003, 2004; Duff *et al.*, 2004; Flood and Wilson, 2008). Research has also examined the impact of gender on learning and approaches to studying (e.g. Ballantine *et al.*, 2008; Duff, 1999, 2002; Flood and Wilson, 2008; Lucas and Meyer, 2005). Duff (2002, p. 1008) states that "gender is clearly an important variable for consideration in the promotion of deep learning, as the identification of gender differences would imply differential teaching strategies for men and women".

According to Byrne *et al.* (2004a), as these studies are different regarding their aim and scope, it is difficult to have a clear idea or pattern concerning the accounting students' learning approaches. However, the literature frequently reports that accounting students tend to adopt either strategic or surface approaches over deep approaches to studying (e.g. Duff, 1999; Flood and Wilson, 2008). In some cases, strategic approaches to studying prove to be dominant (e.g. Byrne *et al.*, 2009; Flood and Wilson, 2008).

In addition, research provides evidence that "there is a significant positive relationship between the deep approach and the total assessment mark and a highly significant positive relationship between the strategic approach and the total assessment mark"; as well as a highly significant negative relationship between surface approaches and assessment marks (Byrne *et al.*, 2002, p. 39).

Accounting research reveals a general consensus towards the need to encourage deep approaches to studying in higher education (e.g. Byrne *et al.*, 2004a; Duff, 1999, 2002). In fact, “finding ways of promoting deep learning is an increasingly important topic in higher education” (Duff, 1999, p. 108). Also, “the accounting profession, which provides a career path for many accounting graduates, expects future members to demonstrate knowledge and competencies associated with high quality learning and outcomes” (Byrne *et al.*, 2002, p. 30). Therefore, the understanding of concepts “is a critical factor in determining the quality of the learning outcome” (e.g. Byrne *et al.*, 2002, p. 27).

1.4. EMPIRICAL STUDY

In describing the empirical study, the Portuguese context and the aim of the study will be described followed by information relating to the research instrument and data collection, as well as the descriptive analysis. The statistical results and analyses subsection will focus on the reliability and validity of the short version of ASSIST and on students’ approaches to studying within introductory accounting, examining the impact of subject area and gender.

1.4.1. The Portuguese context and the aim of the study

Within Portuguese higher education, research into learning processes, study methods and strategies has been carried out, among others, by Chaleta (2003), Tavares *et al.* (2003a), Rosário and Oliveira (2006), Valadas (2007), Duarte (2007), Chaleta *et al.* (2010) and Valadas *et al.* (2010).

These studies were developed under different models (e.g. Entwistle’s model and Biggs’s model), used different study strategy inventories (e.g. Duarte, 2007) and have focused on the higher education context in general, without drawing attention to any specific subject area. In addition, they were mainly case studies, as the case of a public university located in the south of Portugal (Valadas *et al.*, 2010) and another in the Islands, the University of Azores (Tavares *et al.*, 2003a).

As an example of what was done in these studies, Valadas *et al.* (2010) gathered data from a sample of Portuguese graduates from several academic areas, including Economics and Management (which are the equivalent to British business, management and finance area/courses), from a public university located in the south of Portugal. The

authors examined the validity and reliability of the short version of ASSIST in that sample and concluded that, “ASSIST seems to be an instrument that will yield valid and reliable scores for assessing the learning approaches of students from different courses and years” (Valadas *et al.*, 2010, p. 269).

To our knowledge, there has been no attempt to date to assess the approaches to learning and studying in higher education of Portuguese accounting students. However, as pointed out by Lucas (2001), research into approaches to learning within specific knowledge areas would give useful insights into patterns of behaviour concerning students’ learning approaches.

The importance of the introductory disciplines of accounting has been highlighted by several authors (e.g. Byrne and Flood, 2008; Byrne *et al.*, 2009, Duff, 2004; Lucas, 2000, 2001; Lucas and Meyer, 2005; Lucas and Mladenovic, 2009). As Byrne *et al.* (2009, p. 159) explain, introductory accounting is “important in developing students’ understanding and interest in accounting regardless of their future study and career intentions”. Also, Lucas (2000, p. 502) suggests that “the teaching of introductory accounting should seek to acknowledge, and enter into, the students’ own worlds of accounting”.

Considering the aforementioned aspects, the present study aims at contributing to the literature that seeks to investigate students’ behaviour towards learning and studying within the accounting area (e.g. Ballantine *et al.*, 2008; Byrne *et al.*, 2002, 2009; Lucas, 2001). In particular, it uses the short version of the ASSIST instrument in order to measure the approaches to studying of Portuguese students of introductory accounting within Portuguese higher education.

The Portuguese education system is composed of universities and polytechnics from both the private and public sectors (e.g. Teixeira *et al.*, 2012). The current study examines data collected from a sample of students at five higher education institutions, universities and polytechnics from both these sectors, in the north of Portugal.

As the Portuguese higher education institutions have all implemented the requirements of the Bologna process, the students from all five institutions were exposed to a similar learning environment.

The introductory courses in accounting considered in the current study are taught in a variety of discipline areas, namely, accounting, economics, management, international business, sports management and hotel management. The accounting courses within programmes in disciplines such as accounting, economics and management follow the accreditation requirements of the Portuguese Institute of chartered accountants (OTOC) for entering the profession. Thus, the introductory disciplines of accounting within these three discipline areas are similar in content and focus. That is not the case for the accounting courses delivered as part of programmes in international business, sports management and hotel management.

According to the literature, there is evidence that study and learning behaviour varies according to the course/subject area (Entwistle, 2004). In addition, the literature indicates that “gender is a significant differentiating variable in the case of many social phenomena” (Richardson, 1993, p. 4) and might influence students’ learning and studying behaviour (e.g. Duff *et al.*, 2004; Flood and Wilson, 2008; Richardson, 2007). Thus, the current study also examines whether there is any difference in students’ studying behaviour according to subject area and gender. In order to give a better insight into subject area specificity, the analysis focused on three groups of course area: (i) accounting, (ii) economics and management, and (iii) other courses.

1.4.2. Research instrument and data collection

The ASSIST instrument developed by Entwistle and his colleagues (version available at the ETL Project web site²¹) was used to measure the approaches to studying of Portuguese students of introductory accounting in higher education. Considering the purpose of the study, the analysis makes use of the short version of ASSIST, specifically the part concerned with approaches to studying (Part 2/B).

When permission to use the inventory was granted by Professor Noel Entwistle in October 2011, he suggested that the Portuguese version of the instrument be used (Chaleta *et al.*, 2010). Professor Chaleta was contacted and permission was obtained to use this version of the instrument.

²¹ ETL Project, Centre for Research on Learning and Instruction, University of Edinburgh, <http://www.etl.tla.ed.ac.uk/publications.html>.

ASSIST was distributed to 430 students of introductory accounting from across the five institutions. The questionnaire acknowledged the source as well as the authors of the translated version. Apart from the specific instructions for answering the questionnaire, the purpose of the study was presented and assurances of confidentiality of the answers were given. The students' participation was voluntary and this was stated both verbally, by lecturers in class, and in the questionnaire they completed. Data was collected in class during the last three weeks of November 2011 (weeks eight, nine and ten of the 15/16-week semester). This process was closely followed up by the members of the research team.

1.4.3. Descriptive analysis

Of the 430 questionnaires collected, 386 were completed²². 52% were female students and 48% were male students. The mean age of the female students was 21.3 years; for the male students, it was 22.4 years. Ninety six percent of the respondents were Portuguese nationals, with the remainder from other countries, namely, Cape Verde, Mozambique, Brazil, Spain, Romania, Venezuela and Switzerland. In terms of courses, 45% were from accounting, 39% from economics and management, and 16% from other courses. Seven per cent were from Institution 1, 28% Institution 2, 21% Institution 3, 26% from Institution 4, and 18% from Institution 5.

Introductory accounting courses are taught in the first year of accounting programmes and in some economics and management programmes but are otherwise taught in the second year (most economics and management courses) or in either second or third year in the other courses. Accordingly, around 74% of the sample attend introductory accounting in the first year, and the rest of the sample attend introductory accounting in the second and third years of the course.

1.4.4. Results and analyses

The statistical procedures and data analyses were carried out using SPSS 19 and the scoring procedure for the questionnaire can be found in ASSIST (1997).

²² This corresponds to the number of complete questionnaires for approaches to studying only (Part 2/B).

Students respond to the statements/items according to a five-point Likert scale, varying from 1 (definitely disagree) to 5 (definitely agree). The 13 sub-scale scores are calculated by summing the responses on the statements/items belonging to each sub-scale (four items each). Then, scores on the three main scales (i.e. the approaches to studying) are calculated by summing the sub-scale scores that contribute to each of the three approaches to studying (four sub-scales/each relating to deep and surface approaches, and five sub-scales relating to strategic approaches), and dividing each total by the number of constituent subscales. Therefore, each scale score varies from 4 to 20 points. Table 1 presents the descriptive statistics.

Table 1 - Descriptive Statistics for ASSIST Scales and Subscales

Approaches to Studying	Mean	Std. Dev.	Skewness	Kurtosis
Deep Approach	14.65	1.71	-0.14	1.16
Seeking meaning	15.13	2.02	-0.20	0.61
Relating ideas	13.88	2.19	0.03	0.69
Use of evidence	15.20	2.08	-0.26	1.42
Interest in ideas	14.40	2.44	-0.27	0.08
Strategic Approach	14.89	1.77	-0.20	0.14
Organised studying	13.84	2.48	-0.11	-0.26
Time management	14.34	2.81	-0.41	0.08
Alertness to assessment demands	14.84	2.06	-0.22	0.16
Achieving	15.65	2.32	-0.51	0.30
Monitoring effectiveness	15.80	2.01	-0.96	2.97
Surface Approach	12.62	1.96	0.10	-0.19
Lack of purpose	10.56	3.09	0.39	0.22
Unrelated memorising	12.54	2.49	-0.30	0.16
Syllabus boundness	13.19	2.55	0.01	-0.26
Fear of failure	14.21	2.93	-0.22	-0.38

1.4.4.1. The reliability and validity of the short version of ASSIST

In order to validate this use of the short version of ASSIST (regarding approaches to studying) with Portuguese students of accounting, the reliability and validity of the instrument was tested.

The internal reliability of the three scales and 13 sub-scales was measured using Cronbach alpha coefficients. “Cronbach alpha coefficients are used to indicate the internal

reliability of psychological measures – the extent to which the defined scales contain items which are internally consistent and coherent” (Entwistle *et al.*, 2000, p. 37).

Table 2 shows the Cronbach alpha coefficient values along with those reported in four other studies: (1) Portugal (Valadas *et al.*, 2010); (2) Norway (Diseth, 2001); (3) Ireland and USA (Byrne *et al.*, 2004a); (4) Ireland (Ballantine *et al.*, 2008).

Table 2 - Cronbach Alpha Coefficient for ASSIST Scales and Subscales

Approaches to Studying	Portugal	Portugal	Norway	Ireland	USA	Ireland	
	N= 386	(1) N= 566	(2) N=573	(3) N= 437	(3) N= 298	(4) N= 286 T0	T1
Deep Approach	0.78	0.81	0.81	0.84	0.82	0.81	0.85
Seeking meaning	0.51	0.51	0.49	0.63	0.55	0.66	0.67
Relating ideas	0.47	0.54	0.62	0.59	0.59	0.55	0.59
Use of evidence	0.59	0.59	0.49	0.59	0.49	0.63	0.64
Interest in ideas	0.59	0.56	0.64	0.69	0.67	0.54	0.70
Strategic Approach	0.81	0.83	0.81	0.87	0.87	0.86	0.88
Organised studying	0.55	0.51	0.59	0.63	0.55	0.54	0.50
Time management	0.63	0.65	0.72	0.74	0.77	0.76	0.76
Alertness to assessment demands	0.47	0.40	0.41	0.63	0.56	0.67	0.70
Achieving	0.58	0.67	0.66	0.68	0.63	0.65	0.67
Monitoring effectiveness	0.55	0.58	0.51	0.61	0.61	0.52	0.63
Surface Approach	0.66	0.79	0.70	0.83	0.80	0.80	0.81
Lack of purpose	0.59	0.54	0.68	0.75	0.68	0.73	0.77
Unrelated memorising	0.48	0.73	0.57	0.59	0.57	0.53	0.59
Syllabus boundness	0.47	0.62	0.57	0.64	0.55	0.61	0.57
Fear of failure	0.57	0.63	0.57	0.74	0.72	0.77	0.77

The values for the approaches to studying scales range from 0.66 to 0.81, indicating appropriate internal reliability (Tait and Entwistle, 1996). The sub-scale values range from 0.47 to 0.63, indicating adequate reliability for this stream of research²³ (e.g. Diseth, 2001; Entwistle *et al.*, 2000; Flood and Wilson, 2008; Tait and Entwistle, 1996; Valadas *et al.*, 2010).

²³ Traditionally Cronbach alpha values <0.5 are considered unacceptable. However, when in the presence of psychological constructs, values lower than the traditional criteria can be expected (e.g. Kline, 1994; 1999; Valadas *et al.*, 2010). In addition, within the accounting field, Flood and Wilson (2008, p. 231) reported Cronbach’s alpha values ranging from 0.47 to 0.80, “which, in the main, proved to be very satisfactory”.

As in Diseth (2001) and Valadas *et al.* (2010) some of the values for the sub-scales fall in the interval between 0.40 and 0.51, but they are considered sufficient according to the small number of items included in each sub-scale (Diseth, 2001; Valadas *et al.*, 2010). However, it is interesting to note that there are two common aspects between the current study and the studies of Diseth (2001) and Valadas *et al.* (2010). These are, (i) the students are from cultural contexts different from the British context, in which the ASSIST instrument was developed, and (ii) the studies have used translated versions of the questionnaire. Thus, the results might have been influenced by cultural issues (e.g. Richardson, 1994b) or the translation process itself ²⁴(e.g. Baker, 1995; McKee *et al.*, 1992).

On the whole, the results show acceptable internal reliability for scales of their length and type (Entwistle *et al.*, 2000, p. 37) and are similar to other studies that focused on the validation of the ASSIST instrument [e.g. Entwistle *et al.*, 2000; Diseth, 2001; Byrne *et al.*, 2004a; Ballantine *et al.*, 2008; Flood and Wilson, 2008; Valadas *et al.*, 2010].

Factor analysis was carried out to group variables with similar characteristics, exploring the factor structure of ASSIST sub-scales and validating the use of the instrument in this particular context.

The Kaiser-Meyer-Olkin (KMO) and Bartlett's test was carried out. The result of the KMO=0.829 shows that the sample is adequate to proceed with the factor analysis. Bartlett's test of sphericity is significant ($p=0.000$), which means that the correlation matrix is not an identity matrix. Thus, correlation exists between some of the variables.

The communality values are acceptable as only two of the values are less than 0.5 (see Table 3). The analysis of the total variance explained by factor shows that the three first factors explain 59% of the total variance. The components were extracted using the principal component analysis extraction method²⁵. Then, using the Kaiser criterion, the scree plot and parallel analysis, three components were selected.

²⁴The translation process and its problems is a theme widely discussed within translation studies literature (e.g. Baker, 1995). The literature acknowledges that there are no 'perfect' translations as, among other aspects, languages have different structures. That is the case of the English language and the Portuguese language.

²⁵ Both skewness and kurtosis values and the Kolmogorov-Smirnov test results reject the hypothesis that the sub-scales have normal distribution. Therefore, the principal component method was used.

The rotated component factor matrix shows the loadings of the 13 variables on the three factors extracted after rotation to an oblique simple structure using a *direct oblimin rotation* (see Table 3). Thus, as expected, Factor I represents the deep approach, Factor II represents the surface approach, and Factor III represents the strategic approach.

Table 3 - Factor Loadings for ASSIST Subscales and Communalities

Approaches to Studying	Factor I	Factor II	Factor III	Communalities
Deep Approach				
Seeking meaning	0.716	-0.015	0.066	0.560
Relating ideas	0.910	-0.006	-0.212	0.697
Use of evidence	0.760	0.039	0.118	0.675
Interest in ideas	0.649	-0.021	0.118	0.505
Strategic Approach				
Organised studying	0.099	0.071	0.790	0.699
Time management	-0.010	-0.116	0.800	0.665
Alertness to assessment demands	0.267	0.214	0.518	0.494
Achieving	0.263	-0.074	0.591	0.574
Monitoring effectiveness	0.500	-0.100	0.323	0.514
Surface Approach				
Lack of purpose	-0.071	0.708	-0.238	0.609
Unrelated memorising	-0.045	0.815	0.077	0.653
Syllabus boundness	0.107	0.532	-0.350	0.425
Fear of failure	-0.009	0.731	0.331	0.592

The analysis of factor loadings indicates that the sub-scale ‘monitoring effectiveness’ is substantially loaded both on strategic and deep approaches (e.g. Byrne *et al.*, 2004a; Diseth, 2001; Entwistle *et al.*, 2000; Flood and Wilson, 2008; Valadas *et al.*, 2010), while ‘fear of failure’ and ‘syllabus boundness’ are loaded both on the strategic approach and surface approaches.

As to the correlation between factors (see Table 4), Factor I and Factor III are positively correlated while Factor II and Factor III are negatively correlated; which is in line with previous research (e.g. Byrne *et al.*, 2004a; Diseth, 2001; Valadas *et al.*, 2010).

Table 4 - Correlations between Factors

	Factor I	Factor II	Factor III
Factor I	1	0.038	0.457
Factor II	0.038	1	-0.101
Factor III	0.457	-0.101	1

Considering the satisfactory statistical measures reported in the current study, the results validate the use of the short version of the ASSIST instrument concerning approaches to studying, within the accounting context in Portuguese higher education.

1.4.4.2. Students' approaches to studying within introductory accounting

Paired sample t-tests were carried out to test for any differences between approaches for the whole sample (see Total in Table 5), and significant differences were found between (i) deep and strategic approaches ($p=0.002$), (ii) deep and surface approaches ($p=0.000$), and (iii) strategic and surface approaches ($p=0.000$). However, considering the sample size, one should bear in mind that the significant differences detected by the statistical tests might be influenced by the large sample size. These results suggest that students of introductory disciplines of accounting favour a strategic approach over either deep or surface approaches to studying. The results are consistent with the literature that indicates that accounting students do not favour a deep approach in their study (e.g. Byrne *et al.*, 2009, Duff, 1999; Flood and Wilson, 2008). An analysis of variance (ANOVA) was conducted in order to compare the mean scores of the three approaches to studying in the five institutions, and no significant differences were found except for the strategic approach ($p=0.006$), where institution 1 differs from the other institutions. This seems to be in line with the assumption that students from all five institutions were exposed to similar learning environments, as institution 1 represents 7% of the whole sample. An ANOVA with two factors was carried out to analyse the cross effect of subject area and gender, as well as the isolated effect of these variables on each approach. Results show that only in the deep approach does the cross effect of gender and subject area have an impact ($p=0.014$). The isolated effect of gender has impact on both deep approaches ($p=0.09$) and strategic approaches ($p=0.000$). The isolated effect of subject area has impact on both deep approaches ($p=0.008$) and strategic approaches ($p=0.037$).

Going into further detail, the next subsections explore the isolated effect of subject area and gender.

1.4.4.3. The impact of subject area

Considering the previous classification according to subject area courses, Table 5 presents the mean scores for the three approaches to studying in the three groups of course area and also for the total sample. ANOVA was carried out to test for differences in approaches to studying between course areas. Paired sample t-tests were carried out to test for any differences within each course area.

Table 5 - Mean scores and standard deviation of ASSIST Scales in the Three Groups

Approaches to Studying	Accounting		Econ/Management		Other		Total	
	N= 174		N= 152		N= 60		N= 386	
	M	SD	M	SD	M	SD	M	SD
Deep Approach	14.38	1.76	14.87	1.59	14.92	1.76	14.65	1.706
Strategic Approach	14.70	1.78	15.05	1.72	15.07	1.84	14.89	1.769
Surface Approach	12.83	1.94	12.51	1.96	12.30	1.99	12.62	1.961

When analysing the mean scores for the approaches to studying between the three groups of course area, the results suggest that accounting students from accounting courses show more of a surface approach in their study behaviour, as well as less deep and strategic approaches when compared with students from the other groups. However, only the differences relating to the deep approach were found to be significant, as the ANOVA test showed a significant difference between courses for the deep approach ($p=0.015$) caused by accounting courses.

For the accounting course, significant differences were found between (i) deep and strategic approaches ($p=0.001$), (ii) deep and surface approaches ($p=0.000$), and (iii) strategic and surface approaches ($p=0.000$). These results suggest that accounting students show a preference for a strategic approach over either deep or surface approaches.

For the economics and management courses, significant differences were found between (i) deep and surface approaches ($p=0.000$), and (ii) strategic and surface approaches ($p=0.000$). These results suggest that economics and management students favour deep or strategic approaches over a surface approach.

As to the other courses, significant differences were also found between (i) deep and surface approaches ($p=0.000$), and (ii) strategic and surface approaches ($p=0.000$). This suggests that students of introductory disciplines of accounting in other courses favour deep or strategic approaches over a surface approach.

The results are consistent with those of the literature, which mentions that subject area has an influence on study and learning behaviour (e.g. Entwistle, 2004; Lucas, 2001).

1.4.4.4. The impact of gender

Table 6 presents the mean scores for the three approaches to studying according to gender. Independent sample t-tests were carried out to test for any differences between male and female students, and only the differences relating to the strategic approach were found to be significant ($p=0.000$). Paired sample t-tests were carried out to test for any differences within female students and within male students.

Table 6 - Mean Scores of ASSIST scales for Female and Male Students

Approaches to Studying	Accounting		Econ. Managem.		Other		Total	
	Mean scores		Mean scores		Mean scores		Mean scores	
	F= 105	M= 69	F= 73	M= 79	F= 24	M=36	F=202	M= 184
Deep Approach	14.37	14.38	14.73	14.99	15.67	14.42	14.66	14.65
Strategic Approach	14.91	14.37	15.58	14.55	15.71	14.64	15.25	14.50
Surface Approach	12.84	12.83	12.57	12.46	12.79	11.97	12.73	12.50

Significant differences were found between male and female students' mean scores relating to strategic approaches for (i) accounting courses ($p=0.051$), (ii) economics and management courses ($p=0.000$), and (iii) other courses ($p=0.027$). There were also significant differences between the male and female students' mean scores for deep approaches in the other courses ($p= 0.006$).

For the whole sample, female students tended to adopt a strategic approach over deep and surface approaches while male students tended to adopt both deep and strategic approaches over surface approaches. These results seem to be consistent with those reported in the literature, which suggests that gender has an impact on students' learning and studying behaviour (e.g. Duff, 1999; Duff *et al.*, 2004; Flood and Wilson, 2008).

Nevertheless, a more in-depth analysis could be carried out in order to explore the existence of other factors responsible for the gender differences: as gender is likely to be a proxy for socialization experiences, different factors can be considered, such as ethnic or cultural factors, levels of intrinsic motivation and students' maturity (e.g. Arthur and Everaert, 2012). Indeed, there are studies that examine the complexity expressed by the gender dimension and carry out different types of analysis, such as biological gender and constructed gender (Paver and Gammie, 2005).

1.5. CONCLUDING REMARKS

The study reported in this essay contributes to the stream of research that focuses on accounting students' approaches to studying. Its aim was to develop a more informed understanding of students' approaches to learning within introductory accounting subject matters, the importance of which has been highlighted in the literature (e.g. Byrne *et al.*, 2009, Lucas, 2000, 2001; Lucas and Meyer, 2005).

In doing so, it focused upon the study behaviour of Portuguese students within the context of introductory accounting subjects being taught in other discipline areas. This widens our knowledge and perception of student study behaviour in different discipline areas where accounting (especially introductory accounting) may be taught, something that is particularly relevant given the evidence from the literature which suggests that students with different subject area backgrounds show differences in their approaches to studying (e.g. Entwistle, 2004; Lucas and Meyer, 2004; McCune and Hounsell, 2005). Subject area and gender were also investigated for evidence of impact upon the approaches to studying adopted.

The study contributes to the literature in a number of ways. The results validate the use of ASSIST with students of accounting in Portuguese higher education and strengthen the argument of its cross-cultural applicability, adding weight to the use of translated versions of this instrument elsewhere. The study considered a diversified range of programmes (accounting and non-accounting) from five higher education institutions where introductory accounting is taught, so providing a wider analysis concerning the studying behaviour of the students. Consistent with the results of Flood and Wilson (2008) and Byrne *et al.* (2009), students of introductory accounting within Portuguese higher education show a preference for a strategic approach to studying over either a deep or a surface approach. This circumstance seems to be contrary to the learning objectives

supported by higher education and professional organisations (e.g. Ferguson *et al.*, 2005; Byrne *et al.*, 2009) in which great emphasis is placed on the need to increase the adoption of deep approaches to learning and studying by students. In line with the literature, which indicates that subject area has an impact upon the approaches adopted to learn and to study (e.g. Entwistle, 2004; Lucas, 2001), the results show a significant difference in the extent to which the deep approach is adopted across the discipline areas in which the introductory accounting courses were delivered. This finding stresses the need to consider the discipline area of the programme in which accounting topics are taught. Significant differences were found according to gender, with female students adopting less deep approaches than male students, a result which is consistent with those reported in the literature: gender does have an impact on student learning and studying behaviour (e.g. Duff, 1999; Duff *et al.*, 2004; Flood and Wilson, 2008). Finally, although study strategy inventories contribute greatly to the measurement of the approaches to learning and studying of students in higher education, Entwistle and McCune (2004, p. 342) acknowledge that “the limitations of this methodology have to be accepted, and alternative approaches to research used to capture change and individuality more fully”. Future research should consider the use of other research methods, such as those used in phenomenographic studies (e.g. Lucas, 2001) so as to identify the approaches to learning of students of introductory accounting and their conceptions of accounting. Doing so could strengthen the analysis and provide insight into accounting students’ approaches to studying and learning.

2. STUDENTS' CONCEPTIONS OF LEARNING AND PREFERENCES FOR TEACHING

2.1. INTRODUCTION

Aspects of learning and studying in higher education have been examined using generic models of student learning and several questionnaires (e.g. ASSIST) emerged from within educational psychology research in order to assess how students learn and study. This stream of research focused on teaching and learning in higher education and provided general guidance, enhancing understanding of teaching and learning issues (Entwistle, 2004).

Concerning accounting education, the accounting change and the call for better learning environments has become one of the major accounting policy concerns (e.g. Duff, 1999; Byrne *et al.*, 2009). As a result, “one of the major challenges facing accounting education is the creation of a learning environment that promotes high-quality learning” (Byrne *et al.*, 2010, p. 369). In addition, introductory accounting courses have been pointed out as being amongst the most important courses within the study of accounting (e.g. Lucas, 2000, 2001, 2002; Mladenovic, 2000; Geiger and Ogilby, 2000; English *et al.*, 2004; Lucas and Meyer, 2005; Ferguson *et al.*, 2005; Byrne and Flood, 2008; Lucas and Mladenovic, 2007; Bui and Porter, 2010; Palm and Bisman, 2010; Collison *et al.*, 2011). Therefore, considering the mentioned aspects, the current study reports the results of research on accounting students' learning aspects, namely the conceptions of learning and preferences for teaching of Portuguese students of introductory accounting within higher education²⁶. The research also investigated whether subject area and gender have any impact on those aspects of learning.

The study is structured as follows. In the next subsections, the literature on student learning within educational psychology is reviewed, focusing on conceptions of learning and preferences for teaching, as well as student learning within accounting and business areas. Afterwards, the empirical study is presented along with the research methodology and the analysis of the results. Finally, concluding remarks and suggestions for future research are presented.

²⁶ The analysis of ‘approaches to studying’ is reported in Section 1.

2.2. STUDENTS' CONCEPTIONS OF LEARNING AND PREFERENCES FOR TEACHING

Students experience learning with different preconceived ideas as to what learning is about. In addition, “students also differ in their preferences for different kinds of teaching” because students who adopt deep approaches are more likely to “favour courses that they find intellectually challenging and assessment that allows them to express their own ideas”, while students who adopt surface approaches to learning are more likely to favour “courses that provide a ready link between the material taught and fact-based assessment procedures” and tend not to appreciate course design to focus on understanding (Entwistle and Peterson, 2004, p. 423).

According to Marton *et al.* (1997, p. 22), “one could say that approaches to learning materialise or express the learners’ conceptions of learning in a specific situation”. However, approaches to learning refer to the way students learn and approach learning while conceptions of learning reflect the way students represent or perceive learning (Duarte, 2007). Indeed, the concept ‘conceptions of learning’ refers to students’ interpretation of the learning phenomena and this depends on their own conceptions of reality²⁷ (Säljö, 1997). As Entwistle and Peterson (2004, p. 424) explain, “as with all conceptions, the ways in which students conceptualise instruction will depend on the variety of experience they have had, and how they value and interpret those different experiences”.

With the aim to investigate the developmental differences in the conceptions of learning amongst people with different learning experiences, Marton and Säljö (1979) interviewed people with significant differences concerning age and level of formal education “so as to achieve as great a degree of heterogeneity as possible” (Säljö, 1979, p. 445). The findings revealed “that there are distinctive differences between people in terms of their subjective conceptions of learning” (Säljö, 1979, p. 443), suggesting that the phenomena of learning is perceived in different ways by people. For example, for some people “it has been made an object of reflection – while for others it represents an activity, the nature of which is taken for granted” (Säljö, 1979, p. 443). Therefore, “the fact that

²⁷Entwistle and Peterson (2004) clarify the difference between ‘concept’ and ‘conception’, as concept refers to a shared understanding of something (e.g. object or behaviour) while conception refers to an individual’s personal perception of a concept.

people approach learning in different ways could be understood as a reflection of the variety of beliefs or conceptions which they hold about learning” (Säljö, 1979, p. 444).

This phenomenographic research “introduced the distinction between deep and surface approach to learning” and led to distinct conceptions of learning based on six categories, “with learning seen as a quantitative increase in knowledge at the simplest level, leading to an interpretative process aimed at understanding reality at its highest category” (Entwistle and McCune, 2004, pp. 328, 335). Marton *et al.* (1997, p. 22) characterise the two opposing ways of experiencing and approaching learning; in brief, the surface approach is described by “the learner focusing on ‘the sign’, i.e. on the learning material as such”; the deep approach is described by “the learners’ focus going beyond – or through – the sign or the learning material to the ‘signified’, i.e. that to which the learning material refers.”

This line of research argues that a person’s beliefs on what learning is about have a significant impact on their approaches to learning and, to a large extent, on the outcome of learning. Indeed, the literature shows that there is a strong relationship between surface and non-strategic approaches and poor academic performance (e.g. Entwistle and Peterson, 2004). Nevertheless, according to Entwistle (2000, p. 4), “a deep strategic approach to studying is generally related to high levels of academic achievement, but only where the assessment procedures emphasise and reward personal understanding. Otherwise, surface strategic approaches may well prove more adaptive”. Therefore, students’ perceptions of the academic environment have also been pointed out as a factor that has an impact on student learning (e.g. Ramsden, 1979). For example, students stress “the critical importance of the teaching and assessment environment” and reveal that “enthusiasm on the part of a lecturer encouraged them to put more effort into a subject and enjoy it more” while “threatening teaching environments creates anxiety and students learn nothing” (Ramsden, 1979, p. 426).

Research also reports dissonance in student learning patterns (e.g. Quinnell *et al.*, 2012; Gijbels *et al.*, 2008; Vermunt and Vermetten, 2004; Meyer and Shanahan, 2003; Boulton-Lewis *et al.*, 2003; Entwistle *et al.*, 2000). The phenomenon of dissonance has been described as “a mismatch between approaches to studying and perceptions of the learning environment, or between internal and external regulation of studying” (Entwistle

et al., 2000, p. 44). As explained by Prosser, Ramsden *et al.* (2003, p. 38), an “incoherent pattern of learning is used when, for example, a surface approach is used with perceptions supporting a deep approach.” Boulton-Lewis *et al.* (2003, p. 85) carried out a phenomenographic investigation into conceptions of learning and ways of learning and found students “exhibited dissonance between their core conceptions and some of the ways in which they learned”. For example, data has shown that there were “students who held a core conception of learning as personal growth or as change in thinking and understanding, however, they used predominantly organization and memorization strategies” (Boulton-Lewis *et al.*, 2003, p. 85).

The literature identifies possible causes for this dissonant pattern of behaviour. For example, Entwistle *et al.* (2000, p. 45) posit that the unexpected linkages between approaches to learning and perceptions of the learning environment might be related to “a tension between personal intentions and either the general learning environment provided or the pressures to conform to external assessment requirements.” Gijbels *et al.* (2008, p. 441) argue that “students probably need time to get used to the new approach and to adapt both their perceptions and study approaches”. Therefore, Entwistle (2000) stresses the need to encourage academic staff to think about student learning and the ways of assessing assignments and examination that promote personal understanding and a greater engagement of students in their learning.

2.2.1. Entwistle’s Model and the ASSIST Instrument

Entwistle’s model is regarded as one of the most influential models of approaches to learning (e.g. Coffield *et al.*, 2004), and the ASSIST instrument has been widely used to assess students’ approaches to learning, particularly in the UK (e.g. Ballantine *et al.*, 2008) and in its previous versions, the ASI and the RASI. ASSIST presents six statements (items/categories) concerning conceptions of learning. The items relating to a deep learning pattern, indicating conceptions of learning as involving personal understanding and development (i.e. learning as transforming), are the following: b) ‘developing as a person’, e) ‘understanding new material for yourself’, and f) ‘seeing things in a different and more meaningful way’. The items relating to a surface learning pattern, indicating conceptions of learning as ‘reproducing knowledge’, are the following: a) ‘making sure you remember things well’, c) ‘building up knowledge by acquiring facts and information’, and d) ‘being able to use the information you’ve acquired’ (ASSIST, 1997). There are

eight items relating to preferences for different types of course and teaching. The items representing the deep learning pattern, indicating a preference for teaching as ‘supporting understanding’, are the following: b) ‘lecturers who encourage us to think for ourselves and show us how they themselves think’, c) ‘exams which allow me to show that I’ve thought about the course material for myself’, f) ‘courses where we’re encouraged to read around the subject a lot for ourselves’, and g) ‘books which challenge you and provide explanations which go beyond the lectures’. The items relating to a surface learning pattern, indicating preferences for teaching as ‘transmitting information’, are the following: a) ‘lecturers who tell us exactly what to put down in our notes’, d) ‘exams or tests which need only the material provided in our lecture notes’, e) ‘courses in which it’s made very clear just which books we have to read’, and h) ‘books which give you definite facts and information which can easily be learned (ASSIST, 1997).

2.3. CONCEPTIONS OF LEARNING AND PREFERENCES FOR TEACHING IN ACCOUNTING EDUCATION

The validity and reliability of ASSIST has been tested within the accounting higher education context (e.g. Byrne *et al.*, 2004a; 2009). Several studies have used ASSIST to measure students’ approaches to studying, conceptions of learning and preferences for teaching (e.g. Duff, 1999; Byrne *et al.*, 2002; Duff, 2003; Duff *et al.*, 2004; Byrne *et al.*, 2004b, 2009; Ballantine *et al.*, 2008; Flood and Wilson, 2008). The impact of gender on learning processes has been also examined (e.g. Duff, 1999; Lucas and Meyer, 2005; Flood and Wilson, 2008; Ballantine *et al.*, 2008).

Among other findings, research provides evidence that students adapt their approaches to learning and studying, according to the perceptions they have of task requirements and assessment demands. As Flood and Wilson (2008, p. 228) explain, “if students perceive that assessment simply requires the acquisition and accurate reproduction of facts then they are likely to adopt a surface approach. In contrast, if they perceive that assessment demands the demonstration of a thorough understanding, integration and application of knowledge then they are more likely to adopt a deep approach”. Therefore, students’ conceptions of learning play an important role in their learning process (e.g. Lucas and Meyer, 2005), and along with their preferences for teaching, both affect their learning outcomes (Byrne *et al.*, 2004a).

2.4. EMPIRICAL STUDY, RESEARCH INSTRUMENT AND METHODOLOGY

2.4.1. The Portuguese context and the aim of the study

In Portugal, research into learning processes and study methods and strategies has been carried out by several authors (e.g. Chaleta, 2003, Rosário and Oliveira, 2006, Duarte, 2007, Chaleta, *et al.*, 2010 and Valadas *et al.*, 2010). This research has been carried out under different models, focused on higher education in general, and examined mainly case studies, such as the case of the University of Azores (Tavares *et al.*, 2003a).

To our knowledge, no prior research has attempted to assess the conceptions of learning and preferences for different types of courses and the teaching of Portuguese students of introductory accounting within higher education. However, students' perception of the academic environment has been pointed out as a factor that has an important impact on student learning (e.g. Ramsden, 1979). Also, Entwistle and Peterson (2004, p. 416) stress the need to extend the research to “specific learning processes that are needed to build up personal understanding in each distinctive area of study”. Introductory accounting considered in the current study is lectured in a variety of programmes, namely, accounting, economics, management, international business, sports management and hotel management.

The Portuguese education system is composed of universities and polytechnics both from the private and public sectors (Teixeira *et al.*, 2012; Sá *et al.*, 2011). For this reason, the study examines data collected from a sample of students at five higher education institutions, universities and polytechnics both from the private and public sectors. As the Portuguese higher education system has already implemented the requirements of the Bologna process, these students were exposed to similar learning environments. Nevertheless, the selection of students from different institutions and subject area background aimed at providing a variety of views and experiences of learning introductory accounting.

Aspects of learning, such as conceptions of learning and approaches to studying, may be influenced by subject area (Entwistle, 2000, 2004; Lucas and Meyer, 2005; McCune and Hounsell, 2005) or gender (e.g. Duff *et al.*, 2004; Richardson, 2007). Thus, the study also examines whether there is any difference in students' conceptions of learning and preferences for teaching according to subject area and gender. In order to give better insight

into subject area specificity, the analysis focused on three groups: (i) accounting, (ii) economics and management, and (iii) other programmes.

2.4.2. The research instrument and data collection

The ASSIST instrument developed by Entwistle and his colleagues was used to measure the conceptions of learning, approaches to studying and preferences for teaching of Portuguese students of introductory accounting in higher education. The version that was used is the short version of ASSIST. Permission for using the inventory was given by Professor Noel Entwistle in October 2011. The Portuguese version used was the one developed by Chaleta *et al.* (2010).

The ASSIST was distributed to 430 students from across the five higher education institutions. The questionnaire acknowledged the source as well as the authors of the translated version. The students' participation was voluntary, and, apart from specific instructions for answering the questionnaire, the purpose of the study was presented and confidentiality of the answers was assured. Data was collected in class during the last three weeks of November 2011 (weeks eight, nine and ten of the 15/16-week semester). This process was closely followed up by the members of the research team.

2.4.3. Descriptive analysis

Of the 430 questionnaires collected, 375 were completed²⁸. 52% were female students and 48% were male students. The female students' mean age is 21.1 years old, and the male students' mean age is 22.4 years old. Ninety six percent of the respondents were Portuguese nationals, while the rest were from other countries, namely, Cape Verde, Mozambique, Brazil, Spain, Romania, Venezuela and Switzerland. Around 74% of the sample attend introductory accounting in the first year, and the rest of the students attend introductory accounting in the second and third years of the programme. Therefore, our sample is mainly composed of first-year students. Considering that the data collection happened in the first semester of the academic year, then, students' conceptions of learning and teaching preferences derive mainly from their previous learning experience (e.g. Entwistle, 2004).

²⁸ This corresponds to the number of complete questionnaires for both conceptions of learning (Part 1/A) and preferences for teaching (Part 3/C).

2.4.4. The internal reliability of the short version of ASSIST

The study reports the results relating to the first and third parts of the questionnaire, that is, conceptions of learning (Part 1/A) and preferences for teaching (Part 3/C). Students responded to the statements (items/categories) according to a five-point Likert scale. The scoring procedure for the questionnaire can be found in ASSIST (1997). The statistical procedures and data analyses were carried out using SPSS 19.

The use of the short version of the ASSIST was previously validated concerning the approaches to studying (Part 2/B) within the Portuguese accounting context (Teixeira *et al.*, 2013). However, as suggested in Byrne *et al.* (2004b, p. 71), “the internal consistency of new data should be presented when relying on a previous validation”. Therefore, the internal consistency of the items related to conceptions of learning and preferences for teaching was measured using Cronbach alpha coefficients.

The Cronbach alpha coefficient values were the following: (i) $\alpha=0.554$ for learning as transforming; (ii) $\alpha=0.260$ for learning as reproducing; (iii) $\alpha=0.597$ for teaching as supporting understanding; and (iv) $\alpha=0.595$ for teaching as transmitting information. The results indicate adequate internal reliability (Tait and Entwistle, 1996) except for learning as reproducing²⁹. The tests have also shown that item a) ‘making sure you remember things well’ was responsible for that low value of internal consistency. If this item was eliminated the Cronbach alpha coefficient would be $\alpha=0.408$.

Meyer and Kiley (1998) also found a low level of internal consistency ($\alpha=0.28$) regarding the deep approach construct within conceptions of learning among Indonesian students. The authors used a translated version of a modified and extended version of the ASI in order to assess Indonesian students’ conceptions of learning. Meyer and Kiley (1998, p. 288) posited that this circumstance could have been related to: (i) “possible influence of Indonesian learning culture on students’ conceptions of learning” or to (ii) “particular sources of variation that might be attributable to language and culture”.

When using ASSIST to assess students’ approaches to studying, both Diseth (2001) and Valadas *et al.* (2010) report lower levels of internal consistency than those found in

²⁹ Traditionally Cronbach alpha values <0.5 are considered unacceptable. However, when in presence of psychological constructs, values lower than the traditional criteria can be expected (e.g. Kline, 1994; 1999; Valadas *et al.*, 2010). In addition, within the accounting field, Flood and Wilson (2008, p. 231) reported Cronbach’s alpha values ranging from 0.47 to 0.80, “which, in the main, proved to be very satisfactory”.

Anglo-American contexts (e.g. Byrne *et al.*, 2004ba; Ballantine *et al.*, 2008). However, consistent with Meyer and Kiley's (1998) hypothesis, it is interesting to note that there are two common aspects between the current study and the mentioned studies (i.e. Meyer and Kiley, 1998; Diseth, 2001; Valadas *et al.*, 2010). These are: (i) students are from cultural contexts different from the British context, in which ASSIST was developed, and (ii) the studies have used translated versions of the questionnaire. Thus, the results might have been influenced by cultural issues (e.g. McKee *et al.*, 1992; Richardson, 1994b).

That said, on the whole, the results show acceptable internal reliability for scales of their length and type (Entwistle *et al.*, 2000, p. 37) and are similar to other studies that focused on the validation of the ASSIST instrument (e.g. Entwistle *et al.*, 2000; Diseth, 2001; Valadas *et al.*, 2010).

2.4.5. Results and discussion

Table 1 presents the descriptive statistics for the items concerning conceptions of learning and preferences for teaching. Paired sample t-tests were carried out to test for any differences between the mean scores concerning conceptions of learning and preferences for teaching. Significant differences were found between learning as transforming and learning as reproducing ($p=0.000$), and significant differences were also found between preferences for teaching as supporting understanding and teaching as transmitting information ($p=0.000$). Thus, the results suggest the existence of a deep approach regarding accounting students' conceptions of learning (i.e. conceiving learning as transforming), and indicate a surface approach regarding their preferences for teaching and learning environments (i.e. favouring teaching as transmitting).

Table 1 - Conceptions of Learning and Preferences for Teaching

	ASSIST	Items	Mean	Std. Dev.	
Conceptions of Learning	Learning as Transforming	b)	4.37	0.66	
		e)	4.01	0.73	
		f)	4.07	0.83	
				12.45	1.48
	Learning as Reproducing	a)	3.17	1.07	
		c)	4.47	0.54	
d)		4.47	0.62		
			12.10	1.62	
Preferences for Teaching	Supporting Understanding	b)	4.09	0.87	
		c)	3.77	1.02	
		f)	2.95	1.07	
		g)	3.61	1.03	
				14.41	2.69
	Transmitting Information	a)	4.10	0.94	
		d)	3.61	1.11	
		e)	3.75	0.96	
h)		4.21	0.74		
			15.67	2.54	

The results seem to be dissonant with the general literature as they reveal non-coherent linkages between students' conceptions of learning and preferences for teaching. However, this is in line with reports of dissonant patterns within student learning (e.g. Quinnell *et al.*, 2012; Gijbels *et al.*, 2008; Fyrenius *et al.*, 2007; Vermunt and Vermetten, 2004; Vermunt and Minnaert, 2003; Meyer and Shanahan, 2003; Boulton-Lewis *et al.*, 2003; Entwistle *et al.*, 2000). Furthermore, within the business area, Byrne *et al.* (2004b) also present a similar pattern. The authors analysed the approaches to studying and the preferences for teaching of students from different nationalities (Irish, German and Spanish) and found that these students favour deep approaches to studying (mean=13.89) while they prefer surface learning patterns regarding preferences for teaching (mean=16.62).

In seeking further evidence of dissonant study orchestrations, and for triangulation purposes (Meyer and Shanahan, 2001), both factor analysis considering the three parts of ASSIST (i.e. conceptions of learning, approaches to studying and teaching preferences)

and cluster analysis were carried out, as these statistical methods have been acknowledged to have complementary strengths (e.g. Meyer, 2000; Entwistle *et al.*, 2000; Long, 2003). As Entwistle *et al.* (2000, p. 37) explain, “factor analysis describes the relationships between variables in ways which show the broad overall pattern clearly”; while “cluster analysis groups individuals who have responded to items in similar ways”. However, some argue that factor analysis “may disguise the existence of important variations in the relationships between approaches to studying within particular subgroups”; thus, “cluster analysis offers an appropriate additional tool which would allow this possibility to be explored” (Entwistle *et al.*, 2000, p. 40). Both methods confirmed the existence of dissonant patterns of learning behaviour amongst Portuguese students of introductory accounting.

In short, factor analysis confirmed a structure of ASSIST containing three factors, where factor I represented both deep and strategic approaches to learning; factor II represented both surface approaches to studying and surface preferences for teaching (i.e. teaching as transmitting); and finally, factor III represented both deep and surface conceptions of learning and deep preferences for teaching (i.e. teaching as supporting knowledge). While the first two factors present theoretically expected relationships between the learning aspects under analysis; factor III reveals a theoretically unexpected pattern/relationship (i.e. dissonant study orchestration) as it groups together both deep and surface conceptions of learning. Concerning the cluster analysis, based on Entwistle *et al.* (2000) and Meyer and Shanahan (2001), a k-means cluster analysis was carried out in order to provide the fullest description of the clusters, minimizing, however, the variability within the clusters. A range of cluster solutions were analysed (i.e. three, four and six-cluster solution) in order to examine whether theoretically expected patterns of learning behaviour would emerge or not. Again, dissonant patterns of learning behaviour emerged from the results. The following clusters produced moderately high scores for both deep and surface approaches to learning, thus reflecting no distinction between approaches to studying/learning: cluster 1 (n=128) within the three-cluster solution; cluster 3 (n=168) within the four-cluster solution; and cluster 3 (n=99) within the six-cluster solution. In addition other indications of dissonance were identified within groups of students showing a clear preference for deep approaches to learning and deep conceptions of learning altogether with a preference for teaching as transmitting. It is interesting to note that, like

in Entwistle *et al.* (2000, p. 42), “these mainly, first-year students preferred teaching and books which concentrated on information transmission and provided notes suitable for fact-oriented assessment procedures”. In fact, as described in the literature review, dissonant study orchestrations relating to first-year students have been frequently reported in the literature relating to students’ approaches to learning.

2.4.5.1. *The impact of subject area*

Table 2 and 3 present the mean scores and standard deviation for conceptions of learning and preferences for teaching according to subject area. Paired sample t-tests were carried out to test for any differences within each group. ANOVA was carried out to test for differences in conceptions of learning and preferences for teaching between groups.

Concerning conceptions of learning (see Table 2), significant differences were found between (i) learning as reproducing and learning as transforming ($p=0.000$) for the accounting programmes; the differences were not significant neither for economics and management programmes ($p=0.174$) nor for the other programmes ($p=0.249$). This evidence suggests that students from accounting programmes favour a conception of learning as transforming, while students from the other programmes do not show a preference for any conception of learning.

Table 2 – Mean (Standard Deviation) for Conceptions of Learning according to Subject Area

Conceptions of Learning	Accounting N= 168		Economics/Management N= 149		Other N= 58	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Learning as Transforming	12.45	1.60	12.44	1.65	12.48	1.61
Learning as Reproducing	11.96	1.45	12.23	1.53	12.21	1.41

As to preferences for teaching (see Table 3), significant differences were found between (i) teaching as supporting understanding and teaching as transmitting ($p=0.000$) for accounting, economics and management programmes; the differences were not statistically significant for other programmes ($p=0.102$). This suggests that students from accounting, economics and management programmes clearly prefer teaching as transmitting, while students from the other programmes do not show any preference. In light of this, one could say that introductory accounting students favour a surface learning pattern over deep learning patterns concerning teaching preferences. This is consistent with

Byrne *et al.* (2004a) and the literature that indicates that accounting students do not favour deep learning patterns, such as studying behaviour (e.g. Duff, 1999; Flood and Wilson, 2008; Byrne *et al.*, 2009).

Table 3 – Mean (Standard Deviation) for Preferences for Teaching according to Subject Area

Preferences for Teaching	Accounting		Economics/Management		Other	
	N= 168		N= 149		N= 58	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Supporting Understanding	14.17	2.78	14.65	2.60	14.52	2.58
Transmitting Information	15.60	2.61	15.85	2.37	15.45	2.74

Analysing the mean scores for the conceptions of learning and preference for teaching items between the three groups, ANOVA test showed no significant differences concerning (i) learning as transforming ($p=0.229$), (ii) learning as reproducing ($p=0.983$), (iii) teaching as supporting understanding ($p=0.264$) and (iv) teaching as transmitting ($p=0.529$). This is not in line with the literature that mentions that subject area has an influence on learning and studying aspects (e.g. Lucas, 2001; Entwistle, 2004).

2.4.5.2. The impact of gender

Table 4 presents the mean scores and standard deviation for conceptions of learning and preferences for teaching according to gender. Independent sample t-tests were carried out to test for any differences between the male and female students. Paired sample t-tests were carried out to test for any differences within female students and within male students.

Table 4 – Mean (Standard Deviation) for Conceptions of Learning and Preferences for Teaching according to Gender

Conceptions of Learning	Mean (Std. Dev.)		Preferences for Teaching	Mean (Std. Dev.)	
	F (N= 194)	M (N= 181)		F (N= 194)	M (N= 181)
Learning as Transforming	12.62 (1.59)	12.27 (1.64)	Supp. Understanding	14.16 (2.69)	14.68 (2.66)
Learning as Reproducing	12.25 (1.49)	11.94 (1.46)	Transm. Information	15.63 (2.53)	15.72 (2.55)

Significant differences were found between the male and female students' mean scores relating to (i) learning as reproducing ($p=0.044$) and (ii) learning as transforming ($p=0.035$). No significant differences were found relating to (i) teaching as supporting understanding ($p=0.064$) or (ii) teaching as transmitting ($p=0.718$).

In addition, within the female students answers and within the male students answers, significant differences were found between learning as transforming and learning as reproducing (male: $p=0.013$; female: $p=0.003$), and between teaching as supporting understanding and teaching as transmitting information (male: $p=0.000$; female: $p=0.000$).

In general, the female students tend to regard learning in line with a deep pattern of learning more than male students do. This is less evident regarding their preferences for teaching, as female students seem to not value teaching as supporting understanding as much as male students do (although as noted before the difference is not statistically significant). Therefore, the results suggest that gender has an impact on the conceptions of learning of Portuguese students of introductory accounting.

2.5. CONCLUDING REMARKS

The current study aims to contribute to the stream of research that focuses on accounting students' learning patterns (e.g. Duff, 1999; Byrne *et al.*, 1999; Lucas, 2000, 2001; Duff, 2002; Byrne *et al.*, 2002; Duff, 2003, 2004; Duff *et al.*, 2004; Lucas and Meyer, 2005; Ballantine *et al.*, 2008; Flood and Wilson, 2008; Byrne *et al.*, 2010). It specifically reports the results of research into conceptions of learning and preferences for teaching of Portuguese students of introductory accounting within higher education. It also examined whether subject area and gender had any impact on the mentioned aspects of learning.

The results suggest the existence of deep learning patterns regarding students' conceptions of learning (i.e. conceiving learning as transforming), and indicate surface learning patterns regarding their preferences for teaching and learning environments (i.e. favouring teaching as transmitting). In addition, based on the current research (see, Section 1), it was reported in Teixeira *et al.* (2013) that Portuguese students of introductory accounting favour a strategic approach to studying when learning. Therefore, this is not consistent with the literature that mentions that deep approaches are linked with a conception of learning as 'transforming', and also with a preference for teaching which

encourages and challenges understanding. Nevertheless, the results are in line with the literature, which reports dissonant patterns within student learning, as they reveal a variation in students' conceptions of learning and preferences for teaching.

No significant differences were found according to subject area. As to the gender effect, significant differences were found between the male and female scores relating to conceptions of learning only. These results are consistent with those reported in the literature, which suggests that gender has an impact on students' learning processes (e.g. Duff, 1999; Duff *et al.*, 2004; Flood and Wilson, 2008).

The dissonant pattern found in the results justifies further investigation into the matter as to its possible causes. Also, as suggested by Entwistle (2000, p. 5), "it is possible to identify the differing conceptions that students hold of specific topics within a course or discipline". Therefore, the analysis of accounting students' conceptions of learning under accounting education literature (e.g. Lucas and Meyer, 2005) might prove to be useful to provide insight into subject area within this topic. Finally, the limitations of using quantitative methods of research (e.g. cluster analysis or factor analysis) are acknowledged as to the identification of dissonant study orchestrations (e.g. Meyer, 2000; Meyer and Shanahan, 2003). Therefore, the use of qualitative research methods, such as phenomenographic procedures, might be more appropriate to examine dissonant patterns of learning (e.g. Lindblom-Ylänne, 2003).

In the next chapter Essay 3 is presented.

ESSAY 3

CONTEXTUAL FEATURES AND BACKGROUND OF STUDENTS' APPROACHES TO LEARNING

CONTEXTUAL FEATURES AND BACKGROUND OF STUDENTS' APPROACHES TO LEARNING

This essay reports two empirical studies on the aspects of learning of Portuguese students of introductory accounting. These will be presented in the following sections. The first section presents a study about students' conceptions of accounting and expectations of learning it. The second section presents a study on students' motivations, expectations and preparedness for higher education.

1. STUDENTS' CONCEPTIONS OF ACCOUNTING AND EXPECTATIONS OF LEARNING ACCOUNTING

1.1. INTRODUCTION

Educational psychology research focuses on teaching and learning in higher education and provides general guidance concerning student learning. By drawing on “pragmatic educational theories for describing the types of learning found in classrooms” (Entwistle and Smith, 2002, p. 323), aspects of learning and studying in higher education have been investigated through generic models of student learning. For example, the students' approaches to learning (SAL) conceptual framework provided evidence that learning processes are context-dependent (e.g. Trigwell *et al.*, 2012). According to Entwistle (1997, p. 133), “an approach to learning can surely be accepted as to some extent stable – as a habitual response to learning situations which a student commonly meets - and yet also variable in response to teaching, learning environment, and assessment demands in a specific course or on a particular occasion”. In addition, there are disciplinary differences relating to teaching and learning. Indeed, “the literature suggests that different disciplinary contexts will each, to some extent, possess their own norms, languages and practices” (McCunne and Hounsell, 2005, p. 257). That is the case for the accounting disciplinary area itself. As explained by Lucas and Meyer (2005, p. 179), “accounting is a subject that comprises many component specialisms, each of which provides a particular teaching context in its own right”. Therefore, students' perceptions and conceptions of the subject matter they study represent a key aspect within their perceptions of the learning context (e.g. Prosser *et al.*, 1994; Ramsden 1997; McCunne and Hounsell, 2005; Lucas and Meyer, 2005).

Within the accounting disciplinary context, the accounting change and the demand for better learning environments has become a major concern (e.g. Duff, 1999; Byrne *et al.*, 2009). This circumstance has had a strong impact on accounting education research,

and much relevant research has been carried out focusing on introductory accounting (e.g. Oswick and Barber, 1998; Saemann and Crooker, 1999; Lucas, 2000, 2002; Byrne *et al.*, 2002; English *et al.*, 2004; Byrne and Flood, 2005; Lucas and Meyer, 2005; Ferguson *et al.*, 2005; Tan and Laswad, 2006, 2009; Bealing *et al.*, 2009; Palm and Bisman, 2010; Krom and Williams, 2011; Barratt *et al.*, 2011).

In particular, there is a well-established body of work within introductory accounting based on the students' approaches to learning theoretical framework (e.g. Lucas, 1998, 2001 2002; Byrne and Flood, 2004; Byrne *et al.*, 1999, 2002, 2009; Lucas, 2000; Mladenovic, 2000; Lucas and Meyer, 2004, 2005). Similarly, the importance of the learning environment/context has been acknowledged by several authors (e.g. Lucas, 2000, 2001; Lucas and Meyer, 2005; Lucas and Mladenovic, 2009). Lucas and Meyer (2005, p. 180) examined introductory accounting "students' conceptions of accounting, their motivations and the extent to which these might impact upon approaches to learning". Their findings question "whether introductory accounting is appropriately regarded as a generic unit with learning outcomes that are equally applicable to all students" (Lucas and Meyer, 2005, p. 195). The impact of gender and subject area has been examined, yet with contradictory results as to its nature on student learning. Therefore, research acknowledges the need for future research to further investigate aspects of learning within introductory accounting subjects (e.g. Lucas and Meyer, 2005; Byrne and Flood, 2008).

The current study reports the results of research into Portuguese introductory accounting students' conceptions of accounting and expectations of learning the subject of accounting within higher education. The study also investigates whether subject area and gender have any impact on the mentioned aspects. The study is structured as follows. In Section 2, the literature on students' approaches to learning is reviewed with a focus on the role of conceptions of accounting and expectations of learning accounting. In Section 3, the empirical study is presented along with the research methodology and the analysis of the results. Finally, concluding remarks and suggestions for future research are presented in Section 4.

1.2. CONCEPTIONS OF ACCOUNTING AND EXPECTATIONS OF LEARNING ACCOUNTING

Students adjust their approaches to learning and studying to the perceptions they hold regarding task requirements and assessment demands (e.g. Flood and Wilson, 2008).

Accounting graduates are expected to develop knowledge and competencies associated with high quality learning (Byrne *et al.*, 2002). Therefore, the literature highlights the need to encourage deep patterns of learning in higher education (e.g. Duff, 1999, 2002). This seems to be more likely to occur if accounting students favour deep approaches to learning and studying (e.g. Flood and Wilson, 2008).

According to Lucas and Meyer (2005, p. 183) “students start a course of study already possessing certain conceptions or prior knowledge. This includes conceptions of learning, epistemological beliefs, and conceptions about the subject.” Thus, within introductory accounting there is a stream of research aiming at identifying students’ conceptions of accounting and expectations of learning accounting (e.g. Lucas and Meyer, 2004, 2005; Duff *et al.*, 2010). Among other conclusions, the studies point out that the power (and impact) of negative perspectives (preconceptions/stereotypes) of accounting should be taken into consideration, especially regarding non-accounting students (e.g. Lucas and Meyer, 2004). That is, one should consider the existence of strong emotions about the learning of accounting. Indeed, non-accounting students tend to feel anxious about the learning of accounting and see it as something problematic; whereas accounting students feel more enthusiastic about it and “possess more positive motivational conceptions of accounting” related to an inherent interest in the subject of accounting (Lucas and Meyer, 2004, p. 461). This is the pattern of behaviour that students are expected to display/show when learning introductory accounting.

These findings are of great value for accounting education and should be taken into account alongside with recent findings reported in educational psychology literature on student learning. Indeed, recently, Trigwell *et al.* (2012, p. 811) provided evidence that “students who more strongly experience positive emotions, such as hope and pride, and more weakly experience negative emotions (such as anger, boredom, anxiety and shame), are likely to be adopting more of a deep approach to learning. In comparison, students who describe more of a surface approach to learning are more likely to report an experience of lower positive emotions and higher negative emotions.” In addition, “the approaches to learning research framework assumes that students interpret, or make meaning of, their educational experience as a result of their assumptions about knowledge (and the subject) and also in relation to their motivations”; however, research should further examine students’ conceptions of the subject matter and its impact on their approaches to learning

within specific settings (Lucas and Meyer, 2005, p. 180). In fact, most studies within accounting education have used generic inventories (e.g. ASSIST) in order to assess how students learn and study. Nevertheless, evidence shows the existence of a significant relationship between students' conceptions of accounting (and motivations for learning it) and specific learning processes (Lucas and Meyer, 2005). For example, based on phenomenographic research, "Lucas (2001) identifies features that are characteristic of the deep and surface approaches to learning within introductory accounting" (Lucas and Meyer, 2005, p. 180). The contextual features surrounding these approaches to learning "include student conceptions of accounting and motivations towards its study." (Lucas and Meyer, 2005, p. 181).

The description of introductory accounting students' experiences of learning accounting and their expectations about the learning of accounting through the use of qualitative methods is indeed of great interest (e.g. Lucas and Meyer, 2005, Flood and Wilson, 2008; Duff *et al.*, 2010). Nevertheless, the use of inventories/questionnaires enables researchers to reach a greater number of students and, thus, find variations in a statistical sense in order to identify patterns of learning behaviour within introductory accounting.

1.3. EMPIRICAL STUDY

In this section the aim of the study will be presented followed by the information relating to the research instrument and data collection, as well as the descriptive analysis. Then, the results and statistical analyses subsection will focus on the reliability and validity of the Expectations of Learning Accounting (ELAcc) inventory within introductory accounting in Portuguese higher education, and describe students' conceptions of accounting and expectations of learning accounting along with the analysis of the impact of subject area and gender.

1.3.1. The purpose of the study

The current study forms part of a larger study into introductory accounting students' learning and studying behaviour within Portuguese higher education. It specifically examines Portuguese introductory accounting students' conceptions of the subject of accounting and their expectations about learning accounting.

The study examines data collected from a sample of 683 students at five higher education institutions, universities and polytechnics both public and private, in the north of Portugal. Introductory accounting is taught to large numbers of students both specialists and non-specialists. In this study, introductory accounting encompasses courses such as elementary accounting and introductory financial accounting. These courses are taught in a variety of degree programmes, namely, accounting, economics, management, international business, public administration, marketing, sports management and hotel management.

There is evidence that studying and learning behaviour varies according to subject area (e.g. Entwistle, 2004; McCunne and Hounsell, 2005). In addition, the literature mentions that gender might influence students' learning and studying behaviour (e.g. Flood and Wilson, 2008; Richardson, 2007). Thus, the study also examines whether there is any impact on students' conceptions of (and expectations of learning) accounting according to subject area and gender. In order to give better insight into subject area specificity, the analysis focused on three groups of disciplinary area: (i) accounting, (ii) economics and management, and (iii) other courses.

1.3.2. Research instrument and data collection

Drawing on phenomenographic research (e.g. Asworth and Lucas, 2000; Lucas, 2001), the ELAcc inventory was developed by Professor Ursula Lucas and has been subject to further development (Lucas and Meyer, 2005; Duff *et al.*, 2010). It is a subject-specific instrument intended to identify specific conceptions (students' perceptions of accounting) and motivations within introductory accounting, and tries to relate them to deep (transformative) and surface (accumulative) learning processes. As described in Duff *et al.* (2010), the first version of the inventory (ELAcc 1.1) was trialled with 386 first year accounting students in the UK in the 5th week of the second term. The following versions of the inventory were trialled with larger samples of introductory accounting students in the UK and Australia. To our knowledge, this is the first time this inventory has been used within Portuguese higher education.

The ELAcc (1.4) version that was used in the current study is the 50-item version comprising ten subscales with five items each³⁰. The subscales are: (i) enjoyment, (ii) lack

³⁰ As presented in Tables 1 to 3, a prior version of the instrument was comprised of five subscales of the current version (Lucas and Meyer, 2005) and a later version is comprised of nine subscales of the current version (Duff *et al.*, 2010).

of interest, (iii) worry, (iv) numbers, (v) exam focus, (vi) achieving (vii) reality/meaning behind accounting, (viii) questioning, (ix) social and economic importance of accounting, (x) objective/objectivity. As to the meaning of the subscales, according to Lucas and Meyer (2005, p. 199) and Duff *et al.*, (2010, p. 32): (i) enjoyment measures the extent to which “the student is motivated by the idea that the study of accounting is expected to be enjoyable”; (ii) lack of interest reflects that “the student is de-motivated by the idea that accounting is a dull and boring subject”; (iii) worry expresses that “the student feels anxious about learning accounting”; (iv) numbers is related to “an epistemological belief that accounting is mainly about the study of numbers and calculations”; (v) exam focus measures the extent to which “the student’s main intention is to pass the exam”; (vi) achieving expresses that “the student has a strong motivation to succeed”; (vii) reality/meaning behind accounting reflects “an intention to understand the reality/meaning behind accounting”; (viii) questioning refers to “a view of knowledge that means that it is important to identify the underlying assumptions or principles on which it is based”; (ix) social and economic importance of accounting refers to when “accounting is seen as enabling a new view of (or changing understanding of) business, the economy or society”; and (x) objective/objectivity refers to “an epistemological belief that accounting is an objective subject, involving little subjectivity or uncertainty”.

Permission for using and translating the inventory was given by Professor Ursula Lucas in March 2012. The ELAcc inventory was translated into Portuguese by Teresa Pataco³¹ with the assistance of the authors concerning the accounting terminology/context. The method used for translating the ELAcc inventory was based on the functionalist approach, focusing on the function of the translated text, that is, the target text (Munday, 2001; Snell-Hornby, 1995). During the translation process, Professor Lucas also clarified some questions regarding the meaning of specific terms used in the inventory³².

In addition, as suggested by the author, an initial pilot test (i.e. Cronbach alpha coefficient) was carried out in order to assess the internal consistency of the subscales of the translated version. Accordingly, 32 questionnaires were collected in April, the

³¹ Teresa Pataco is a professional translator and an English lecturer at ISCAP/IPP.

³² The translation process faces particular difficulties such as the lack of equivalence between languages, resulting from different structural and lexical features, idioms and collocations, and words that are context dependent. For an overview of these issues see Baker (1995), Snell-Hornby (1995), Bassnett (2000) and Munday (2001).

Cronbach alpha coefficient values were: (i) enjoyment (0.79), (ii) lack of interest (0.82), (iii) worry (0.74), (iv) numbers (0.76), (v) exam focus (0.74), (vi) achieving (0.58), (vii) reality/meaning behind accounting (0.78), (viii) questioning (0.84), (ix) social/economic importance of accounting (0.83), and (x) objective/objectivity (0.4).

Taking into account the results obtained in a previous study that was carried out in the Portuguese accounting context using the ASSIST instrument (Teixeira *et al.*, 2013), the results of the pilot test were considered satisfactory in order to continue the collection of data. Therefore, the ELAcc (1.4) was distributed to 743 students of introductory accounting from across the five institutions. A total of 683 questionnaires were completed. There was a two-stage collection of data, which happened in May 2012 (end of the academic year 2011/2012) and in October 2012 (beginning of the academic year 2012/2013). Although the data collection did not happen in one academic year, in essence, this procedure aimed at assessing students' expectations and conceptions of accounting at the beginning and at the end of their studies of introductory accounting. Its purpose was to look for any changes concerning students' expectations and conceptions of accounting over time.

The questionnaire acknowledged the source and, apart from the specific instructions for answering the questionnaire, the aim of the study was presented and confidentiality of the answers was given. Data was collected in class and the students' participation was voluntary. This process was closely followed up by the members of the research team.

1.3.3. Descriptive analysis

The first collection of data happened nearly at the end of the academic year (May 2012), and the second collection of data at the beginning of the academic year (October 2012). Therefore, the following analyses will be presented in line with the course of the academic year in order to make sense in terms of the progress of students' expectations and conceptions of accounting over that period. That is, firstly, the data relating to October 2012 will be presented (i.e. first semester/term) and, then, the data relating to May 2012 (i.e. second semester/term).

Concerning the first semester, of the 366 questionnaires collected, 344 were completed. 52% were female students and 48% were male students. The mean age of the female students was 20.5 years old. For the male students, it was 21.2 years old. Ninety six

percent of the respondents were Portuguese nationals, with the remainder from other countries, namely, Brazil, Angola, France, China, Moldavia and Venezuela. In the three groups of degree course/discipline areas, 29% of the students were from accounting, 60% were from economics and management, and 11% were from other courses.

Regarding the second semester, of the 377 questionnaires collected, 339 were completed. 58% were female students and 42% were male students. The mean age of the female students was 21.9 years old. For the male students, it was 23.7 years old. Ninety five percent of the respondents were Portuguese nationals, with the remainder from other countries, namely, Brazil, Cape Verde, Spain, France, England, Mozambique and Ukraine. In the three groups of degree course/discipline areas, 28% of the students were from accounting, 43% from economics and management, and 29% from other courses. Between 88% (first semester) and 79% (second semester) of the sample attend introductory accounting in the first year.

1.3.4. Results and analyses

The statistical procedures and data analyses were carried out using SPSS 19. In short, students respond to the statements/items according to a five-point Likert scale, varying from 1 (definitely disagree) to 5 (definitely agree). However, the metric used in the ELAcc inventory is: 0 (definitely disagree) to 4 (definitely agree). Therefore, the results were calculated according to the later metric in order to be presented along with those of the reference studies (Lucas and Meyer, 2005; Duff *et al.*, 2000). Based on these studies, the 10 subscale scores were calculated by (a) summing the responses to the statements (i.e. five items) belonging to each subscale and, then, (b) dividing each total by the number of constituent items. Tables 1 and 2 present the descriptive statistics along with those reported in the studies of Lucas and Meyer (2005) and Duff *et al.* (2010). The reliability and validity of the ELAcc (1.4) inventory was tested in order to validate the instrument within Portuguese higher education. The internal reliability of the ten subscales of ELAcc (1.4) was measured using Cronbach alpha coefficients. Factor analysis was carried out to group variables with similar characteristics, exploring the factor structure of ELAcc (1.4) subscales. Table 3 shows the Cronbach alpha coefficient values along with those reported in the studies of Lucas and Meyer (2005) and Duff *et al.* (2010).

Table 1- Mean Scores of ELAcc Subscales

Expectations of Learning Accounting (ELAcc)	Portugal		Portugal		UK	Australia
	(1)		(2)		(3)	(4)
	(a)	(b)	(a)	(b)	(a)	(b)
Enjoyment	13.3	2.65	12.9	2.59	12.9	2.51
Lack of Interest	7.4	1.47	7.4	1.47	7.9	2.31
Worry	11.4	2.82	11.4	2.27	10.4	3.04
Numbers	11.3	2.25	9.9	1.97	12.1	3.44
Exam Focus	5.4	1.07	5.6	1.12	4.6	1.20
Achieving	14.2	2.83	13.1	2.62		2.89
Reality/Meaning behind Accounting	15.5	3.10	14.8	2.96		3.04
Questioning	14.7	2.93	14.4	2.89		2.72
Social/Economic Importance of Accounting	15.1	3.01	14.6	2.91		2.75
Objective/Objectivity	11.7	2.33	11.3	2.26		

(1) First semester; (2) Second semester; (3) Lucas and Meyer (2005); (4) Duff *et al.* (2010)

Table 2- Standard Deviation of ELAcc subscales

Expectations of Learning Accounting (ELAcc)	Portugal		Portugal		UK	Australia
	(1)		(2)		(3)	(4)
	(a)	(b)	(a)	(b)	(a)	(b)
Enjoyment	2.66	0.53	2.87	0.57	3.51	0.60
Lack of Interest	3.81	0.76	4.01	0.80	4.87	0.56
Worry	3.66	0.73	3.52	0.70	4.94	0.49
Numbers	3.51	0.70	3.54	0.71	3.86	0.68
Exam Focus	2.96	0.59	3.19	0.64	3.04	0.70
Achieving	2.76	0.55	3.11	0.62		0.69
Reality/Meaning behind Accounting	1.90	0.38	2.32	0.46		0.49
Questioning	2.20	0.44	2.43	0.49		0.55
Social/Economic Importance of Accounting	2.39	0.48	2.33	0.47		0.54
Objective/Objectivity	2.20	0.44	2.58	0.52		

(1) First semester; (2) Second semester; (3) Lucas and Meyer (2005); (4) Duff *et al.* (2010)

Table 3- Cronbach Alpha Coefficient for ELAcc Subscales

Expectations of Learning Accounting (ELAcc)	Portugal (1) N=344	Portugal (2) N= 339	UK (3) N=1211	Australia (4) N= 2028
Enjoyment	0.74	0.75	0.81	0.73
Lack of Interest	0.86	0.86	0.92	0.87
Worry	0.74	0.69	0.88	0.79
Numbers	0.84	0.80	0.88	0.83
Exam Focus	0.70	0.75	0.67	0.69
Achieving	0.56	0.61		0.68
Reality/Meaning behind Accounting	0.72	0.79		0.76
Questioning	0.75	0.79		0.73
Social/Economic Importance of Accounting	0.78	0.77		0.77
Objective/Objectivity	0.46	0.54		

(1) First semester; (2) Second semester; (3) Lucas and Meyer (2005); (4) Duff *et al.* (2010)

The Cronbach alpha values reported in both data collections show satisfactory internal consistency as most results are above a coefficient alpha value of 0.70 (e.g. Kline, 1999; Lucas and Meyer, 2005). Exception was made for achieving and objective/objectivity subscales. However, the objective/objectivity subscale has been removed from later revisions of the inventory (Duff *et al.*, 2010). In addition, one item from each of achieving and exam focus subscales was removed from the inventory. Thus, the ELAcc (1.4) version emerging from Duff *et al.* (2010, p. 16) “consists of 43 items with nine subscales”.

Nevertheless, concerning the first-stage collection of data in May 2012, it is apparent that if the last item (50th item) - ‘accounting is uncontroversial’ – was deleted, the coefficient alpha value would go up to 0.59. This came as no surprise, as during the pilot test students had shown doubts about the meaning of the term ‘uncontroversial’; which is similar to the Portuguese word ‘incontroversa(o)’. This might be due to students’ lack of knowledge of their own native language.

Problematic items were also found for lack of interest (one item: #42), worry (one item: #33), achieving (one item: #36), questioning (one item: # 28) and social and economic importance of accounting (one item: #9). That is, if these items were deleted, the internal consistency of the subscales would improve. On the whole, the results show good

internal consistency for most of the subscales, indicating adequate reliability according to this stream of research (e.g. Duff *et al.*, 2010; Flood and Wilson, 2008; Lucas and Meyer, 2005).

Using the first-stage collection of data, factor analysis was carried out to explore the factor structure of ELAcc subscales. The Kaiser-Meyer-Olkin (KMO) and Bartlett's test were carried out. The result of the KMO=0.786 shows that the sample is adequate to proceed with the factor analysis. Bartlett's test of sphericity is significant ($p=0.000$), which means that the correlation matrix is not an identity matrix. Thus, correlation exists between some of the variables. The communality values are acceptable as only two of the values are lower than 0.5 (see Table 4). The analysis of the total variance explained by the factors shows that the two first factors explain 56% of the total variance. The components were extracted using the principal component analysis extraction method. Then, using the Kaiser criterion, two components were selected.

Rotated component factor matrix shows the loadings of the 10 variables on the two factors extracted after rotation to oblique simple structure using a *direct oblimin rotation* (see Table 4). Thus, Factor I is associated with the deep learning processes and Factor II is associated with the surface learning processes.

Table 4 - Factor Loadings for ELAcc Subscales and Communalities

Expectations of Learning Accounting (ELAcc)	Factor I	Factor II	Communalities
Reality/Meaning behind Accounting	0.836	-0.062	0.710
Enjoyment	0.803	0.048	0.642
Social/Economic Importance of Accounting	0.772	0.125	0.598
Questioning	0.753	-0.063	0.577
Achieving	0.555	0.162	0.322
Lack of Interest	-0.609	0.458	0.619
Numbers	0.100	0.805	0.647
Objective/Objectivity	0.304	0.661	0.501
Exam Focus	-0.497	0.573	0.615
Worry	-0.093	0.550	0.318

The analysis of factor loadings indicates that the subscale ‘objective/objectivity’ is substantially loaded both on surface and deep measures. As to the correlation between factors (see Table 5), Factor I and Factor II are negatively correlated; which is in line with previous research.

Table 5 - Correlations between Factors

	Factor I	Factor II
Factor I	1	-.070
Factor II	-.070	1

Table 6 shows the subscales related to the deep (transformative) and the surface (accumulative) processes of learning accounting.

Table 6 - ELAcc Inventory: Deep/Transformative and Surface/Accumulative Measures

Expectations of Learning Accounting (ELAcc)	Deep/ Transformative	Surface/ Accumulative
Reality/Meaning behind Accounting	x	
Social/Economic Importance of Accounting	x	
Enjoyment	x	
Questioning	x	
Achieving	x	
Lack of Interest		x
Exam Focus		x
Numbers		x
Worry		x
Objective/Objectivity		x

These results are in line with those of Duff *et al.* (2010), except for the objective/objectivity subscale for the reasons previously explained. Taking into account the satisfactory statistical measures reported in the current study, the results validate the use of the ELAcc inventory within Portuguese higher education.

1.3.4.1. The impact of subject area

As shown in Table 6, the deep patterns of learning encompass the first five subscales, which are, reality/meaning behind accounting, social economic importance of accounting, enjoyment, questioning and achieving; while, surface patterns of learning include the last five subscales, lack of interest, exam focus, numbers, worry and

objective/objectivity. Following this categorisation, Tables 7 and 8 present the mean scores for the inventory subscales across the degree course/discipline area. Small variations in sample sizes are due to missing data relating to subject area and gender. An analysis of variance (ANOVA) was conducted to test for differences in conceptions of accounting and expectations of learning it between discipline areas. Paired samples T-tests were carried out to test for any differences between deep and surface learning processes within subject area. One should bear in mind that the significant differences detected by the statistical tests might be influenced by the large sample size in the case of economics and management programmes.

Table 7 - Mean Scores (Standard Deviation) of ELAcc Subscales across Subject Area: 1st Semester

Expectations of Learning Accounting (ELAcc)	Accounting		Econ./Managem.		Other	
	N= 98		N= 205		N= 37	
	M	SD	M	SD	M	SD
Reality/Meaning behind Accounting	3.20	0.31	3.04	0.41	3.10	0.33
Social/Economic Importance of Accounting	3.18	0.47	2.97	0.47	2.79	0.41
Enjoyment	2.93	0.42	2.54	0.53	2.46	0.57
Questioning	3.03	0.40	2.88	0.45	2.94	0.45
Achieving	2.85	0.52	2.85	0.55	2.64	0.63
Deep Learning Processes	3.04	0.29	2.86	0.36	2.79	0.29
Lack of Interest	1.05	0.57	1.66	0.77	1.56	0.74
Exam Focus	0.95	0.55	1.11	0.62	1.18	0.53
Numbers	2.42	0.73	2.22	0.68	2.03	0.66
Worry	2.31	0.71	2.32	0.74	2.09	0.73
Objective/Objectivity	2.29	0.44	2.37	0.46	2.23	0.31
Surface Learning Processes	1.80	0.36	1.94	0.39	1.82	0.34

Regarding the first semester, students from the accounting degree courses/discipline area score higher than the rest of the students on the following subscales: reality/meaning behind accounting, social/economic importance of accounting, questioning, enjoyment and numbers. They score lower than the rest of the students on lack of interest and exam focus. Thus, accounting students' conceptions of accounting and expectations about the study of it seem to be higher than the rest of the students. This is consistent with the literature that suggests that these students give greater relevance to the study of accounting than other students (e.g. Lucas and Meyer, 2004). In particular, students from accounting programmes seem to expect to enjoy accounting more than

students from other subject areas, while students from other programmes seem to expect to enjoy accounting less than the rest of the students. The same pattern happens concerning the ‘social/economic importance of accounting’ subscale.

In contrast, the opposite pattern is shown regarding the exam focus subscale. Thus, students from other programmes seem to focus simply on passing the exam, whereas students from accounting programmes wish to succeed and achieve the higher possible grades in accounting. This is in accordance with the expected pattern of behaviour reported in the literature (e.g. Lucas and Meyer, 2004).

Students from economics and management score higher than the rest of the students on lack of interest, worry and objective/objectivity subscales; while score lower than the rest of the students on reality/meaning behind accounting and questioning. Thus, economics and management students seem to be less interested in the study of accounting than the rest of the students, and perceive accounting as an objective subject/technique more than the rest of the students (e.g. Lucas and Meyer, 2004).

In addition, it is interesting to note that students from other programmes do not perceive accounting as an objective subject (or mainly about the study of numbers) as much as the rest of the students.

The ANOVA test showed significant differences between degree courses/discipline areas for the following subscales: (i) enjoyment ($p=0.000$); (ii) exam focus ($p=0.048$); (iii) numbers ($p=0.008$); (iv) reality/meaning behind accounting ($p=0.005$); (v) questioning ($p=0.020$); and (vi) social and economic importance of accounting ($p=0.000$). The results of the Homogeneity of Variances test for the subscales ‘lack of interest’ ($p=0.002$) and ‘objective/objectivity’ ($p=0.037$) required the Kruskal Wallis test instead of ANOVA. The Kruskal Wallis test showed a significant difference to (vii) lack of interest ($p=0.000$). Tukey’s B test shows that the differences found in the enjoyment subscale were caused by accounting programmes. This is line with the literature which suggests that subject area has an influence on conceptions of learning, studying and learning behaviour (e.g. Entwistle, 2004; Lucas, 2001).

Significant differences were found between deep and surface learning processes within degree courses/discipline areas: accounting ($p=0.000$), economics and management ($p=0.000$) and other courses ($p=0.000$). Thus, for the three degree course/discipline areas,

the results suggest a preference for a deep pattern concerning students' conceptions of (and expectations of learning) accounting.

Table 8- Mean Scores (Standard Deviation) of ELAcc Subscales across Subject Area: 2nd Semester

Expectations of Learning Accounting (ELAcc)	Accounting		Econ./Managem.		Other	
	N= 95		N= 144		N= 99	
	M	SD	M	SD	M	SD
Reality/Meaning behind Accounting	3.03	0.49	2.99	0.40	2.84	0.50
Social/Economic Importance of Accounting	2.96	0.49	2.90	0.45	2.90	0.47
Enjoyment	2.77	0.55	2.58	0.52	2.42	0.63
Questioning	2.99	0.47	2.89	0.47	2.80	0.50
Achieving	2.59	0.62	2.70	0.59	2.54	0.65
Deep Learning Processes	2.87	0.38	2.81	0.37	2.70	0.41
Lack of Interest	1.14	0.74	1.50	0.71	1.75	0.87
Exam Focus	0.97	0.62	1.05	0.56	1.36	0.69
Numbers	2.11	0.76	1.86	0.66	2.02	0.70
Worry	2.22	0.80	2.25	0.64	2.35	0.69
Objective/Objectivity	2.20	0.55	2.25	0.48	2.32	0.53
Surface Learning Processes	1.73	0.48	1.78	0.37	1.96	0.46

Concerning the second semester, again, students from accounting programmes score higher than the rest of the students on the following subscales: reality/meaning behind accounting, social/economic importance of accounting, questioning, enjoyment and numbers. They score lower than the rest of the students on lack of interest, exam focus, worry and objective subscales. Again, accounting students' expectations about the study of accounting seem to be greater than the rest of the students. These results are similar to the ones of the first semester and are consistent with the literature that suggests that these students give greater relevance to the study of accounting than non-accounting students (e.g. Lucas and Meyer, 2004). In addition, over time, it seems that their belief that accounting is an objective subject diminishes.

In contrast, students from other programmes score higher than the rest of the students on lack of interest, exam focus, worry and objective/objectivity, while scoring lower than the rest of the students on enjoyment, questioning, reality/meaning behind accounting and achieving subscales (Lucas and Meyer, 2004).

As for students from economics and management, they score higher than the rest of the students on achieving and score lower on numbers subscales. It seems that, over time, these students increase their wish to succeed and decrease/diminish their belief that accounting is mainly about the study of numbers.

The ANOVA test showed significant differences between degree course/discipline areas for the following subscales: (i) enjoyment ($p=0.000$); (ii) numbers ($p=0.019$); and (iii) questioning ($p=0.023$). The results of the Homogeneity of Variances test for the subscales lack of interest ($p=0.020$), exam focus ($p=0.031$) and reality/meaning behind accounting ($p=0.031$) required the Kruskal Wallis test instead of ANOVA. The Kruskal Wallis test showed significant differences for (iv) lack of interest ($p=0.000$), (v) exam focus ($p=0.000$) and (vi) reality/meaning behind accounting ($p=0.032$). Again, Tukey's B test shows that the differences found for the enjoyment subscale were caused by accounting programmes. These results suggest that subject area has an influence on students' conceptions of (and expectations of learning) accounting.

Finally, significant differences were found between deep and surface learning processes within each subject area as follows: accounting ($p=0.000$), economics and management ($p=0.000$) and other courses ($p=0.000$). Again, the results show a preference for a deep pattern concerning students' conceptions of (and expectations of learning) accounting.

Independent sample t-tests were carried out to test for any differences across the two time trials. Therefore, between the first and the second semesters, introductory accounting students' conceptions of accounting and expectations of learning it changed as follows. Concerning accounting programmes, there were found significant differences for the deep learning processes ($p=0.001$). Therefore, although students from accounting programmes show a preference for deep learning processes regarding their conceptions of accounting and expectations of learning accounting, this pattern decreases over time. In particular, significant differences were found for the following subscales: (i) enjoyment ($p=0.024$), (ii) numbers ($p=0.005$), (iii) achieving ($p=0.002$), (iv) reality/meaning behind accounting ($p=0.007$) and (v) social/economic importance of accounting ($p=0.001$). This suggests that, over time, students' expectations of enjoying the study of accounting decrease, along with their motivations to succeed, intention to understand the reality/meaning behind accounting and their belief that accounting enables a new view of

business, the economy and society. Finally, students' belief about accounting being mainly the study of numbers also decreases.

For the economics and management programmes, significant differences were found for the surface approach ($p=0.000$). Thus, over time, students' surface measures decrease. Particularly, significant differences were found for the following subscales: (i) lack of interest ($p=0.049$), (ii) numbers ($p=0.000$), (iii) achieving ($p=0.020$) and (iv) objective/objectivity ($p=0.019$). This is due to a decrease in students' lack of interest, along with their belief that accounting is mainly about the study of numbers and is an objective subject, involving little subjectivity or uncertainty. As to the other degree courses/discipline areas, significant differences were found only for reality/meaning behind accounting ($p=0.000$), suggesting that, over time, students' intention to understand the reality/meaning behind accounting decreases.

These results are in line with the literature that argues that subject area has an influence on student learning (e.g. Entwistle, 2004; Lucas, 2001). Specifically, they point out the differences between specialist and non-specialist students' conceptions of (and their motivations for) learning accounting (Lucas and Meyer, 2005). In addition, the results suggest that, especially in the case of accounting programmes, the deep learning patterns concerning students' conceptions of accounting and expectations of learning accounting decrease over time. Further research is required to investigate this evidence and its possible causes.

1.3.4.2. The impact of gender

Tables 9 and 10 present the mean scores for the ELAcc (1.4) subscales according to gender. Small variations in sample sizes are due to missing data. Independent sample t-tests were carried out to test for any differences between the male and female students.

Table 9- Mean Scores (Standard Deviation) of ELAcc Subscales across Gender: 1st Semester

Expectations of Learning Accounting (ELAcc)	Female		Male	
	N= 180		N= 164	
	M	SD	M	SD
Reality/Meaning behind Accounting	3.13	0.34	3.06	0.42
Social/Economic Importance of Accounting	3.06	0.40	2.96	0.55
Enjoyment	2.72	0.51	2.58	0.54
Questioning	2.98	0.40	2.89	0.47
Achieving	2.83	0.54	2.83	0.57
Deep Learning Processes	2.95	0.30	2.86	0.38
Lack of Interest	1.30	0.69	1.65	0.80
Exam Focus	0.93	0.50	1.23	0.65
Numbers	2.30	0.67	2.20	0.74
Worry	2.42	0.73	2.13	0.70
Objective/Objectivity	2.29	0.42	2.38	0.45
Surface Learning Processes	1.85	0.35	1.91	0.41

For the first semester, the results show statistically significant gender differences for (i) enjoyment ($p=0.012$), (ii) lack of interest ($p=0.000$), (iii) worry ($p=0.000$), (iv) exam focus ($p=0.000$), and (v) social and economic importance of accounting ($p=0.048$).

Accordingly, it is interesting to note that the female students tend to expect to enjoy more the study of accounting and try to understand its social and economic importance; while the male students show a greater lack of interest in that same study and their main intention is to pass the examination. The female students also tend to worry more about the study of accounting.

Significant differences were found between deep and surface learning processes for the female students ($p=0.000$) and also for the male students ($p=0.000$). These results show a preference for a deep learning pattern concerning students' conceptions of accounting and expectations of learning accounting. Nevertheless, the male students tend to score higher on surface learning processes than the female students.

Table 10 - Mean Scores (Standard Deviation) of ELAcc Subscales across Gender: 2nd Semester

Expectations of Learning Accounting (ELAcc)	Female		Male	
	N= 197		N= 141	
	M	SD	M	SD
Reality/Meaning behind Accounting	2.99	0.42	2.91	0.52
Social/Economic Importance of Accounting	2.95	0.38	2.87	0.56
Enjoyment	2.60	0.55	2.58	0.62
Questioning	2.94	0.46	2.82	0.50
Achieving	2.62	0.57	2.64	0.69
Deep Learning Processes	2.82	0.34	2.76	0.46
Lack of Interest	1.36	0.75	1.63	0.85
Exam Focus	0.99	0.56	1.30	0.70
Numbers	1.90	0.70	2.08	0.71
Worry	2.34	0.72	2.18	0.67
Objective/Objectivity	2.17	0.48	2.38	0.54
Surface Learning Processes	1.75	0.41	1.91	0.47

Concerning the second semester, the results show statistically significant gender differences for (i) lack of interest ($p=0.003$), (ii) worry ($p=0.035$), (iii) numbers ($p=0.019$), (iv) exam focus ($p=0.000$), questioning ($p=0.018$) and (v) objective/objectivity ($p=0.000$).

Therefore, when contrasting gender differences, it is interesting to note that, once more, the male students show greater lack of interest in the study of accounting and they focus mainly on passing the exam; while the female students tend to worry more about the study of accounting and try to identify and question the underlying principles on which accounting is based. In addition, the male students tend to believe more (than the female students) that accounting is mainly about the study of numbers and is an objective subject.

Once again, significant differences were found between deep and surface learning patterns for the female students ($p=0.000$) and for the male students ($p=0.000$). This shows a preference for a deep learning pattern concerning students' conceptions of accounting and expectations of learning accounting. However, similarly, the male students tend to score higher on surface learning patterns than the female students.

Independent sample t-tests were carried out to test for any differences across the two time trials. Therefore, between the first and the second semesters of introductory

accounting, students' conceptions of accounting and expectations of learning accounting changed as follows.

Concerning the female students, there were found significant differences for the deep patterns of learning ($p=0.001$) and the surface patterns of learning ($p=0.012$). That is, although the female students show a preference for a deep pattern of learning regarding their expectations and conceptions of accounting, the total score of the deep patterns of learning decreases over time.

In particular, significant differences were found for the following subscales: (i) enjoyment ($p=0.026$), (ii) numbers ($p=0.000$), (iii) achieving ($p=0.000$), (iv) reality/meaning behind accounting ($p=0.000$), (v) social/economic importance of accounting ($p=0.005$) and (vi) objective/objectivity ($p=0.009$). This suggests that, over time, female students' expectations of enjoying the study of accounting decrease, along with their motivations to succeed, intention to understand the reality/meaning behind accounting and their belief that accounting enables a new view of business, the economy and society. Finally, female students' beliefs about accounting being mainly the study of numbers and being an objective subject also decrease.

As for the male students, significant differences were found for the deep learning processes ($p=0.037$), suggesting that although the male students show a preference for a deep measures as to their expectations and conceptions of accounting, this pattern tends to decrease over time. More specifically, significant differences were found for (i) achieving ($p=0.010$) and (ii) reality/meaning behind accounting ($p=0.004$). This suggests that both male students' motivations to succeed and their intention to understand the reality/meaning behind accounting decrease over time.

These results seem to be consistent with the literature that argues that gender has an impact on students' learning and studying behaviour (e.g. Duff, 1999; Duff *et al.*, 2004; Flood and Wilson, 2008). Particularly, they suggest that the male students tend to score higher on surface learning patterns than the female students. Furthermore, over time, the deep learning patterns concerning both male and female students' expectations and conceptions of accounting tend to decrease. Further research is required to investigate this phenomenon and its possible causes.

1.4. CONCLUDING REMARKS

The current study aims at contributing to the stream of research that focuses on accounting students' conceptions of accounting and their expectations of learning it so as to develop a better understanding of student learning within introductory accounting subject matter (e.g. Lucas, 2000, 2001; Lucas and Meyer, 2004; 2005; Duff, 2004; Ballantine *et al.*, 2008; Flood and Wilson, 2008; Byrne *et al.*, 2009; Duff *et al.*, 2010).

There is evidence which suggests that students with different backgrounds (according to subject area) show differences in their learning and studying behaviour (e.g. Entwistle, 2004; Lucas and Meyer, 2004; 2005). There is also evidence that suggests that conceptions of accounting and expectations of learning it play an important role in the learning process (e.g. Lucas and Meyer, 2005; Duff *et al.*, 2010). As a result, the current study reports the results of research into Portuguese introductory accounting students' conceptions of accounting and expectations of learning the subject of accounting within higher education. The study also investigates whether subject area and gender have any impact on the mentioned aspects.

This study contributes to the literature in different ways. Firstly, it validates the ELAcc inventory within Portuguese higher education. Secondly, the study examines data collected from a sample of students (accounting and non-accounting students) at five higher education institutions (public/private/university/polytechnic), providing a wider perspective concerning students' conceptions of accounting and expectations of learning accounting. Thirdly, the results are in line with the literature that argues that subject area has an influence on learning aspects (e.g. McCunne and Hounsell, 2005). Indeed, they point out the differences between specialist and non-specialist students' conceptions of accounting and their expectations of learning accounting (Lucas and Meyer, 2005). This circumstance stresses the need to consider the different programmes (subject area) in which introductory accounting is taught. Furthermore, especially in the case of accounting students, the results suggest that, over time, the deep learning processes relating to students' conceptions of accounting and expectations of learning accounting tend to decrease. Thus, further research is needed to investigate this evidence and its possible causes. Finally, the results are consistent with the literature that argues that gender has an impact on students' learning and studying behaviour (e.g. Duff, 1999; Flood and Wilson, 2008). Specifically, the findings suggest that the male students score higher on surface

learning patterns than the female students. Similarly, over time, the deep learning patterns concerning both male and female students tend to decrease. Further research is required to investigate this trend as to its possible causes. Nevertheless, in the current study, the collection of data did not happen in one single academic year, thus, no matched-pair of responses were obtained in order to assess changes concerning students' conceptions of accounting over that period. Therefore, future research could tackle this limitation collecting data within the same academic year. Also, "it is plausible that other variables (e.g. age and social background) reflect different prior experiences of learning and interpretations of the context of learning" (Ballantine *et al.*, 2008, p. 199), thus, the investigation of these variables would be of great value. Moreover, future research should consider the use of other research methods, such as those used in phenomenographic studies (e.g. Lucas, 2000, 2001) so as to further investigate students' conceptions of accounting within introductory accounting.

2. STUDENTS' MOTIVES, EXPECTATIONS AND PREPAREDNESS FOR HIGHER EDUCATION

2.1. INTRODUCTION

Students' learning behaviour is strongly related to their motivation (e.g. Ramsden, 1997; Fazey and Fazey, 2001; Trigwell and Prosser, 2004; Christie *et al.*, 2006; Gibney *et al.*, 2011). As explained by Heikkilä and Lonka (2006, p. 100), "students' approaches to learning are connected to several other aspects of students' learning, such as conceptions of learning, motivational orientations and regulation of learning". In turn, "the idea of motivation as a personality trait has been largely abandoned and researchers acknowledge that motivation may vary in terms of context and subject area" (Heikkilä and Lonka, 2006, p. 99, 100). Motivation is different in its nature. According to Fazey and Fazey (2001, p. 347), "the desire to act (motivation) can be described as being internally and externally stimulated". Thus, motivation can be intrinsic or extrinsic; and "each of these types of motivation has its own logic and may be associated with different degrees of engagement, types of learning behaviours and likelihood of success" (Gibney *et al.*, 2011, p. 354). For example, on the one hand, there is evidence of a strong relationship between intrinsic motivation and deep approaches to studying (e.g. Ramsden, 1997; Fazey and Fazey, 2001). On the other hand, "students who study because of vocational aspirations may adopt a surface learning approach" (De Lange and Mavondo, 2004, p. 434). In light of this, it is important to understand that undergraduate students' motivation depends on "the students' perceptions of the purpose of university education" as well as the reasons which led them to go to higher education (Breen and Lindsay, 1999, p. 80).

The literature reports that extrinsic motivations, such as career and academic reasons (course-specific extrinsic motivation), are quite often at the top of students' motivations to go to higher education. Indeed, Rawson (2000, p. 229) mentions that "an important potential outcome of the higher education process for the great majority of participants is the achievement of a recognised qualification". Nevertheless, research also reveals that "some students' are motivated by the notion of learning (intellectual growth) as opposed to the direct link to an enhanced career and financial future" (De Lange and Mavondo, 2004, p. 434). Other motivations are related to parental influence (and what others expect of them), enjoyment and vocational motives (e.g. Byrne and Flood, 2005; Christie *et al.*, 2006; Gibney *et al.*, 2011). In addition, research reveals that "the initial

motivation for participation at higher education has an impact on how students subsequently fare at university” (Gibney *et al.*, 2011, p. 354).

Marton and Säljö (1976, p. 125) explain that “students adopt an approach determined by their expectations of what is required of them”. Also, Heikkilä and Lonka (2006, p. 103) argue that “the notion of approach to learning describes both what students do and why they do it”. Thus, motivation plays a key role on student learning. However, students’ approaches to learning are affected by other factors. Students’ preparedness for going to higher education is also a key aspect within learning behaviour. Christie *et al.* (2006) and Gibney *et al.* (2011) describe the contrast that students experience, in terms of learning environment, between secondary education and higher education. Secondary education learning environments are perceived to be highly structured and supportive in comparison to higher education learning environments. However, this perception is intensified/increased by “a lack of understanding of the nature of university learning and the importance of autonomous and independent reading and writing” (Gibney *et al.*, 2011, p. 363). Autonomous learning is an essential aspect of learning behaviour within higher education and, ultimately, represents one of its main goals. According to Fazey and Fazey (2001, p. 345, 346), “autonomous people are intrinsically-motivated, perceive themselves to be in control of their decision-making, take responsibility for the outcomes of their actions and have confidence in themselves”. Thus, autonomous learning is associated with deep approaches to learning. However, one might speculate about students having already developed an autonomous learning behaviour at this point in their lives (e.g. Fazey and Fazey, 2001).

The literature shows that, in general, students arrive at university possessing high expectations about playing an active role in university life and tend to possess high confidence in their academic and personal skills. For example, Christie *et al.* (2006, p. 362) report that students’ expectations “both of what university could provide them with and of the time they would have available for ‘student life’” are quite often unrealistic “given the conflicting demands on their time”. Students’ high confidence in their academic and personal skills might have different consequences. On the one hand, it may lead students to display positive attitudes towards learning (e.g. Fazey and Fazey, 2001). On the other hand, it “may limit students’ ability to recognize the need to acquire new skills essential in their new environment and immediately disadvantage them” (Gibney *et al.*, 2011, p. 354).

Nevertheless, given the diversity in the student population within higher education, students vary in the way they approach learning and, in this particular time in their lives, anxiety is quite high both for personal and academic reasons (Christie *et al.*, 2006; Gibney *et al.*, 2011).

Accounting education literature frequently reports that accounting students score high on surface or strategic approaches and perceive “learning accounting as mastering a ‘technique’” (Flood and Wilson, 2008, p. 229). Also, as acknowledged by Beattie *et al.* (1997, p. 10), “it is widely believed that accounting attracts a relatively high proportion of reproducing and achieving students”. In fact, Beattie *et al.* (1997, p. 10) question whether “the inherent approach to learning of accounting undergraduates differ from that of the general undergraduate population?”. In order to better understand this phenomena and answer these and other questions, Byrne and Flood (2005, p. 112) examined the antecedents of students’ approaches to learning. The analysis of students’ motivations for going to higher education, as well as their preparedness and expectations, increases the knowledge of student learning within higher education.

The current study examines Portuguese introductory accounting students’ motives, expectations and preparedness for higher education. It also examines whether subject area and gender have any impact on the mentioned aspects. The study is structured as follows. In Section 2, the literature on the topic is reviewed focusing on introductory accounting. In Section 3, the empirical study is presented along with the research methodology and the analysis of the results. Finally, concluding remarks and suggestions for future research are presented in Section 4.

2.2. STUDENTS’ MOTIVES, EXPECTATIONS AND PREPAREDNESS WITHIN ACCOUNTING

There is a well-established body of research on student learning within introductory accounting (e.g. Lucas, 2000, 2001; Mladenovic, 2000; Byrne and Flood, 2004, 2005, 2008; Lucas and Meyer, 2004, 2005; Byrne *et al.*, 2002, 2009; Duff *et al.*, 2010, Byrne *et al.*, 2012). Aiming at providing answers to concerns relating to student attrition, these studies examined students’ experiences of learning accounting and identified the characteristics of student learning behaviour within this subject matter.

Byrne and Flood (2005) examined the perceptions of first-year accounting students at the beginning of their studies in higher education at an Irish university. To do so, the

authors developed the questionnaire: *Motives, Expectations and Preparedness for University*. Byrne and Flood (2008, p. 209) used that same questionnaire and found that prior academic achievement is crucial for first-year academic performance; and that factors/features such as: lower academic ability, no prior knowledge of accounting, and a lack of confidence in one's abilities were strongly associated with poor academic performance. Further developments of this study led to the examination of the previously mentioned aspects in other countries (e.g. Arquero *et al.*, 2009; Byrne *et al.*, 2012). Byrne *et al.* (2012) report differences concerning students' motives, expectations and preparedness for going to higher education between Ireland, the UK, Spain and Greece, which, on the whole, seem to be related to cultural aspects.

2.3. EMPIRICAL STUDY

2.3.1. *The purpose of the study*

Drawing on the reference studies and answering the calls for replicating this analysis elsewhere (e.g. Byrne and Flood, 2005; 2008; Byrne *et al.*, 2012), the current study further extends it to the Portuguese higher education context. Data was collected from a sample of 253 students at five higher education institutions, universities and polytechnics both public and private, in the north of Portugal. Students from all five institutions were exposed to similar learning environments as a result of the Bologna process. Introductory accounting encompasses courses such as elementary accounting and introductory financial accounting. These courses are taught in a variety of degree programmes, namely, accounting, economics, management, international business, public administration, marketing, sports management and hotel management. There is evidence that studying and learning aspects vary according to subject area (Entwistle, 2000, 2004; Lucas and Meyer, 2005; McCune and Hounsell, 2005). In addition, the literature mentions that gender might influence students' learning and studying behaviour (e.g. Duff *et al.*, 2004; Flood and Wilson, 2008; Richardson, 2007). Thus, the study also examines whether there is any impact on students' motives, expectations and preparedness for higher education according to subject area and gender. The analysis focused on three groups of discipline areas: (i) accounting, (ii) economics and management, and (iii) other courses.

2.3.2. Research instrument and data collection

Motives, Expectations and Preparedness for Higher Education is a questionnaire designed by Marann Byrne and Barbara Flood (Byrne and Flood, 2005). It contains “open and closed questions on some of the factors which are antecedents of learning approaches and which also impact on student retention in higher education” (Byrne and Flood, 2005, p. 113).

As Byrne *et al.* (2012, p. 137) explain, “the questions were devised based on the researchers’ examination and interpretation of the key issues identified in prior studies affecting students’ motives, expectations and preparedness for higher education”. In particular, students are “asked to rate the importance of a range of factors in their decision to enter higher education and commence their studies” (e.g. find a good job or develop intellectual abilities); “to evaluate the extent to which their prior experiences had prepared them for undertaking a range of learning activities in higher education (e.g. working in groups, IT usage, independent study, etc.)”; and classify/grade “how well they believe their time in higher education would enable them to achieve certain learning outcomes and how confident they are in their academic ability (e.g. develop new skills, pass all examinations, etc.)” (Byrne *et al.*, 2012, p. 137).

Further developments led to the exploration of the questionnaire’s factor structure (see Figure 1). Accordingly, eight factors/scales were extracted (Byrne *et al.*, 2012, p. 138), these include items relating to: “the extent to which students believe their prior educational experiences prepared them for the independent learning environment of higher education” (*independent learner*); “students’ expectations or confidence concerning their academic ability” (*academic confidence*); students’ expectations about “the chance to develop as a person” (*self development*); “students’ motives for coming into university and (...) career-focused goals” (*career focus*); “the notion that students are motivated to proceed to higher education in order to become better educated, to grow intellectually and to acquire new knowledge and skills (...) capturing students’ expectations that their time in higher education will allow them to achieve these educational goals” (*intellectual growth*); “students’ belief that third level education will provide them with the opportunities to meet new people and to engage in social and sporting activities” (*social opportunities*); “students’ views as to whether their prior education has equipped them with the skills needed to: use a computer; write assignments; participate in class and ask for

help” (*skills confidence*); and, finally, “items which relate to societal expectations towards progressing to higher education” (*social norm*).

Figure 1- ‘Motives, Expectations and Preparedness for Higher Education’ scales

Scales	Items (#)
Independent Learner (7#)	3.1; 3.2; 3.3; 3.4; 3.5; 3.11; 3.12
Skills Confidence (5#)	3.6; 3.7; 3.8; 3.9; 3.10
Academic Confidence (4#)	6.1; 6.2; 6.3; 6.4
Self Development (6#)	1.2; 1.4; 1.8; 1.12; 1.13; 5.2
Intellectual Growth (6#)	1.17; 1.20; 5.1; 5.4; 5.5; 5.7
Social Opportunities (5#)	1.1; 1.9; 1.16; 5.3; 5.6
Social Norm (4#)	1.3; 1.7; 1.14; 1.18
Career focus (5#)	1.5; 1.6; 1.10; 1.15; 1.19

Source: Byrne *et al.* (2012)

To date, the questionnaire has been used in Ireland, the UK, Spain and Greece. To our knowledge, this is the first time the questionnaire has been used within Portuguese higher education.

Permission for using and translating the inventory was given by Professor Marann Byrne in March 2012. The questionnaire was translated into Portuguese by Teresa Pataco with the assistance of the authors concerning specific adjustments consistent with the purpose of the study³³. The translation process was based on the functionalist approach; focusing on the function of the translated text, that is, the target text (e.g. Munday, 2001).

In early May, a pilot test was carried out in order to evaluate the Portuguese version of the questionnaire and to assess non-accounting students’ reaction towards the section relating to the ‘reasons for choosing a course/module in accounting’. Accordingly, there were students from programmes other than accounting that expressed their wish to attend introductory accounting courses even if not compulsory; thus, non-accounting students would answer that section only if attending introductory accounting was their option.

³³ For example, the word ‘university’ was adapted to ‘higher education’. Also, as the current study aimed at assessing the perceptions of both accounting and non-accounting students, the name of the section ‘reasons for choosing a degree course in accounting’ was changed to “reasons for choosing a course/module in accounting”.

The questionnaire was distributed to 336 students of introductory accounting from across the five institutions between the 21st May and the 8th June 2012. A total of 253 questionnaires were completed³⁴.

The questionnaire acknowledged the source and, apart from the specific instructions for answering the questionnaire, the aim of the study was presented and confidentiality of the answers was given. Data was collected in class and the students' participation was voluntary. This process was closely followed up by the members of the research team.

2.3.3. Descriptive analysis

Of the 253 complete questionnaires, 58% were female students and 42% were male students. The mean age of the female students was 21.4 years old. For the male students, it was 22.6 years old. Ninety five percent of the respondents were Portuguese nationals, with the remainder from other countries, namely, Brazil, Cape Verde, Spain, France, Italy, England, Mozambique and Venezuela. As to disciplinary area/programmes: 23.41% of the students were from accounting, 45.24% from economics and management, and 31.35% from other courses. Around 85% of the sample is composed of first-year students.

2.3.4. Results and analyses

The statistical procedures and data analyses were carried out using SPSS 20. Students responded to the statements/items according to a five-point Likert scale, varying from 1 (very unimportant/very badly/not at all confident) to 5 (very important/very well/very confident).

2.3.4.1. The impact of subject area

Tables 1 to 7 present the descriptive statistics along with the statistical significance [Sig. * represents a p-value < 0.05; Sig. ** represents a p-value < 0.001] across subject area. Small variations in sample size are due to missing data (about programme and gender). The Kruskal-Wallis test was carried out to test for differences between accounting, economics and management, and other programmes.

³⁴ There were students who did not answer the section 'reasons for choosing a course in accounting' because they would not attend introductory accounting if it was optional. Therefore, it was decided to consider only the complete questionnaire for the purpose of this study.

As to the motives that were most important for students to go to higher education (see Table 1), significant differences were found for the following items: 'I wished to study Accounting in an in-depth way' ($p=0.000$); 'Progressing to university is what others expected of me' ($p=0.025$), and 'I really want to get a university degree' ($p=0.021$). Accordingly, compared with non-accounting students, accounting students seem to be more willing to study accounting in a more profound/deep way than non-accounting students; while not so worried about getting a higher education degree, and seem to be less vulnerable to external influence.

Concerning the importance of the opinion of other people in their decision to go to higher education (see Table 2), a significant difference was found for the following item: 'Parents' ($p=0.001$). Economics and management students seem to value more their parents' opinion than the rest of the students.³⁵

As for students' preparedness for higher education (see Table 3), a significant difference was found for the following item: 'Being able to work independently without much direction from a teacher' ($p=0.022$). Apparently, accounting students feel less prepared to work in an autonomous way when compared with non-accounting students.

Regarding the most important reasons for students choosing a degree course/module in Accounting (see Table 4), significant differences were found for: 'I enjoyed Accounting in school' ($p=0.001$); 'I consider that I have the skills and abilities which are suited to the study of accounting' ($p=0.000$); 'I want to qualify as a professional accountant and view this degree as a good stepping-stone' ($p=0.000$); 'I am attracted by the career prospects available to accounting graduates' ($p=0.001$); and 'I want to learn more about accounting' ($p=0.000$). Not surprisingly, in these cases, accounting students score higher than non-accounting students (e.g. Lucas and Meyer, 2004). Finally, a significant difference was also found for 'My friends also planned to come to this higher education institution' ($p=0.001$), with students from programmes other than accounting, economics and management scoring higher than the rest of the students.

³⁵ This could be related to the status/importance given to Economics and Management programmes in Portuguese society/culture.

As for students' most important expectations (see Table 5) significant differences were found for the item 'to broaden my horizons' ($p=0.015$), with accounting students scoring lower than non-accounting students. It seems that accounting students do not expect higher education to enable them to broaden their horizons as much as non-accounting students.

Concerning the confidence students feel about their own abilities (see Table 6), significant differences were found for the following items: 'your ability to pass all your exams at the first attempt' ($p=0.000$), 'your ability to perform above average in your university studies' ($p=0.008$), and 'your ability to achieve results in the top 10% of your class' ($p=0.006$). In all these cases, accounting students appear to be less confident than non-accounting students. Finally, significant differences were found for the importance students place in doing well in their higher education degree ($p=0.012$) (see Table 7). In this case, accounting students seem to be less worried about doing well in their degree when compared with non-accounting students.

In summary, a pattern seems to emerge from data concerning accounting students. That is, on the one hand, accounting students seem to value the study of accounting (and other career-focused aspects relating to accounting) more than the rest of the students; on the other hand, these students seem to feel less prepared to work independently, less confident about achieving the best results (i.e. top 10%) or even achieving results above the average, and feel less enthusiastic about going to higher education and its inherent possibilities (i.e. the broadening of horizons) than the rest of the students. Therefore, although accounting students feel more enthusiastic with the prospect of studying accounting than other students, it appears that they lack aspects of (or relating to) academic confidence, intellectual growth and independent learner skills displayed by other students.

2.3.4.2. The impact of gender

Tables 1 to 7 present the descriptive statistics along with the statistical significance [Sig.* represents a p -value < 0.05 ; Sig.** represents a p -value < 0.001] according to gender. The Mann-Whitney test was conducted to test for differences between the male and female students. Significant differences were found especially for two of the sections of the questionnaire: the motives for going to higher education and the preparedness for higher education. Within the former section, on the one hand, the female students score higher than the male students on the following items: 'I want to develop my mind and intellectual

abilities' ($p=0.045$); 'I want to prove to myself that I can be successful at university' ($p=0.033$); 'I want the chance to broaden my horizons and face new challenges' ($p=0.001$); 'I believe that university will give me the opportunity to improve myself-belief and self-confidence' ($p=0.034$); 'I wanted to become a better educated person' ($p=0.002$); 'This degree will enable me the education requirements for my career' ($p=0.009$); 'This degree will help me develop knowledge and skills which will be useful in my life after university' ($p=0.003$); and 'I really want to get a university degree' ($p=0.038$). On the other hand, the male students score higher than the female students on the following item: 'I rather drifted into higher education' ($p=0.011$). Data shows that the female students score higher than the male students on items related to 'self development' and 'intellectual growth' scales (Byrne *et al.*, 2012). This might suggest that the female students seem to be more determined and more aware of what they want to achieve in life than the male students. Within the latter section, again, the same pattern can be observed as the female students score higher than the male students on the following items: 'Being able to initiate your own study activities' ($p=0.014$); 'Being able to take responsibility for your own learning' ($p=0.004$); 'Being willing to ask for help from your lecturers/tutors' ($p=0.032$); 'Being confident about your ability to use a computer' ($p=0.020$); 'Being confident about your ability to complete written assignments' ($p=0.029$); 'Being able to evaluate your own progress' ($p=0.046$); 'Being able to organise your own life generally' ($p=0.041$). The female students score higher than the male students on items relating to 'independent learner' and 'skills confidence' scales (Byrne *et al.*, 2012). Apparently, the female students feel more prepared to face higher education requirements and responsibilities than the male students.

In contrast, as shown in Table 6, it is interesting to note that, however, the male students feel more confident about their 'ability to perform above average (...)' ($p=0.000$), and their 'ability to achieve results in the top 10%' of their class ($p=0.002$). Thus, the male students score higher than the female students on items related to 'academic confidence' scale (Byrne *et al.*, 2012). This might mean that male students feel overconfident about their own abilities to do well in higher education, or that the female students feel more insecure or, perhaps, they are more realistic about their ability to achieve the best results when compared with other people.

Further significant differences were found for 'I wasn't too bothered what I studied at university' ($p=0.046$), in which the male students score higher than the female students; and for 'To experience intellectual growth and stimulation' ($p=0.025$), in which the female students score higher than the male students. Again, a similar pattern emerges from the data, as the female students show great expectations about their passage through higher education, while the male students seem to be less aware of their intentions and wishes during this stage of their life.

Table 1 - The importance of the following in the decision to come to higher education (Motives)	Accounting			Economics & Management			Other			Female			Male			Sig	
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Stand Dev.	Mean score	Median		Std. Dev.
1. I like the idea of participating in sports and social activities at university	3.63	4.00	1.049	3.47	4.00	1.107	3.76	4.00	0.950		3.60	4.00	0.928	3.60	4.00	1.196	
2. I want to develop my mind and intellectual abilities	4.46	4.00	0.502	4.52	5.00	0.536	4.32	4.00	0.651		4.51	5.00	0.502	4.34	4.00	0.643	*
3. I rather drifted into higher education	3.34	4.00	1.240	3.07	3.00	1.692	3.46	4.00	1.534		3.03	3.00	1.601	3.57	4.00	1.422	*
4. I want to prove to myself that I can be successful at university	4.27	4.00	0.739	4.37	4.00	0.732	4.27	4.00	0.828		4.39	5.00	0.737	4.21	4.00	0.786	*
5. I wished to study Accounting in an in-depth way	3.95	4.00	0.860	3.23	3.00	1.137	3.06	3.00	1.158	**	3.47	4.00	1.096	3.18	4.00	1.164	
6. Completing this degree will increase my earning power	3.90	4.00	0.941	3.89	4.00	0.845	3.99	4.00	0.725		3.90	4.00	0.841	3.94	4.00	0.822	
7. All my friends were going to university	2.36	2.00	1.013	2.25	2.00	1.102	2.56	2.00	1.318		2.27	2.00	1.111	2.49	2.00	1.216	
8. I want the chance to broaden my horizons and face new challenges	4.37	4.00	0.613	4.44	4.00	0.565	4.43	4.00	0.655		4.51	5.00	0.554	4.23	4.00	0.638	*
9. I am attracted by the opportunities for an active social life	3.66	4.00	1.044	3.63	4.00	0.989	3.92	4.00	0.764		3.75	4.00	0.891	3.67	4.00	1.044	
10. I believe that a university degree will open up new opportunities for me in the future	4.54	5.00	0.567	4.59	5.00	0.607	4.56	5.00	0.615		4.59	5.00	0.571	4.54	5.00	0.634	
11. I am interested in pursuing post-graduate studies	3.93	4.00	0.868	4.04	4.00	0.835	4.01	4.00	0.792		4.05	4.00	0.858	3.96	4.00	0.788	
12. I believe that university will give me the opportunity to improve my self-belief and self-confidence	4.00	4.00	0.871	3.86	4.00	0.871	4.00	4.00	0.816		4.01	4.00	0.855	3.81	4.00	0.859	*
13. I want to develop a better understanding of myself	3.97	4.00	0.742	3.80	4.00	0.864	3.95	4.00	0.749		3.95	4.00	0.816	3.79	4.00	0.774	
14. Having done well in school, going to university seemed like the natural thing to do	3.37	3.00	1.128	3.68	4.00	1.093	3.71	4.00	0.936		3.56	4.00	1.089	3.67	4.00	1.026	
15. This degree will enable me to get a good job	4.05	4.00	0.753	4.20	4.00	0.755	4.11	4.00	0.716		4.19	4.00	0.727	4.07	4.00	0.756	
16. I wanted the chance to meet new people and make new friends	3.73	4.00	0.762	3.48	4.00	1.050	3.70	4.00	0.925		3.59	4.00	0.973	3.63	4.00	0.927	
17. I want to become a better educated person	4.53	5.00	0.504	4.61	5.00	0.526	4.47	5.00	0.695		4.65	5.00	0.493	4.40	4.00	0.657	*
18. Progressing to university is what others expected of me	3.12	3.00	1.247	3.58	4.00	1.167	3.67	4.00	1.071	*	3.45	4.00	1.181	3.54	4.00	1.184	
19. This degree will enable me the education requirements for my career	4.10	4.00	0.885	4.24	4.00	0.720	4.10	4.00	0.841		4.27	4.00	0.782	4.03	4.00	0.806	*
20. This degree will help me develop knowledge and skills which will be useful in my life after university	4.44	4.00	0.565	4.50	5.00	0.553	4.27	4.00	0.746		4.53	5.00	0.501	4.25	4.00	0.741	*
21. I really want to get a university degree	4.19	4.00	0.798	4.50	5.00	0.682	4.33	4.00	0.780	*	4.47	5.00	0.656	4.24	4.00	0.845	*
22. Coming to university affords me three more years to decide what I really want to do	2.39	2.00	1.000	2.80	3.00	1.305	2.81	3.00	1.272		2.60	3.00	1.212	2.83	3.00	1.270	

Table 2 - The importance of external opinions in the decision to come to higher education	Accounting			Economics & Management			Other			Female			Male				
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig
1. Parents	3.75	4.00	1.226	4.34	5.00	0.840	3.82	4.00	1.258	*	4.03	4.00	1.129	4.03	4.00	1.103	
2. Brothers/Sisters	3.10	3.00	1.322	3.36	4.00	1.427	3.09	3.00	1.487		3.25	3.00	1.399	3.15	3.00	1.459	
3. Relatives	2.98	3.00	1.196	3.10	3.00	1.262	2.97	3.00	1.377		3.03	3.00	1.256	3.04	3.00	1.317	
4. Friends	3.25	3.00	1.108	3.35	4.00	1.072	3.37	4.00	1.100		3.34	4.00	1.065	3.31	4.00	1.136	
5. Subject teachers	3.02	3.00	1.122	3.18	3.00	1.199	3.13	3.00	1.334		3.23	4.00	1.192	2.96	3.00	1.251	
6. Career guidance teachers	2.24	2.00	1.119	2.39	2.00	1.237	2.22	2.00	1.216		2.34	2.00	1.206	2.22	2.00	1.200	

Table 3 - Preparedness for higher education	Accounting			Economics & Management			Other			Female			Male				
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig
1. Knowing what is expected of you academically in university	3.56	4.00	0.815	3.67	4.00	0.889	3.70	4.00	0.822		3.66	4.00	0.800	3.64	4.00	0.914	
2. Being able to work independently without much direction from a teacher	3.59	4.00	0.853	3.88	4.00	0.874	3.68	4.00	0.743	*	3.82	4.00	0.836	3.65	4.00	0.825	
3. Being able to initiate your own study activities	3.83	4.00	0.931	3.98	4.00	0.852	3.80	4.00	0.740		4.00	4.00	0.788	3.74	4.00	0.883	*
4. Being able to plan your study in a time effective manner to meet all your deadlines	3.63	4.00	0.963	3.71	4.00	0.890	3.68	4.00	0.870		3.74	4.00	0.879	3.61	4.00	0.919	
5. Being able to take responsibility for your own learning	4.05	4.00	0.655	3.98	4.00	0.798	3.96	4.00	0.688		4.11	4.00	0.706	3.84	4.00	0.742	*
6. Being willing to ask for help from your lecturers/tutors	3.85	4.00	0.761	3.91	4.00	0.847	3.72	4.00	0.831		3.96	4.00	0.713	3.68	4.00	0.938	*
7. Being confident about your ability to use a computer	4.07	4.00	0.888	3.97	4.00	0.917	4.14	4.00	0.828		4.15	4.00	0.858	3.91	4.00	0.896	*
8. Being comfortable working in groups	4.03	4.00	0.718	4.13	4.00	0.710	4.11	4.00	0.751		4.18	4.00	0.661	4.01	4.00	0.795	
9. Being confident about your ability to complete written assignments (essays & projects)	3.71	4.00	0.852	3.83	4.00	0.808	3.92	4.00	0.747		3.92	4.00	0.753	3.70	4.00	0.849	*
10. Being willing to participate in class	3.73	4.00	0.715	3.70	4.00	0.786	3.77	4.00	0.750		3.77	4.00	0.693	3.68	4.00	0.842	
11. Being able to evaluate your own progress	3.78	4.00	0.872	3.85	4.00	0.801	3.90	4.00	0.691		3.93	4.00	0.711	3.74	4.00	0.862	*
12. Being able to organise your own life generally	3.93	4.00	0.828	3.93	4.00	0.900	3.99	4.00	0.792		4.04	4.00	0.804	3.82	4.00	0.888	*

Table 4 - Reasons for choosing a degree/course/module in Accounting	Accounting			Economics & Management			Other			Female			Male			Sig	
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Std. Dev.	Mean score	Median		Std. Dev.
1. I enjoyed Accounting in school	3.29	4.00	1.463	2.55	3.00	1.370	2.49	3.00	1.329	*	2.79	3.00	1.439	2.60	3.00	1.366	
2. I consider that I have the skills and abilities which are suited to the study of Accounting	3.80	4.00	0.761	3.02	3.00	1.182	2.99	3.00	1.019	**	3.26	4.00	1.064	3.09	3.00	1.129	
3. I wasn't too bothered what I studied at university	2.78	3.00	1.233	2.91	3.00	1.141	3.18	3.00	1.059		2.84	3.00	1.198	3.14	3.00	1.041	*
4. I want to qualify as a professional accountant and view this degree as a good stepping-stone	3.63	4.00	1.113	2.34	2.00	1.166	2.24	2.00	1.190	**	2.68	3.00	1.307	2.50	3.00	1.262	
5. I am attracted by the career prospects available to accounting graduates	3.64	4.00	0.996	3.01	3.00	1.201	2.96	3.00	1.214	*	3.18	3.00	1.155	3.07	3.00	1.249	
6. I want to learn more about Accounting	4.12	4.00	0.811	3.40	4.00	1.037	3.25	4.00	1.203	**	3.59	4.00	0.994	3.43	4.00	1.214	
7. My friends also planned to do this degree	1.73	1.00	0.887	1.83	1.00	1.038	2.15	2.00	1.321		1.81	1.00	1.012	2.04	2.00	1.228	
8. My friends also planned to come to this (higher education) institution	1.80	2.00	0.924	1.80	1.00	1.049	2.43	2.00	1.327	*	1.91	1.50	1.114	2.10	2.00	1.197	

Table 5 – Expected outcomes (Expectations)	Accounting			Economics & Management			Other			Female			Male			Sig	
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Std. Dev.	Mean score	Median		Std. Dev.
1. To develop new skills	4.42	4.00	0.593	4.54	5.00	0.518	4.37	4.00	0.664		4.52	5.00	0.554	4.37	4.00	0.622	
2. To increase my self-esteem and self-confidence	4.08	4.00	0.749	4.18	4.00	0.698	4.22	4.00	0.613		4.18	4.00	0.711	4.15	4.00	0.656	
3. To have a good time	3.76	4.00	1.072	4.05	4.00	0.901	4.04	4.00	0.649		3.97	4.00	0.946	3.96	4.00	0.835	
4. To experience intellectual growth and stimulation	4.29	4.00	0.589	4.45	4.00	0.550	4.27	4.00	0.674		4.43	4.00	0.562	4.25	4.00	0.646	*
5. To broaden my horizons	4.29	4.00	0.589	4.55	5.00	0.534	4.42	4.00	0.591	*	4.45	4.00	0.564	4.45	4.00	0.587	
6. To meet new people	4.07	4.00	0.763	4.29	4.00	0.700	4.20	4.00	0.705		4.21	4.00	0.723	4.22	4.00	0.718	
7. To learn about new ideas	4.42	4.00	0.498	4.51	5.00	0.536	4.38	4.00	0.626		4.49	4.50	0.515	4.39	4.00	0.611	

Table 6 – Academic confidence	Accounting			Economics & Management			Other			Female			Male				
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig
1. Your ability to handle the course material	3.71	4.00	0.617	3.84	4.00	0.558	3.91	4.00	0.683		3.82	4.00	0.587	3.87	4.00	0.660	
2. Your ability to pass all your exams at the first attempt	2.88	3.00	0.811	3.50	4.00	0.914	3.53	4.00	0.931	**	3.32	3.00	0.900	3.44	4.00	0.973	
3. Your ability to perform above average in your university studies	2.90	3.00	0.736	3.05	3.00	0.976	3.38	3.00	0.910	*	2.95	3.00	0.881	3.36	3.00	0.924	**
4. Your ability to achieve results in the top 10% of your class	2.56	3.00	0.915	2.66	3.00	1.046	3.10	3.00	1.069	*	2.60	3.00	1.007	3.03	3.00	1.068	*

Table 7 – The importance of doing well in the course degree	Accounting			Economics & Management			Other			Female			Male				
	N=59			N=114			N=79			N=146			N=107				
	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig	Mean score	Median	Std. Dev.	Mean score	Median	Std. Dev.	Sig
1. How important is it to you to do well in your degree?	4.69	5.00	0.500	4.88	5.00	0.380	4.78	5.00	0.443	*	4.88	5.00	0.350	4.71	5.00	0.514	*

2.3. CONCLUDING REMARKS

The current study examines Portuguese introductory accounting students' motives, expectations and preparedness for higher education. It also examines whether subject area and gender have any impact on the mentioned aspects. The results suggest that subject area has an impact on students' motives, expectations and preparedness for higher education. On the one hand, accounting students value the study of accounting (and other career-focused aspects relating to accounting) more than the rest of the students. On the other hand, accounting students appear to be less prepared to work independently, less confident about achieving results above the average and feel less enthusiastic about going to higher education than the rest of the students. These features are related to surface learning processes. Thus, while accounting students feel more enthusiastic with the idea of studying accounting than other students, it appears that they lack the academic confidence, and other aspects relating to intellectual growth and independent learner skills when compared with non-accounting students. Nonetheless, these aspects/skills are essential to thrive within higher education learning environments. This is an important time in students' life as they enter a very complex and different learning environment. Therefore, it is important to acknowledge the need to work with accounting students on the mentioned aspects. Portuguese higher education institutions should address the issue in order to find the ways of changing accounting students' behaviour in this matter. Similarly, in order to promote deep patterns of learning, it is important to further investigate the reasons that could cause this attitude/behaviour (e.g. prior learning outcomes; perceptions of the accounting profession). Gender seems to have an impact on students' motives, expectations and preparedness for higher education. Evidence suggests that the female students feel more prepared to face higher education requirements and responsibilities than the male students. In addition, the female students show great expectations about higher education, whereas the male students appear to be less aware of their intentions and purpose at this stage in life. Finally, the literature shows that students' motivations, expectations and preparedness are essential elements as they have a significant impact on students' learning behaviour. Therefore, future research should consider the use of other research methods, such as those used in phenomenographic studies so as to further investigate students' motivations, expectations and preparedness for higher education.

In the next chapter Essay 4 is presented.

ESSAY 4

THE LEARNING OF INTRODUCTORY ACCOUNTING: THE STUDENTS' EXPERIENCES

THE LEARNING OF INTRODUCTORY ACCOUNTING: THE STUDENTS' EXPERIENCES

This essay reports an empirical study on aspects of learning and studying introductory accounting in Portuguese higher education. In particular, it examines students' learning outcomes as to several accounting concepts, their conceptions of accounting and their connection with aspects of learning. It also reports other aspects of interest concerning the learning of introductory accounting.

1. INTRODUCTION

As noted in the previous essays, the literature provides evidence of the impact of the disciplinary context on student learning (e.g. Ramsden, 1997; Entwistle, 2004; McCunne and Hounsell, 2005). For example, students usually perceive the learning of natural or exact sciences as being based on rules and being of a logical and procedural nature; while the learning of arts and social sciences is perceived as requiring a lot of reading as well as interpretation and judgment. The teaching is also perceived as having distinct characteristics according to knowledge area. For example, students perceive the teaching within natural and exact sciences as being based on formal methods and clear goals for learning. In contrast, the teaching within the arts and social science areas is perceived as being based on informal methods and unclear goals (Ramsden, 1997).

The learning of accounting encompasses features of the two contrasting areas of knowledge. That is, accounting involves technical knowledge and procedural tasks as well as interpretation and judgment. Thus, the understanding process within accounting is based on analysis and interpretation as well as calculative practices and relating rationales. As illustrated by Mladenovic (2000), accounting has a theoretical base, involves complex applications and processes, is located in the real world, requires interpretation and judgment, is controversial and involves understanding processes and terminology. Similarly, in his 'accounting for non-accounting students' textbook, Dyson (2010, p. xvi) alerts students to the fact that "the solution to many accounting problems often calls for a considerable amount of personal judgment", meaning that, to some extent, there is an element of subjectivity in whatever decisions students make within this context. The author highlights that "accounting involves much more than being good at doing simple arithmetic" (Dyson, 2010, p. xvi). Furthermore, Dyson (2010) emphasises the importance of paying careful attention to accounting principles, and the criteria and methods to be applied, as well as subjecting accounting information to a great deal of questioning. This

perspective is also emphasised by the IASB. Indeed, the IASB's conceptual framework acknowledges that "to a large extent, financial reports are based on estimates, judgments and models rather than exact depictions" (IASB, 2012, p. A28, § OB11).

The relevance of identifying a learner's profile within a subject area has been highlighted in the literature (e.g. Quinnell *et al.*, 2012; Lucas and Meyer, 2005). Research has examined conceptions of the subject matter and their impact on aspects of learning within a few disciplinary areas, such as mathematics (Crawford *et al.*, 1998a,b; Cano and Berbén, 2009), biology (Quinnell *et al.*, 2012), biochemistry (Minasian-Batmanian *et al.*, 2006), political science (Bliuc *et al.*, 2010) and introductory accounting (Lucas and Meyer, 2004, 2005; Duff *et al.*, 2010). Identifying a learner's profile seems to be a critical factor for developing understanding about the way students approach learning in distinctive disciplinary areas. Thus, the relationship between students' conceptions of the subject and surface or deep learning processes has also been investigated (e.g. Crawford *et al.*, 1998a,b; Lucas, 2001).

As previously noted, the learning of introductory accounting is crucial within the learning of accounting. Introductory accounting courses tend to be the first contact with accounting for many students. And students' learning experiences within these courses are likely to have a significant impact on their future studies in accounting (e.g. Etter *et al.*, 2000). Drawing on the approaches to learning literature, aspects of learning were examined within introductory accounting (e.g. Lucas, 2000, 2001; Mladenovic, 2000; Byrne and Flood, 2004; Byrne *et al.*, 2002; Lucas and Meyer, 2005). In addition, research has examined introductory accounting students' perspectives of the accountancy profession (e.g. Fisher and Murphy, 1995; Saemann and Crooker, 1999; Marriott and Marriott, 2003). Among other findings, research shows that perceptions of accounting as being exclusively numerical and requiring little judgment are usually related to "a focus on learning the technique, rather than on learning the organising, or underlying conceptual, framework of accounting" (Lucas and Mladenovic, 2007, p. 243). Many support a change within the accounting curriculum (both for accounting students and non-accounting students) in terms of, for example, adopting a users' perspective rather than a preparers' perspective as well as addressing wider issues (e.g. Ferguson *et al.*, 2005, 2008, 2010; Palm and Bisman, 2010). It is argued that these changes will develop students' critical thinking skills and promote deeper approaches to learning within accounting. Nevertheless, over time, there

has been a lot of debate around this controversial question, which appears to be a great challenge for accounting education.

The current essay reports the results of research into higher education students' learning experiences within the subject of introductory accounting. It aims to examine some of the aforementioned aspects within the learning of introductory accounting. To do so, it draws on qualitative data collected from students' answers to a semi-structured interview about their learning experiences, in particular within introductory accounting, as well as their conceptions of accounting and selected accounting concepts. The essay is organised as follows. Section 2 provides a review of the relevant literature, in particular focusing on student learning within introductory accounting. Section 3 presents a brief overview of the authorised definitions of the accounting concepts selected for the current analysis. Section 4 discusses alternative perspectives on the referred definitions of the accounting concepts. It also reviews the argument of including wider issues within the introductory accounting syllabus. Section 5 contains the empirical study. It reports several excerpts of students' answers during the interview and their connection with aspects of learning. Finally, it reports various other aspects of interest within the learning of introductory accounting. Section 6 provides a summary of the main findings and offers suggestions for future research.

2. LITERATURE REVIEW

As mentioned in Essay 1, there are conflicting views as to the nature and content of the introductory accounting curriculum. The accountancy profession and employers seem not to share the same ideas that teachers and researchers do about which topics should be addressed (and to what length) within the first approach to accounting education (e.g. Bui and Porter, 2010). Yet, it seems that a new perspective is emerging within the accountancy profession. Recently, it has been acknowledged that “technical competence is essential, but not sufficient for the future professional” (Heeter, 2010, p. 26). According to Heeter³⁶ (2010, p. 26), nowadays, the accountancy profession is “an exciting, rewarding, but highly demanding career”; and one can say that “the ideal professional is multicultural, highly attuned to professional ethics (independence, conflict of interests, professional ethics), a

³⁶Charles P. Heeter, Managing Director, Global Public Policy, Deloitte Touche Tohmatsu Limited. Personal communication: “The Evolving Accounting Regulatory Landscape”, in the 11th World Congress of Accounting Educators and Researchers, Singapore, 2010.

wise (wo)man (judgment), a fortune-teller (early warning), a politician (attuned to public expectations)”. For this reason, some highlight the importance of developing students’ critical thinking (and other skills that would promote deeper approaches to learning) through the discussion of wider issues and perspectives on topics, such as society or the environment, within introductory accounting (e.g. Ferguson *et al.*, 2005, 2008).

Nevertheless, because of financial restrictions accounting education in higher education faces major challenges in order to promote the development of adequate skills for students. In most cases, these restrictions lead to increased workloads for teachers and large classes for students (Bui and Porter, 2010). In addition, the literature reports that students’ perceptions of the accountancy profession may discourage creative and intelligent students from continuing their studies in accounting and, thus, joining the accountancy profession (e.g. Bui and Porter, 2010). For example, taking into account Saemann and Crooker’s (1999) categorisation of students’ perceptions of the accountancy profession, a traditional view of the tasks within accounting encompasses perceptions of ‘structure and rule-orientation’, ‘repetition and precision’, as well as the accountancy profession as being boring and solitary. The dimension of ‘structure and rule-orientation’ could be described using terms/expressions such as inflexible, fixed, structured, rigid, established rules, standard procedures and compliance. The opposite perception could be described using, for example, the following terms/expressions: flexible, random, innovation, spontaneous, alternative views and new solutions. The dimension of ‘repetition and precision’ could be described using terms such as accurate, precise, thorough, detail, repetition, mathematical and practical. The contrasting depiction could be described as, for example, imprecise, creativity, innovation, theoretical, spontaneous and variety. In addition, students could describe the nature of the accounting work and the accountancy profession as solitary (introvert/number crunching) *versus* people-oriented (extrovert/interacting with others); and boring (dull/monotonous/tedious) *versus* interesting (exciting/fascinating/absorbing). According to Saemann and Crooker (1999, p. 11), “perceptions of accounting as accurate, challenging, conforming, detail-oriented, mathematical, planned, practical, repetitive and thorough served to lessen interest in accounting for more creative individuals”. Not surprisingly, evidence also shows that students are more likely to pursue an accounting major if they consider accounting to be an interesting subject. In the same way, “students chose not to major in accounting because

they perceive it to be too number-oriented and boring” (Geiger and Ogilby, 2000, p. 65). In addition, research shows that students may start their studies of introductory accounting holding positive expectations and attitudes as to the study of accounting and the accountancy profession, but these positive expectations and attitudes tend to decrease by the end of their studies (Marriott and Marriott, 2003). To some extent, this is related to the teaching of introductory accounting. In fact, the traditional approach to the teaching of introductory accounting has been subject to criticism (e.g. Lucas, 1998). According to Lucas (1998, p. 192), it “appears to involve a high degree of direction of the activities of the students and [...] to involve a degree of conditioning of their behaviour”. In contrast, nontraditional methods of teaching may challenge negative perceptions and attitudes towards the study of introductory accounting (Mladenovic, 2000). In fact, there have been proposals aimed at motivating students and encouraging deep approaches to learning. These include: the development of students’ written communication skills (e.g. English *et al.*, 2004; Krom and Williams, 2011), active learning (e.g. group activities) or research-based processes in order to encourage the development of critical thinking skills (e.g. Irving, 2011; Kelly *et al.*, 2011).

Another aspect to take into account is the image and reputation of the accountancy profession. Fisher and Murphy (1995) examined the perceptions of both accounting and non-accounting students in the UK and found that “within the two groups there was an apparent co-existence of high status and low esteem in their perceptions of accounting and accountancy” (Fisher and Murphy, 1995, p. 45). Data revealed both a sense of stigma and a sense of high prestige concerning accounting and the accountancy profession. The authors analysed several historical and sociological factors that could have impacted on these perceptions and concluded that, apparently, the accountancy profession is, to some extent, perceived to be “somewhat sinister” and “something deeply negative still surrounds the notion of accountancy” (Fisher and Murphy, 1995, p. 46).

According to Fisher and Murphy (1995, p. 51), “the historical character of accounting: as an activity it was primarily technical and instrumental, carried out by a functionary whose role was to control and, thereby, indirectly to oppress” along with “the historical role, then, of the book-keeper (who was the antecedent of the accountant)” which “was based on the performance of a service which was more mechanistic than interpretative”, contributed to the current image of the accountancy profession (Fisher and

Murphy, 1995, p. 51). Also, “the social role which evolved from the work of the book-keeper was one which necessarily stressed performance based on such characteristics as objectivity, emotional disinvolvement, sobriety and attention to fine detail”. Therefore, “a ‘dreaming book-keeper’ would also fail to fulfil his social purpose” (Fisher and Murphy, 1995, p. 52). In fact, accounting played a key role in the rationalisation process, developing quantitative modes of thinking in detriment of the qualitative reasoning, and numerically assessing everything and everyone (Fisher and Murphy, 1995). This circumstance might partially explain the image (and reputation) still associated with the accountant and the accountancy profession today. The idea of someone sinister, somehow threatening and intimidating.

Their findings revealed that non-accounting students’ perceptions of the status of accounting and the accountancy profession expressed notions of dullness and boredom alongside unethical practices. Concerning the accounting students, they were aware of negative attitudes towards accounting and the accountancy profession and that the general public’s opinion was that accounting was ‘boring’. Nevertheless, accounting students’ attitudes and perceptions towards the subject of accounting “indicated a generally positive experience” (Fisher and Murphy, 1995, p. 50).

The approaches to learning theoretical framework had also a strong impact on introductory accounting research. Therefore, taking into account the students’ views, some studies addressed aspects relating to the learning and studying of introductory accounting (e.g. Lucas, 1998, 2000, 2001). For example, based on qualitative interview-based research, Lucas (2000) found two contrasting worlds of accounting: a world of detachment and a world of engagement. Within the former, “accounting is seen to be a technique” and the learning of accounting corresponds to the learning of a technique (Lucas, 2000, p. 497). The students’ main goal is to pass the subject and students “express no doubts about what is required to achieve this, they must work through the learning materials and learn the techniques” (Lucas, 2000, p. 497). Also, for these students accounting is mainly about numbers and they do enjoy the fact that “there is a ‘right’ answer” (Lucas, 2000, p. 498). Within the latter, the students’ aim is to “develop their understanding of accounting and of the world” (Lucas, 2000, p. 498). And, although accounting students tend to enjoy the study of accounting more than non-accounting students, one should be aware of the fact that “accounting students do not necessarily fall into the world of engagement as one might

expect” (Lucas, 2000, p. 498). In another study, Lucas (1998, p. 189) reports that “students see accounting as being relevant for a *future* business career in that it fulfils a role within business and possesses some practical usefulness”; however, it “lacks an immediate relevance and they appear to accept its long-term relevance more as an article of faith”.

Focusing on specific accounting concepts, Lucas (2001) examined students’ explanations relating to accounting concepts, such as, the balance sheet and the profit and loss account, and classified them as disaggregated (fragmented/atomistic) or comprehensive (coherent/holistic). As described by Lucas (2001, p. 172), “students provided either disaggregated explanations which focused on discrete components of the financial statements or global explanations which focused on the totality of the financial statements.” The author also noticed that “disaggregated and global explanations are not mutually exclusive” (Lucas, 2001, p. 173). Yet, Lucas (2001) reports a predominance of disaggregated analyses/explanations amongst the students’ answers. The author also found, on the one hand, a clear association between disaggregated descriptions and the adoption of a surface approach to learning; on the other hand, a relationship between coherent/comprehensive explanations and the adoption of deep approaches to learning.

Lucas (2001) describes the deep approach to learning as students aiming at understanding the subject matter, and seeking meaning (intention to understand); identifying patterns and principles; expressing an intrinsic interest in studying (interest in ideas) as well as deriving enjoyment from studying; relating ideas to their personal experience and to other subjects or topics within the subject. In contrast, Lucas (2001, p. 162) characterises the surface approach as students aiming at memorising and reproducing knowledge, expressing an extrinsic motivation and feeling that learning is an imposition; and most importantly, “failing to integrate topics into a coherent whole” as they approach the learning of the subject by focusing on separate parts of knowledge. For example, when trying to solve a problem or a question relating to the balance sheet:

... if a student is seeking to ‘fit things in’ this may indicate a format approach which may also demonstrate that the student only perceives a balance sheet as an accumulation of fragmented data, something to be ‘produced’ rather than as something that has a particular significance and meaning (Lucas, 2001, p. 181).

In addition, Lucas and Meyer (2005) report that the deep/transformational learning processes are associated with the intention to relate what one learns to aspects of relevance

in terms of a career, business or even higher education; whereas, surface/accumulative learning processes are associated with focusing on passing the exam or obtaining a professional qualification, and reflect a sense of detachment with accounting being perceived as a subject lacking relevance. Further developments in research suggest that deep or transformative learning processes are associated with variables such as: enjoyment, questioning, reality/meaning behind accounting, social/economic importance of accounting; whilst the surface or accumulative learning processes are associated with variables such as: exam focus, lack of interest, objectivity, numbers and worry (Duff *et al.*, 2010).

Other studies focused on conceptions of learning within accounting education. For example, based on the six categories established by Säljö and his colleagues (Säljö, 1979; Marton *et al.*, 1993), Byrne and Flood (2004) analysed students' written descriptions of what learning meant to them. The authors found "evidence of the variation of accounting students' conceptions of learning from the simplest conception of learning involving knowledge acquisition to the most complex perspective of learning as embodying personal development" (Byrne and Flood, 2004, p. 25). They also found that the conceptions of learning as reproducing were more common among accounting students than conceptions of learning as transforming.

On a different topic, it seems that "students are either attracted to the logic and clarity of accounting or are repelled by preconceptions of numbers and boredom" (Lucas, 2001, p. 180). For some students, the certainty of a technique, the logic and coherence of accounting appears to attract their attention and interest, and to 'get a right answer' becomes a personal challenge with its own appeal (Lucas, 1998). Similarly, on a humorous note, Alexander and Nobes (1994, p. 11) highlight that, on the one hand:

... students and practitioners of bookkeeping regard the balance sheet as the culmination of a long and complex recording process. If it does not balance then mistakes have definitely been made during the preparation process. They will have to be found, and more work is needed.

On the other hand:

... the public at large tend to regard the balance sheet, which contains lots of big numbers and yet apparently magically arrives at the same figure twice, as proof of both the complicated nature of accountancy and of the technical competence and reliability of the particular accountants and auditors involved.

In addition, Lucas (2000) draws attention to the fact that, sometimes, students' views on events, transactions and accounting concepts are in opposition with the 'authorised conceptions' (e.g. presented in accounting textbooks). According to Lucas (2000, p. 497), these personal views "arise from the students' everyday experience of life" yet they are not aware of the fact that their own conceptions are in conflict with the conceptions adopted in the course. As a result, students resiliently retain their 'own' conceptions in preference to, or along with, the authorised version of conceptions within their introductory accounting course. Overall, it seems that after attending an introductory accounting course, most students perceive the learning of accounting as the learning of a technique (Lucas, 1998), the preparation of financial statements and the calculation of revenues, depreciation, etc... Therefore, it seems to be important to inform students that accounting is equally about variety in activities, ongoing analysis, addressing uncertainty, and relies on judgments about complex operations and transactions. In a way, as Lucas (2002 p. 195) points out, it is "a matter of needing to understand the business environment, but also of understanding aspects of the world in terms of accounting concepts". And accounting involves calculations based on interpretations of principles and rationales, and is also about decision-making, requiring thus the development of a wider and critical awareness of issues (e.g. Mladenovic, 2000; Lucas 2002; Ferguson *et al.*, 2005, 2010; Dyson, 2010; IASB, 2012).

3. DEFINITIONS OF ACCOUNTING AND OTHER ACCOUNTING CONCEPTS

This section presents the accounting concepts examined during the interview process. It aims to present some of the ‘authorised’ versions of the definitions of accounting, accounting information, the users of accounting information, the balance sheet, profit and loss account and financial statements. Its purpose is not to fully develop them, but to provide a summary of the most important aspects related to these concepts. This analysis was mostly based on introductory accounting textbooks (May *et al.*, 1980; Horngren, 1981; Alexander and Nobes, 1994; Horngren *et al.*, 1996; Riahi-Belkaoui, 2000; Dyson, 1997, 2010) and both IASB’s conceptual framework and SNC’s conceptual framework³⁷.

The definition of Accounting

May *et al.* (1980, p. 3) argue that “accounting is a language. It is used to communicate financial and other information to people, organizations, governments, and some technical information processing and storage devices”. Accounting is also described as “the process of identifying, measuring and communicating economic information to permit informed judgments and decisions by users of the information” (Alexander and Nobes, 1994, p. 4).

According to Horngren *et al.* (1996, p. 2):

Accounting is the major means of organizing and summarizing information about economic activities. This information is provided to decision makers in the form of financial statements. To prepare these statements, accountants analyze, record, quantify, accumulate, summarize, classify, report, and interpret economic events and their financial effects on the organization.

In addition, Horngren (1981, p. 5) notes that “accounting is a broad subject. It should not be confused with bookkeeping. [...] bookkeeping may be considered a part of the broad discipline of accounting. Bookkeeping is mainly concerned with the detailed procedure for maintaining accounting records, whereas accounting extends far beyond such a narrow focus.” Similarly, Dyson (1997, p. 11) clarifies that:

...bookkeeping is a mechanical task involving the collection of basic financial data. [...] The bookkeeping procedures usually end when the basic data have been entered in the books of account

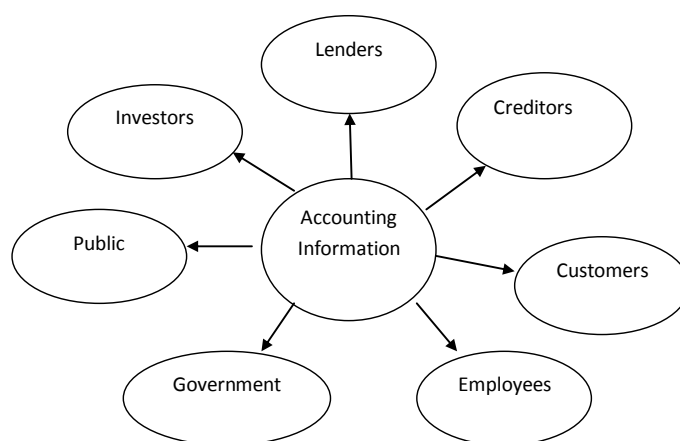
³⁷Although the selected textbooks for the current review were published by Anglo-American authors, an overview of Portuguese introductory accounting textbooks confirmed that they adopt the same perspectives.

and the accuracy of each entry has been tested. At that stage, the accounting function takes over. Accounting tends to be used as a generic term covering almost anything to do with the collection and use of basic financial data. It should, however, be more properly applied to the use to which the data are put once they have been extracted from the books of account. Bookkeeping is a routine operation, while accounting requires the ability to examine a problem using both financial and non-financial data.

About Accounting Information and the Users of Accounting Information

Hornigren *et al.* (1996, p. 2) point out that “accounting information is useful to anyone who must make judgments and decisions that have economic consequences. Such decision makers include managers, owners, investors and politicians”. The authors also mention other examples of decision makers, such as, suppliers of goods and services, income tax authorities and lenders of money. Figure 1 identifies the users of accounting information.

Figure 1 - The Users of Accounting Information



Source: IASB’s conceptual framework and SNC’s conceptual framework³⁸

A key distinction is made between *financial accounting* and *management accounting*. As Hornigren *et al.* (1996, p. 7) explain “the field of financial accounting serves external decision makers, such as stockholders, suppliers, banks and government agencies”, while, “management accounting serves internal decision makers, such as top

³⁸ In contrast with the 2010 IASB’s conceptual framework, the SNC’s conceptual framework does not include the regulators within the group of users of the accounting information.

executives, department heads, college deans, hospital administrators, and people at other management levels within an organization” (Hornrgren *et al.*, 1996, p. 7).

The Balance Sheet, Profit and Loss Account and Financial Statements

The balance sheet is one of the major financial statements prepared by accountants, “it shows the financial status of a business entity at a particular instant in time. The balance sheet has two counterbalancing sections. The left side lists assets, which represent the resources of the firm. The right side lists liabilities and owners’ equity, which represent claims against the resources (Hornrgren *et al.*, 1996, p. 7).

The items of the balance sheet form the *balance sheet equation*:

$$\text{Assets} = \text{Capital} + \text{Liabilities (Dyson, 2010, p. 48)}$$

$$\text{Assets} = \text{Liabilities} + \text{Owners’ Equity (Hornrgren *et al.*, 1996, p. 8).$$

As explained in Alexander and Nobes (1994 , p. 12):

... a balance sheet is often defined as a statement of financial position at a point in time. It is a list of sources, of where everything came from, and a list of applications, of everything which the business has got. Since both lists relate to the same business at the same point in time, the totals of each list must be equal and the balance sheet must balance because it is defined and constructed so that it has to balance. It represents two ways of looking at the same situation.

In brief, “a balance sheet lists what the entity owns and what it owes at the end of the year” (Dyson, 1997, p. 11). In a different way, the IASB’s conceptual framework mentions that “the elements directly related to the measurement of financial position in the balance sheet are assets, liabilities and equity” (IASB, 2012, p. A40, § 4.2).

Another basic financial statement is the profit and loss account (British accounting terminology) or income statement (American accounting terminology). Indeed, as Alexander and Nobes (1994, p. 17) explain, users of accounting information “may also require current and ongoing information about the results of the operating activities of the business. It is necessary, to meet these requirements, to collect together and summarize those items which are part of the calculation of the profit figure for the particular period concerned. [...] Profit will consist of two sets of elements, one positive and one negative.” The positive part of the profit is referred to as *revenue(s)*, while the negative part is

referred to as *expense(s)* (Alexander and Nobes, 1994). Thus, “an income statement is a report of all revenues and expenses pertaining to a specific time period. Net income is the famous “bottom line” on an income statement – the remainder after all expenses (including income taxes) have been deducted from revenue” (Horngren *et al.*, 1996, p. 50).

One can also think of “income as a measure of the entity’s performance in generating net assets, that is, assets less liabilities” (Horngren *et al.*, 1996, p. 53). Decision makers use the profit and loss account to “assess the performance of an entity or its management over a span of time”; this statement shows “how the entity’s operations for the period have increased net assets through revenues and decreased net assets by consuming resources (expenses)” (Horngren *et al.*, 1996, p. 51). For example, “a net loss means that the values of the assets used exceeded the revenues” (Horngren *et al.*, 1996, p. 51). A briefer definition is provided by Dyson (1997, p. 11): “a profit and loss account shows whether the business has made a profit or loss during the year, i.e. it measures how well the business has done”. The IASB’s conceptual framework mentions that “the elements directly related to the measurement of performance in the income statement are income and expenses” (IASB, 2012, p. A40, § 4.2). Within this conceptual framework “the definition of income encompasses both revenue and gains” (IASB, 2012, p. A45, § 4.29); and “the definition of expenses encompasses losses as well as those expenses that arise in the course of the ordinary activities of the entity” (IASB, 2012, p. A45, § 4.33).

The cash flow statement “reports the cash receipts and cash payments of an entity during a particular period” (Horngren *et al.*, 1996, p. 53). Then, “income statements (or profit and loss accounts), balance sheets and cash flow statements are known collectively as the financial statements” (Dyson, 2010, p.8). Apart from these statements, the financial statements of listed companies within the UK and the EU also include other statements, such as the notes to the accounts/financial statements and the auditor’s report (Dyson, 2010). In other words, the IASB’s conceptual framework states that “a complete set of financial statements includes a statement of financial position, a statement of comprehensive income, a statement of changes in equity, a statement of cash flows, and accounting policies and explanatory notes” (IASB, 2012, p. A17, §11).

Finally, a distinction is made between financial accounting and financial reporting. According to Dyson (2010, p. 8), “financial accounting may be regarded as being the accounting process that ends with the preparation of the financial statements; whereas “financial reporting is the process of analysing, communicating and supplementing the information included in the financial statements to those users who either need it or want it”. Based on the Statement of Financial Accounting Concepts No. 1 - *Objectives of Financial Reporting by Business Enterprise* - of the *Financial Accounting Standards Board* (FASB), Riahi-Belkaoui (2000, p. 134) also points out the wider scope of financial reporting as it goes beyond the contents of financial statements:

... financial reporting includes not only financial statements but also other means of communicating information that relates, directly or indirectly, to the information provided by the accounting system – that is, information about an enterprise’s resources, obligations, earnings, etc.

4. PERSPECTIVES CONCERNING THE AUTHORISED CONCEPTS: SOME REFLECTIONS

The authorised versions of the accounting concepts have received criticism from researchers and academia. For example, Ferguson *et al.* (2008, p. v) have carried out research that examined “the role of the textbook and the training manual in the teaching of introductory accounting”. The authors specifically focused on introductory financial accounting, and addressed several aspects relating to students’ perceptions about the purpose of accounting, the objectives of business and the users of accounting information. Within this research, among other aspects, the ethical implications, ideological and cultural issues were analysed. According to Ferguson *et al.* (2008, p. 33), “previous work suggests that the values implicit in accounting, business and management textbooks reflect the values associated with Anglo-American capitalism; for example a number of studies have highlighted the emphasis accorded to the interests of shareholder/owner in these texts”. Nevertheless, as Ferguson *et al.* (2008, p. vii) point out:

... the contestability of this approach to business organisation, which has been characterised as Anglo-American, is apparent from the existence of alternative approaches to be found in continental Europe and Japan. These alternatives typically balance the interests of a range of stakeholders and, traditionally, do not accord primacy to shareholders or to the maximisation of shareholder value.

Indeed, as explained by Ferguson *et al.* (2008, pp. 2, 3) “the principle of stakeholder theory is that managers of a firm have obligations to a broader set of stakeholders as opposed to just shareholders. [...] Therefore, a business entity will have

many stakeholders, including, for example, creditors, customers, employees, shareholders, suppliers and the local community.”

Ferguson *et al.* (2008, p. viii) concluded that “the content of introductory accounting textbooks and professional training manuals had a shareholder/investor emphasis”, and “where different users of accounting information are outlined, the discussion is usually limited and normally contained within the introduction”. In addition, Ferguson *et al.* (2008, p. 112) stress that “none of the textbooks analysed refer to the self-interested lobbying activity which takes place during the accounting standard setting process”. The authors argue that introductory accounting textbooks should at least acknowledge that “the rules of accounting are the outcome of a political process, often influenced by powerful groups within society” (Ferguson *et al.*, 2008, p. 112). In fact, Ferguson *et al.* (2008, p. 192) argue that “despite the technical orientation of accounting textbooks and manuals, there is evidence that ideological values are implicit in these texts”. For example, “evidence of ‘universalisation’ is apparent; implying that a single set of financial statements aimed at shareholders satisfies the needs of all user groups” (Ferguson *et al.*, 2008, p. 192). In recent years, especially because of the financial crisis, this perspective has been questioned along with the objective of decision-making usefulness of financial reporting (Dyson, 2010; Zeff, 2012). This circumstance contributed to IASB’s prior *Framework for the Preparation and Presentation of Financial Statements* receiving significant criticism as to its meaningfulness; and being replaced in 2010 by the document entitled *The Conceptual Framework for Financial Reporting* as a result of the development of the IASB/FASB conceptual framework (Zeff, 2012). In fact, the IASB/FASB joint project³⁹, aimed at developing standards that are principles-based, internally consistent and internationally converged, has recently recognised the need to clarify the purpose of accounts in order to appropriately position the expectations of stakeholders (Dyson, 2010).

³⁹ Since October 2004, the IASB and the FASB started a joint project to develop a common conceptual framework, based on both the existing conceptual frameworks of the two organisations, as a basis for developing their future accounting standards (see IASB web site, <http://www.iasplus.com/en/projects/completed/framework>).

On a different matter, Alexander and Nobes (1994, p. 5) also stress that “it is clear that different national environments (cultural, political and economic) are likely to lead to different accounting practices. Indeed, accounting (as opposed to bookkeeping) is very much a social science. It therefore reflects the biases and norms, sometimes long term, sometimes transitory, of the societies in which is embedded”⁴⁰. Indeed, this is also the case for Portugal. The Portuguese accounting system and the development of the accountancy profession mirror the national accounting environment, as illustrated, for example, in Rodrigues *et al.* (2003), Ferreira *et al.* (2007), Marques and Azevedo-Pereira (2009) and Guerreiro (2011). In brief, traditionally the Portuguese accounting system has been grouped within the continental European countries, where, among other aspects, the financial reporting system “has accounting mainly as a servant of the state, particularly for taxation purposes”; thus, it is government driven and tax dominated (Alexander and Nobes, 1994, pp. 81, 82). As a consequence, “the needs of taxation have been dominant in the evolution of accounting and auditing” (Alexander and Nobes, 1994, p. 195). Afterwards, Nobes (2008, p. 193) provided a classification of countries’ accounting systems in the IFRS era, in which Portugal has been placed in the group of countries characterised by a “weak equity, government driven and tax-dominated” accounting environment. Currently, the SNC accounting model is based on a principles-based accounting paradigm (Guerreiro, 2011). According to Guerreiro (2011, p. 65), in contrast with the previous accounting model, the new accounting system “required additional professional judgment, high levels of disclosure, separation between accounting and taxation rules, a new terminology, and a new way of preparing accounting information”. Yet, although “the new practices and symbols associated with the new accounting system are bound to a common-law logic”, Guerreiro (2011, p. 103) argues that the “logic of the Continental tradition” seems to prevail and the new normative prescriptions are “yet to be accepted as legitimate by Portuguese companies and by the Portuguese accounting profession”. Therefore, nowadays, Portuguese accounting is still “influenced pronouncedly by tax law and possesses a strong legal tradition” and “the preparation of financial statements is oriented primarily to the needs of banks and the State” (Guerreiro, 2011, p. 4).

⁴⁰It was not the purpose of the literature review to focus on the topic “Accounting as a Social and Institutional Practice”. For an overview of relevant literature see, for example, Potter (2005) and Hopwood and Miller (1994).

Also, within the “teaching of English for accounting in Portugal”, Kuteeva (2006) reported several aspects relating to her experience of teaching English for accounting (i.e. the case of *Inglês Técnico*) to third-year students of accounting at *Instituto Superior de Contabilidade e Administração de Lisboa* (School of Accounting and Administration of Lisbon). In brief, according to Kuteeva’s (2006, p. 303) experience: (i) “to a large extent, there is still a common belief that accounting and bookkeeping are essentially the same thing”; and (ii) “in the economy where small and medium-sized firms are struggling to survive in the market, the usual practice is to minimize the amount of declared profit in order to avoid tax. In fact, this is often the major skill that potential employees value in an accounting professional”. Concerning the latter, Kuteeva (2006, p. 304) believes that “this attitude has become so ‘common sense’ that it can become an obstacle to students’ comprehension of information in the target language.” Thus, Kuteeva (2006, p. 305) draws attention to (i) the “role played by cultural assumptions related to the local economy such as attitudes to investing or declaring profit”, and (ii) the impact of these (cultural characteristics) on students’ understanding of accounting. For example, increasing profits in order to ‘impress shareholders’ does not seem logical to Portuguese accounting students as it would increase the amount of payable tax, whereas it “may seem obvious to someone who belongs to a culture where the general public invests in stock markets, which is the case, for example, in the US” (Kuteeva, 2006, p. 303). Finally, Kuteeva (2006, p. 305) notes that “it seems that even specifically designed didactic materials like course books *English for Business Studies* and *Financial English*, which are meant to be used all over the globe, include texts and exercises that transmit the realities of the English-speaking countries”, and these realities do not mirror, in particular, the Portuguese accounting context. Kuteeva (2006, p. 300) concludes that “cross-cultural factors can influence the teaching/learning process, i.e. learners’ cultural background interferes with their interpretation of information”. Still, it is interesting to note that Portuguese accounting textbooks do reflect the Anglo-American context, and some of the aforementioned criticism can be made concerning these textbooks as they mostly replicate the original Anglo-American versions.

The importance of learning/studying wider issues and perspectives in accounting

The need to explore ‘wider issues’ within accounting education has already been acknowledged and addressed in accounting education research (e.g. Lucas, 1998, 2002; Ferguson *et al.*, 2005, 2007; Boyce *et al.*, 2012). Based on content analysis of introductory accounting textbooks recommended by Scottish higher education institutions, Ferguson *et al.* (2005) examined what the mentioned textbooks taught students about corporate stakeholders. Among other issues, the authors report a lack of discussion of wider issues and perspectives, such as those related to the impact that business and accounting have on the context of society/community/public (i.e. the role of accounting and the need for accounting information). In addition, Ferguson *et al.* (2005, p. 36) draw attention on the “frightening tendency for accounting students to concentrate on the acquisition of techniques and to resist asking deeper questions such as why are the techniques important?” Ferguson *et al.* (2005, p. 42) argue that:

... if the calls for ‘critical thinkers’ and ‘active, independent learners’ by the professional accounting bodies are to be taken seriously, then accounting academics must resist the single perspective presented in most textbooks, help students to recognise the singularity of views offered and provide alternative perspectives from which students can exercise their own reasoning.

The authors stress the need to encourage students’ critical awareness and the development of deep approaches to learning concerning the subject matter of accounting.

Taking a different research approach, Lucas (1998) focused on the teaching of introductory accounting and found two levels of viewing accounting, that is, the micro and macro levels. The macro level (e.g. conceptual understanding) provides the context in which micro elements of accounting (e.g. accounting technique/bookkeeping) can be observed. In this study, Lucas (1998, p. 281) reported that introductory accounting lectures consider that conceptual understanding is important, however, “they are unable to identify the relationship between conceptual understanding and the acquisition of the technical skills of accounting”. According to Lucas (1998, p. 282), lecturers were not sure about the ideal relationship between theory and practice, and they seemed to believe that, in a way, this was due to the “inherent nature of teaching introductory accounting”. Moreover, Lucas (1998, p. 282) concludes that “where students go on to study accounting further, then their exposure to further studies presumably allows them the time and opportunity to develop conceptual understanding. However, those students who cease their study of accounting

with the introductory accounting course lack this opportunity.” In fact, this is the case for most non-accounting students as they usually do not continue their study of financial accounting. Therefore, if introductory accounting syllabuses give greater emphasis to bookkeeping and do not focus on a conceptual understanding of the wider context in which financial statements are prepared and used, non-accounting students do not get the whole picture within the subject of accounting, and will essentially relate it to the technical aspects of the discipline. Some of the wider issues that have been identified by lecturers were related to a variety of perspectives on accounting, such as, accounting “supports accountability to those who are interested; reports on performance, probity and performance indicators; is a means of control; involves the recording, analysing, understanding and preparing of accounting data for user groups; and is an information system for managing, planning and control by managers and others” (Lucas, 1998, p. 209).

5. EMPIRICAL STUDY

Firstly, this section describes the method and context of the study, the research methodology adopted, and students’ characterisation and learning profiles. Then, it presents the analysis of students’ learning outcomes in relation to specific and broader accounting concepts. Finally, students’ conceptions of accounting⁴¹ are examined along with other aspects relating to the learning and studying of introductory accounting.

5.1. METHOD AND CONTEXT

The current study aims to examine aspects relating to learning and studying introductory accounting in Portuguese higher education. To do so, ten students were recruited at three Portuguese higher education institutions for a semi-structured interview. Like in Lucas (1998, p. 106), “it was thought to be appropriate that students should be interviewed at the end of their course when they had a fair amount of experience to reflect on, but that experience would be fairly recent”. For that reason, all but one student had attended and passed the subject of introductory accounting in the last academic year. In some cases, this was quite recent (i.e. three/four months ago). Nevertheless, there is evidence that “indicates that we should not be surprised to find that students possess

⁴¹ A distinction is made between the terms ‘concept’ and ‘conception’ (see Essay 2). Entwistle and Peterson (2004) explain that the term ‘concept’ refers to a shared understanding of something (e.g. objects or behaviours); whereas the term ‘conception’ refers to an individual’s personal perception of a concept. Thus, in this context, there is the concept of accounting and there are conceptions of accounting (i.e. which derive from students’ views about the concept of accounting).

misconceptions about basic disciplinary concepts in spite of passing the course” (Lucas, 2000, p. 481). That is, one should not assume that the outcome of learning is necessarily reflected in the examination mark. Hence, the learning outcomes were examined through students’ descriptions of accounting concepts, namely, accounting itself, accounting information and its users, the balance sheet, profit and loss account [P&L] and financial statements.

In order to investigate whether the categories of description of conceptions of learning, approaches to learning and preferences for teaching reported in the literature (e.g. Marton, 1981; Entwistle *et al.*, 2000) would be replicated in the current study, students were asked about their learning and studying experiences in general, and what they felt about learning and studying. These questions were then asked with a focus on introductory accounting. The analysis of the accounting concepts also aimed at investigating the qualitatively different approaches students adopted while explaining these concepts. This analysis was assisted by two experienced introductory accounting lecturers, Cláudia Pereira⁴² and Rui Saavedra⁴³. Like in Lucas (1998), the two specialists were selected because they had considerable and relevant expertise both in terms of teaching and professional practice.

Hence, based on the categories of description of conceptions of accounting (e.g. Lucas, 2000; Lucas and Meyer, 2005; Duff *et al.*, 2010) and the literature on conceptions of the subject matter (e.g. Crawford *et al.*, 1998b; Lucas, 2001), the analysis focused on whether students adopted more of a holistic/cohesive/deep approach or a discrete/fragmented/surface approach, or even both approaches. The accounting concepts under analysis were twofold. Specific concepts, such as the balance sheet, P&L and financial statements, aimed at assessing students’ views of specific concepts within financial accounting. And, broader concepts, such as accounting itself, accounting

⁴²Cláudia Pereira has been an accounting lecturer for over ten years. Her teaching experience in higher education encompasses several modules, including introductory accounting, which she has taught both at the ISCAP/IPP and the Faculty of Economics of the University of Porto. Previously, she worked in the banking industry. Currently, she is also responsible for financial accounting modules at ISCAP/IPP.

⁴³Rui Saavedra has been an accounting lecturer at ISCAP/IPP for over fourteen years. His teaching experience in higher education encompasses several modules, including introductory accounting. In addition, he is a chartered accountant and an accounting teacher in secondary school [in one of the few secondary schools in Portugal that have provided professional accounting courses] for over twenty years.

information and the users of accounting information, aimed at assessing students' views on financial reporting⁴⁴, the accounting world and wider issues.

In this study, introductory accounting encompasses modules such as, elementary accounting and introductory financial accounting, and is taught both to accounting students and non-accounting students. Students were from five programmes, namely, accounting, management, economics, public administration and international business. The number of participants allowed the possibility of having more than one view per institution, and per course in the case of accounting programmes. The selection of students from different institutions (public and private, university and polytechnic) and subject area background (accounting students and non-accounting students) aimed at providing a variety of views and experiences of learning introductory accounting.

The interviews were conducted between the 8th October and the 22nd of October 2012. Thus, students were interviewed some time after their examinations in introductory accounting (i.e. at the beginning of the next academic year). Similarly, for practical reasons, it was the best timing to access students before their examinations and other current assignments. A pen drive (2GB) was offered to students in appreciation of their participation in the study. Students were told that the interview's purpose was to learn about their views on aspects of learning and studying within introductory accounting. Students were not told that accounting topics and concepts were going to be discussed so as to avoid prior study to the interview. They were also told that the interview was going to be tape-recorded, unless they would not give permission. On average, the interviews lasted approximately 30 minutes. Their participation was voluntary and confidentiality was assured. The content of the interview was then translated into English by a professional translator, Sofia Perdigão⁴⁵, with the assistance of the research team concerning the accounting terminology or the meaning behind students' statements. The translation process was based on the functionalist approach, focusing on the function of the translated

⁴⁴For practical reasons, the distinction presented in Section 3 is adopted in the current analysis. In other words, financial accounting is perceived essentially as a technical process that ends with the preparation of the financial statements; whereas, "financial reporting is more concerned with how accounting data can best be communicated to users of financial statements in accordance with legal and professional requirements" (Dyson, 2010, p. 177).

⁴⁵Sofia Perdigão is a professional translator and an English lecturer at ISCAP/IPP. Her teaching experience in higher education includes modules of *Business English* and *Technical English* taught in accounting programmes.

text, that is, the target text (e.g. Munday, 2001). Like in Kuteeva (2006), in some cases, translation had to be adapted/adjusted in order to make sense to the reader.

The content and syllabus of introductory accounting is similar in the three institutions. As mentioned in the previous essays, the syllabus of introductory accounting taught in Portuguese higher education largely focuses on double-entry bookkeeping according to the Portuguese accounting standards (i.e. the SNC) and the IAS/IFRS. In addition, it is basically the same syllabus for accounting and non-accounting students. Hence, most students initially approach introductory accounting through the study of double-entry bookkeeping.

5.2. RESEARCH METHODOLOGY: PHENOMENOGRAPHY

Phenomenography has demonstrated that students experience learning or the understanding of a particular concept in differing ways (e.g. Marton, 1981; Marton *et al.*, 1997; Svensson, 1997; Säljö, 1997; Booth, 1997; Marton and Pong, 2005; Åkerlind, 2012). The differing ‘ways of experiencing’, ‘ways of understanding’ and ‘ways of apprehending’ or ‘conceptions’ form the categories of description in phenomenographic research (e.g. Marton and Pong, 2005; Hallett, 2010). Accordingly, for each concept a set of qualitatively different ways of understanding (i.e. conceptions of) that same concept can be identified. These different ways of understanding phenomena are based on students’ internal logic, and are associated with the ways in which students approach the tasks of learning. Finally, students’ approaches to learning are related to learning outcomes (Booth, 1997). In general, the literature provided evidence that “students who adopted a deep approach achieved overwhelmingly superior understanding of the message of the text and also retained information better than their surface studying colleagues” (Booth, 1997, p. 136).

According to Ashworth and Lucas (2000, p. 301), “much phenomenographic research has been replicatory in nature”. For example, several studies used the categories of description concerning conceptions of learning (i.e. learning as transforming or learning as reproducing knowledge) developed by Marton and Säljö (Säljö, 1979; Marton *et al.*, 1993). This research approach has been frequently adopted within student learning in general, and within subject matter with a focus on understanding how students conceive of specific concepts within specific disciplines (Ashworth and Lucas, 2000; Lucas and Meyer, 2005). However, “there is scope for variation within phenomenographic practice”

(Ashworth and Lucas, 2000, p. 307). Similarly, it is acknowledged that “in a context of multiple legitimate interpretations of the same data”, “an interpretative process can never be objective and, in phenomenographic terms, represents the data as experienced by the researcher” (Åkerlind, 2012, pp. 123, 124). Thus, the focus is not so much on searching “for the ‘right’ interpretation, but for an interpretation that is defensible” (Åkerlind, 2012, p. 124). Indeed, as Booth (2012) suggests, empirical phenomenographic research possesses a wide and open nature rather than a normative and narrow character.

The current study is developed within this scope and based on this body of research. The preferred way of collecting data has been by means of interviewing subjects (Åkerlind, 2012). Despite the fact that there is not much detail on how to conduct this research approach (e.g. Greasley and Ashworth, 2007), the literature offers some guidance as to the process of collecting and analysing the data (e.g. Asworth and Lucas, 2000; Åkerlind, 2012).

The semi-structured interviews were carried out based on the following *interview schedule*: (1) Can you tell me about your learning and studying experiences in general?; (2) What do you feel about learning and studying?; (3) Can you describe to me the meaning of (the concept of) ‘accounting’? (4) What do you feel about the study of introductory accounting?; (5) What can you tell me about the teaching in introductory accounting? [How would you like it to be?]; (6) What can you tell me about the ‘balance sheet’ and the ‘P&L’?; (7) What are ‘financial statements’?; (8) What can you tell me about accounting information?; and (9) Who are the users of accounting information? The interviews were developed based on the interview schedule but attuned to the answers given by students during the interview process. Accordingly, when students wanted to express or expand their views on a particular theme, they were not discouraged to do so. If an explanation or idea was not sufficiently clear, then they were asked to give additional details. The notion that there was no ‘right’ or ‘wrong’ answer was expressed to the students. Students’ feelings and ideas about the aspects under study were explored in an informal way. Afterwards, the content of the interviews was transcribed and the transcripts were the focus of the analysis.

Åkerlind (2012) reviews the phenomenographic research approach and the “ways in which experienced researchers describe their own research process”, thus, helping “other

researchers to find their own preferred way of handling data” (Booth, 2012, p. 95). For example, one common way of analysing the data is by means of “seeking similarities and differences in the data and iteratively making more and more sense of the whole data pool in terms of qualitatively different categories of meaning” (Booth, 2012, p. 95). Also, as Booth, (2012, p. 95) exemplifies:

...giving whole transcripts priority, where the meaning that an individual student is making in a given context is held in focus, and, in contrast, of focusing on the meaning signified by text extracts in relation to another and losing, temporarily, the student as such.

These methods were applied during the process of analysing data. Another method that was adopted was by means of “looking at the data from different perspectives at different times” (Åkerlind, 2012, p. 122). On another topic, Ashworth and Lucas (1998) highlight the role and relevance of the researcher’s experience and knowledge of the subject matter. That is, in order to examine students’ views about learning within (and about concepts relating to) specific subjects, the researcher should be fairly familiar with the subject matter under analysis. Nevertheless, Ashworth and Lucas (1998, p. 422) alert researchers of the risk of prior subject knowledge being an element of distraction from “the meaning of the material within the life world of the student”. Thus, researchers have to be, as much as possible, open minded as to what the student says and thinks about the topics under discussion; that is, they have to listen to the students’ views without imposing any judgment on them. Yet, that same prior knowledge of the subject matter will allow researchers to understand those views and ideas on the concepts and topics of that subject. This poses difficulties and dilemmas for researchers within this research approach. Ashworth and Lucas (1998, p. 423) argue that:

...the researcher must ‘neither concur nor refuse, nor remain in problematic suspense’ concerning the paramount reality of the official version of the subject matter, ‘as if he had some say in the validities of the persons who are his subjects.

Overall, phenomenographic research emphasises the importance of focusing on the students’ experience or lifeworld (Lucas, 2000) and the importance of obtaining a variety of experiences so as to address the topic under investigation (Ashworth and Lucas, 2000). It also highlights the idea that “to be scientific about subjectivity demands a certain fellow feeling rather than technical rationality” (Ashworth and Lucas, 2000, p. 307). This

means that the findings will reflect both the data collected and the researchers' professional judgment when interpreting it (Åkerlind, 2012).

5.3. STUDENTS' CHARACTERISATION AND LEARNING PROFILE

As shown in Table 1, of the ten students that were interviewed, six were from accounting programmes and four were from non-accounting programmes. The group of students was composed of six female students and four male students. The groups' average age is 20.5 years old. Student 5, the youngest student, commenced her undergraduate studies in introductory accounting at the age of 17 years old. As mentioned before, all but one student attended and passed the course in the previous academic year. In fact, Student 10 is still enrolled in the discipline. During the interview, students mentioned particular aspects relating to their background area before going to higher education, and their activities apart from studying. For example, concerning the background area relating to students' secondary studies, three of the students were from the science area (i.e. Students 5, 7 and 10). For this reason, Student 7 decided to get some basic knowledge in accounting before going to accounting undergraduate studies, thus, as part of a post-secondary professional accounting course, he had training in an accounting office. Student 6 had also studied accounting before going to higher education in a professional accounting course in secondary school.

Concerning the activities students have apart from studying, three of the students work part-time in activities not related to accounting (Student 3, 7 and 10). Only Student 10 has previously worked in activities connected with accounting (cash management and debt collection). Currently, this student is also involved in a few academic projects. Student 8 before entering university practiced competition sports.

The students' learning profile is based on the students' answers to the questions about both their learning and studying experiences in general, and within introductory accounting. This profile expresses the students' preferences to aspects of learning, that is, conceptions of learning, approaches to studying and preferences for teaching. Thus, if a student is classified with 'deep learning processes', this means that this student shows a preference for this particular type of process of learning.

Table 1- Students' Characterisation and Learning Profile

Students	Programme	Age	Gender	HE	Learning Profile
1	Management	23	Male	A	Deep learning processes
2	Public Administration	20	Male	A	Dissonant learning processes
3	Accounting	19	Female	B	Dissonant learning processes
4	Economics	20	Female	A	Surface learning processes
5	Accounting	18	Female	B	Surface learning processes
6	Accounting	23	Female	C	Strategic/Surface learning processes
7	Accounting	21	Male	C	Dissonant learning processes
8	Accounting	19	Female	A	Strategic/Surface learning processes
9	International Business	20	Female	A	Dissonant learning processes
10	Accounting	22	Male	A	Dissonant learning processes

Legend: HE: Higher Education Institution.

For example, during the interview Student 1 provided evidence of adopting mostly a deep approach to learning as he reveals elements of 'seeking meaning' and 'relating ideas'. When studying introductory accounting he mentioned that he used to analyse his bank account in order to understand and relate it to the theory that was taught in introductory accounting classes. In addition, he placed great importance on relating what he learns to aspects of relevance in terms of a career or business. Similarly, he reveals a questioning attitude towards the study of introductory accounting:

... I used to analyse my bank account [and there were some transactions], and it was totally the other way round, a credit in my account meant money coming in and here [the subject of introductory accounting] it meant the opposite, and at the beginning that was very confusing...

Concerning perceptions of the learning environment, Student 1 reveals the type of teaching he favours as follows:

Thinking about the lectures... well, some of them were taught in huge classrooms, with loads of students, and I think this undermines learning in such classes...as there were too many people... and then some of them weren't always well behaved ... and delayed classes as the teacher had to stop and ask them to be quiet and that would delay a while. Humm... as to the syllabus I think it should somehow try and include group assignments [...] I think that would help students to enjoy accounting more as they would understand the way accounting is in fact really related to real life.

This shows a preference for active learning and for teaching which encourages students to read around the subject. Student 1 argues that this type of teaching would assist

students to feel more engaged with the study of accounting rather than the traditional approach to teaching, which, according to Lucas (1998) leads to a high degree of direction and conditioning of students' behaviour. This comment also highlights the challenges arising from large classes filled with students.

Yet, if the student presents mixed processes of learning, this means that the student displays dissonant patterns of learning (see Essay 1), such as the student showing a preference for conceptions of learning as a transforming process (deep) along with a preference for teaching as a transmitting process (surface). For example, Student 3 shows a mixture of transformative/deep *versus* reproducing/surface conceptions of learning, when saying:

...We feel more fulfilled when we start studying and when we acquire knowledge and put into practice everything learned in class... that is also our role as students... to study, to try to absorb as much as we can [...] the experience is really good, very positive... I feel fulfilled by doing it... and apart from that, one day, I'll want to get in the labour market.

In addition, she shows a preference for learning environments and teaching which emphasise a transmitting process, as follows:

...Well...I've never been much of a reader.... [Interviewer: And why is that?] I think I've never had that habit... I've never been keen on reading...I read books when it was compulsory... in secondary school and so...but it's not something I can say "I enjoy reading", "I am a book lover", no, it's something I do because I have to. I like studying, yes I do, but theory... it's only when it's compulsory.

Also:

[in higher education] There is a huge distance between the teacher and the student. Many teachers get to the classroom, teach the syllabus and they don't have any kind of interaction with the students...and I think this interaction is really important...because we speak [about the subject/topics], Ok, 'that's wrong', but we learn from our mistakes, learning from mistakes makes us go further... and that's the kind of interaction teacher/student and the way a teacher teaches that makes the difference [...] That's what happens in secondary school and that's what we are used to...we feel the difference here.

In fact, Student 3 does not value courses where students are encouraged to read around the subject a lot for themselves and where students are encouraged to develop independent learner skills.

Student 9 also displays a dissonant pattern of learning, resulting from a mixture of deep and surface aspects in terms of conceptions of learning and preferences for teaching. For example, she mentions aspects of relevance in terms of learning based on personal fulfilment, feelings of happiness and enjoyment, which relate to a preference for deep patterns of learning (e.g. developing as a person). Yet, she denotes a lack of independent

learner skills as she essentially values teaching as assisting students in a dependent manner:

...I think it's extremely important for us to feel that the other person [the teacher] is someone open minded [accessible and tolerant] and that can express themselves quite well... but we have teachers that are a bit too much academic. We know they understand [the subject] and they are known as "the brains" and that they have developed an impressive research career, but then when they need to explain things in a way...well, because we need things to be explained as almost if we were small children...one needs, basically, to get closer to the students' level..

She further details the aspects she values in a teacher:

...It's important that the teacher is open minded [willing to listen to students]... because we often see that there are teachers who distance themselves from students, they explain the syllabus and say they are available to explain things to us, but in fact they aren't, as they show a quite aggressive attitude towards us if we don't understand/explain something immediately and exactly as it was told to us before, see what I mean? If we don't grasp things it's because we were not paying attention...or...or something like that.

Also, concerning the teaching of accounting she considers that:

Accounting requires several aspects [steps, procedures]... and, so, that also requires a lot of organisation [in teaching] and that the teacher shows us that everything is logical and follows a clear line of reasoning, because if the teacher starts skipping steps and omitting something the teacher thinks is quite basic, we will get completely lost. So, it must be someone who follows a clear line of reasoning.

This illustrates that Student 9 thinks that students completely rely on the teacher to understand the subject matter and that the teacher is expected to assist students as if they were literally 'small children'. As for Student 2, he also displays a somewhat dissonant pattern. For instance, Student 2 values aspects relating to intellectual growth as described:

...for me learning is to understand knowledge, but more than that is to reflect on it. Not just limited to what is said in class... try to explore a bit, try to think a little bit about that, try to develop, even if just an A5 sheet of a certain topic, but always try to reflect on a certain topic...

In addition, though it is not entirely clear what type of learning environment Student 2 prefers, as he seemed to avoid giving a straightforward opinion on that matter, he highlights the importance of transmitting knowledge and assisting/guiding students through learning; and valued teaching as a source of motivation, thus showing, to some degree, that he seems to rely on extrinsic motivation:

I think motivation and leadership are essential. They are key concepts for everything, not only for learning and teaching, but for everything else. [...] the way things are taught, the leadership, charisma is essential to motivate us to study and to reflect on things.

At some point, he also mentioned that he was happy with the teaching he has had so far in accounting, but clearly stated that:

..well, bear in mind that I'm talking about the accounting I'm taught [in introductory accounting]. That is, apart from what I'm taught, I'm not aware of its existence.

In fact, it seems as if his learning and studying of accounting is entirely based on what teachers discuss in classes. Students 6, 8 and 10 display a clear preference for a strategic approach to learning. For example, Student 8 describes her studying methods as follows:

I usually plan the study [build a chart] I have to do for the various subjects... [...] I've had this method all my life. I've really had the need to schedule my life because of sports and so on, and I really had a study plan. This is the time to study, then this is the time to do homework, then this is the time to practice [sports] and so I would basically stick to that plan. [Interviewer: Can you do it successfully?] Yes, sometimes, some days, some setbacks come up and we really have to waste that day and that's why I never count the weekend in my plans, and if there are problems during the week, I know I can use Saturday or Sunday.

There is a common feature among the three students: they take great responsibility for the way they spend their time and money. In particular, Student 8 has participated in competition sports and she displays a high level of regulation and organisation; Student 10 has a part-time job as well as other academic activities so he has to spend his time and energy wisely; and Student 6, she is originally from Azores, thus she is living away from home and she feels a moral responsibility in terms of spending time and money. Nevertheless, the preference for a strategic approach to learning was combined with either 'deep/transformational' or 'surface/reproducing' conceptions of learning; and either 'deep/supporting understanding' or 'surface/transmitting information' preferences for teaching. Both Students 6 and 8 displayed strong indicators related to a preference for teaching as transmitting (surface) and learning as reproducing knowledge (surface). For instance, concerning the preferred type of teaching, Student 6 mentioned that she particularly enjoyed teaching notes being delivered by *slides* (powerpoint-type presentations). In addition, Student 6 limits her study to the notes she takes during classes, as well as the exercises provided by the teachers (and their explanations):

When a teacher is teaching the subject, I always try to take as many notes as I can. ... I mean things that teachers might tell us: 'This is important'... and then forget to write down in their notes... I usually try to follow up the subject at least once a week. I solve exercises, if there are any. If it's a theoretical subject, I see if I've understood the topics so that at the beginning of the following week I can ask the teacher in case I've got any questions and don't leave a lot [of the study] behind schedule. As to the exercises, there are teachers who give us exercises... and then give us the answers to the exercises. If they don't give the answers and I have doubts, then I also ask them, I don't see any problem in doing that.

Similarly, Student 8 mentions her study is based on what she learns in classe. She ends up memorising the topics and exercises because she reviews them repeatedly as she explains:

... Basically I repeated every exercise solved in class twice, three times... [and so on] Sometimes, I would get to the point that I already knew the exercise by heart. I knew the results by heart. And I think that it helped me, as in exams I knew the exercise was identical to the one that was solved in class and it was much easier for me, because I knew it by heart and I also knew how it worked.

The two students revealed that this was the type of learning environment they appreciate the most. That is, based on teaching as transmitting with ‘lecturers who tell students what to put down in their notes’ (Student 6) and ‘exams or tests which need only the material provided in lecture notes’ (Student 8). As for Student 10, he shows a dissonant pattern of learning. Hence, he favours conceptions of learning that favour personal development because he is committed to participate in projects and activities other than studying so to develop personal and interdisciplinary skills. Yet, he favours teaching as transmitting. For instance, when mentioning positive aspects about the teaching he clearly stated that:

Positive aspects... hmm... the teacher gave us the slides used in classes which had all the information needed to do this subject.. to pass the subject, that’s it... and hmmm... the teacher explained the syllabus quite well... hmm... and that’s the most important, right?... because if someone is teaching the syllabus ... doesn’t ... doesn’t know how to transmit the information... those on the other end can’t understand the message, right?...

Two of the three students who were from the science area favoured more of a surface approach to learning as they mostly based their study on rote-learning. For example, Student 5 explains how she usually studies:

...as the dates of exams and assessments get closer, I try to learn some theoretical things by rote⁴⁶, these [theoretical topics] you really must know, and there’s no other way...

Her explanation denotes a special focus on examinations as well. Then, she continues explaining that:

...the theories... we would have to know... and there was no other way... and if we didn’t know, sometimes, I would come up with some strategies or develop outlines to learn by heart the theoretical concepts and then the definitions would begin to get in [rooting it in the brain] or if I thought that wouldn’t make any sense, and that I couldn’t come up with any outline, I had to memorise, memorise and not to forget. [Interviewer: So, you’ve told me about studying in general, and what about accounting in particular? Does it also happen like that?] Hmmm...sort of...we

⁴⁶ In this context, to learn things ‘by rote’ or ‘by heart’ relates to rote-learning or rote memorization. The Portuguese word used by the two students was ‘*decorar*’, in the context of ‘*decorar a matéria*’.

always have the theoretical concepts which are the basic concepts, but we can relate things with the practical part and then it's much easier to make the outlines or come up with a strategy to manage to learn the theory by rote.

Student 7 also explains the way he approaches his study:

.. one of the things I do is writing outlines. I outline the whole subject... as summarised as possible. I even use elaborated concepts and 'sophisticated' words, and that force me to look up their meanings when I am studying from my notes...hmmm...and then I've got this advantage, I'm really good at learning by rote. And I end up knowing things by heart. And even in technical subjects, with practice, I end up knowing exercises by rote...

In a way, this is in line with the literature that mentions that science students usually favour surface approaches to learning more than students from other subject area (e.g. Lucas, 2001). In fact, these students were the ones to clearly state that they learned topics by rote. Nevertheless, although the two students share the same approach to learning and studying, they differ as to their profile. That is, in general, Student 5 conceives learning as something challenging/problematic and demanding a high degree of personal sacrifice, expressing a tone of suffering and worry concerning her learning and studying, which groups her within the surface learning profile. As for Student 7, he ends up displaying a dissonant profile of learning as he combines surface approaches to learning with both deep and surface conceptions of learning. For example, Student 7 mentions that:

When we are studying, we're also thinking: "I have to study, it's compulsory because I want to finish my degree"...then there's always the other side of the argument to think about, because it's...it's ... another way of gaining vocabulary and ... we start developing other attitudes, other perception of certain things and we manage to assess the culture in which we are living, we end up growing up as persons and... we end up opening new horizons in life, really.[Interviewer: So you feel yourself evolving and developing as a person?] Absolutely, absolutely.

Then, he favours teaching as transmitting:

There are teachers who are in the classroom and just read [the textbook or their own notes] and they leave the explanation at home.... They do not explain things and a subject such as accounting must be explained, must be practiced... they should even bring real elements into class, so that we know what it is and how it is...

In addition, when talking about the conceptual framework, he mentions:

..we can't interpret/comprehend those concepts and not even the teacher can explain to us the way we should... in a way that we can understand. The teacher can't place himself... get down to our level... because introductory accounting is for students who don't have any experience [on the subject], who don't know what accounting is [...] and quite often the teacher can't get to the students' level. He speaks from a higher level, about elaborate concepts that we do not always know, that don't belong to our everyday language.

These comments, to some extent, reveal that Student 7 conceives learning as developing as a person, but he does not value the higher education independent learning environment.

Finally, Student 4 does not expand on much her ideas about learning and studying. Overall, she mentions she enjoys studying and learning and that she feels she easily learns things and that is probably why she then wishes to further study and learn. She sometimes uses the internet to find out more about the topics that the teachers present in classes. Nonetheless, she seems to perceive learning mostly as ‘building up knowledge by acquiring facts and information’, which is related to learning as reproducing knowledge. Just like Student 6, Student 4 particularly enjoys teaching notes being delivered by *powerpoint*-type presentations. Moreover, Student 4 favours teaching as transmitting as she mentions that:

..I rather prefer that I’m told [by the teacher] more or less what’s most important to study, then, of course, it [the study] will depend on what I reckon I should study, but I like to be guided, I mean, that I’m told what’s more important to study.

In summary, only one student favours deep learning processes (Student 1). Half of the sample shows dissonant patterns of learning mostly characterised by a preference for conceptions of learning as transforming combined with a preference for teaching as transmitting (Students 2, 3, 7, 9 and 10). In addition, two of the students favour surface approaches to learning, and the other two display a preference for strategic approaches to studying/learning combined with surface learning processes.

Finally, a brief note to mention that, despite the different periods in time, it is interesting to note that the students’ perceptions of the learning environment within Portuguese higher education in the current study are in line with the findings reported in Wierstra *et al.* (1999). That is, Wierstra *et al.* (1999) analysed the perceptions of Dutch and other European students who studied abroad as to the learning environments in higher education. Taking into account the students’ perspectives, the authors compared several countries’ learning environments. Among other aspects, the authors report that, in countries such as England, Scotland, Ireland, Sweden and Norway; students are expected to work more independently. This is so, because the learning environments of these countries put great emphasis on tutorials, projects, assignments and essays in order to promote the opportunity for discussion. In addition, much attention is placed on conceptual learning and the relationship between theory and practice. In countries such as Italy, Spain and Portugal, native students “assessed their own courses as being more formal, more crowded, less personal, more passive and more theoretical, than the Dutch courses” (Wierstra *et al.*, 1999, p. 90). In addition, the teaching in these countries is perceived as

being “very traditional with an emphasis on taking notes”; and in some cases, “learning from notes is more important than reading books” (Wierstra *et al.*, 1999, pp. 89, 90). Furthermore, Dutch students considered the teachers in the mentioned countries (e.g. Portugal) “to be authoritarian, impersonal, detached and inaccessible for questions or problems when compared to teachers in The Netherlands” (Wierstra *et al.*, 1999, p. 90).

5.4. LEARNING OUTCOMES: STUDENTS’ EXPLANATIONS ABOUT ACCOUNTING CONCEPTS

As previously noted, the analysis concerning the accounting concepts focused on whether students would explain the concepts based on discrete aspects/elements or, otherwise, would present a global perspective of the concept in a logical and coherent way (e.g. Lucas, 2001). It also focused on whether a predominance of a certain manner of presenting and discussing the accounting concepts would emerge. In line with the literature, it was anticipated that students would also provide explanations in which the two contrasting ways of explaining the concepts coexisted (Lucas, 2001). The categorisation of students’ answers relating to specific and broader accounting concepts is shown in Table 2.

Overall, most students adopted fragmented ways of explaining accounting concepts. Only, three of the students (Students 1, 6 and 10) adopted, in the main, a cohesive and global approach. Two of them are accounting students (Students 6 and 10) and the other one is a management student (Student 1). Nevertheless, Student 6 was not as knowledgeable about financial statements as she did not relate them to, for instance, the balance sheet and the P&L. In fact, she admitted she had no idea about that concept. Concerning the specific accounting concepts, such as the balance sheet and P&L, the same three students provided coherent explanations (Students 1, 6 and 10). In addition, four students were able to explain broader concepts, such as accounting and accounting information, in a comprehensive and coherent manner (Students 1, 6, 9 and 10). Two of them are accounting students and the other two are non-accounting students. It is interesting to note that Student 9 - and to a lesser extent, Student 2 - could not explain the concepts at the micro level in a cohesive way, however, they were able to understand the global context in which accounting operates. Similarly, it is interesting to note that only two of the six accounting students were able to demonstrate positive learning outcomes concerning broader concepts. In contrast, most non-accounting students (Students 1, 2 and 9) were able to provide coherent explanations about broader concepts. Another aspect of interest is that not all accounting students are able to provide coherent explanations about

accounting concepts at the micro level, such as the P&L and financial statements. In fact, some students admitted they had no idea about the concept of financial statements (Students 6 and 7) and other students provided discrete and disaggregated explanations about the P&L (Students 3, 5, 7 and 8). Moreover, the worst learning outcomes are displayed by accounting students (Students 3, 5 and 8). In particular, Student 3 did not provide a single coherent answer to any of the concepts. She revealed many misconceptions which she probably got prior to her studies in higher education.

The case of Student 9 presented particular difficulties in terms of the overall analysis. This is because she displayed, in fairly equal terms, features of coherent and fragmented explanations concerning the whole analysis. Finally, despite the fact that all but one student had passed the subject fairly recently, the majority of the students showed negative learning outcomes. This seems to be in line with Lucas (2000). Surprisingly, one of the students who provided cohesive explanations was the only student who did not pass the subject (Student 10). Yet, he mentioned that he usually was very anxious and suffered from some emotional distress because of that. The findings will be examined in more depth within the next subsections.

Table 2 – The Classification of Students’ Explanations about Accounting Concepts

Students	Balance Sheet	P&L	Financial Statements	Accounting	Accounting Information	Users of accounting Information	Cohesive/Deep	Fragmented/Surface
1	Cohesive	Cohesive	Cohesive	Cohesive	Cohesive	Cohesive	√	
2	Fragmented	Fragmented	Fragmented	Fragmented	Cohesive	Cohesive		√
3	Fragmented	Fragmented	Fragmented	Fragmented	Fragmented	Fragmented		√
4	Fragmented	Cohesive	Fragmented	Fragmented	Fragmented	Cohesive		√
5	Cohesive	Fragmented	Fragmented	Fragmented	Fragmented	Fragmented		√
6	Cohesive	Cohesive	Does not recall	Cohesive	Cohesive	Cohesive	√	
7	Cohesive	Fragmented	Does not recall	Fragmented	Fragmented	Cohesive		√
8	Fragmented	Fragmented	Fragmented	Fragmented	Fragmented	Cohesive		√
9	Fragmented	Fragmented	Does not recall	Cohesive	Cohesive	Cohesive	√	√
10	Cohesive	Cohesive	Cohesive	Cohesive	Cohesive	Cohesive	√	

Accounting students

Non-accounting students

5.4.1. Accounting Concepts at the Micro Level: Specific Concepts

The specific concepts that were selected for the interview aimed at collecting students' views about essential accounting concepts within the introductory accounting syllabus. These concepts would enable students to discuss and expand their views about aspects relating to important accounts/statements concerning, for example, the financial status and the performance of a company. Moreover, as the concepts were related to financial statements themselves it would be tested whether the students would indeed relate (and distinguish) them, and if so, in what way. The analysis of the students' explanations was carried out taking into account the official versions of the concepts, as shown in Section 3.

Only two of the students explained all the specific concepts in a reasonably comprehensive and coherent way. Students 1 and 10 had a cohesive perception of those concepts and they presented it in a confident way as well. For example, Student's 1 descriptions were fairly clear and accurate as to official versions as follows:

The balance sheet reflects, as a snapshot, the situation of the company at a specific time. A snapshot is static, it represents the company assets at a given moment...the assets, that is, the goods of the company and the money and the machinery, all the goods that the company either has and/or controls... on the other hand, we have the liabilities, that are basically the company's obligations to third parties, and the capital [...] the capital represents the difference between assets and liabilities, I mean it [the company] would pay all the obligations with its assets, and then it would keep the capital. In other words, in the balance sheet we have all the assets on the left side and the liabilities and capital on the right side, and these two together equal the assets.

The P&L has to do with the company's performance at a specific time, during a specific period of time... which is usually, let's say a year... for small companies ... In there [in the statement] we have the sales account ... the revenues and the expenses, and then we deduct from all the revenues all the expenses and we have the result before taxation. Then, taxes are also calculated... and it [the amount of tax] is deducted from the result before taxation...so that we get the net income...

...Financial statements... well... besides the balance sheet and the P&L, they also include changes in cash flow and the notes to the accounts [notes to the financial statements]... at least as far as I remember... So, the financial statements are made for those who are interested in the company, external people mainly, those who are interested in the complete analysis of the company. The balance sheet and the P&L are the most popular, but sometimes they do not reflect everything that... for instance...an investor may want to know about the company and sometimes the cash flow statement is also important.... to know if the company pays... how often it pays ... how often it gets credit... how often it receives from customers, if it doesn't run up a lot of debt or lots of debts from third parties or debts to suppliers...

Although Student 10 does not expand his ideas as much as Student 1, he shows a correct and objective perception of the concepts. He identifies the balance sheet, P&L and cash flow statement as the main financial statements studied in introductory accounting and explains that:

The balance sheet represents the financial position of a certain company at a particular moment, right? ...usually related to the end of the financial year...hmm... well, a balance sheet has on one side the sources and on the other the applications... on one side the assets, on the other the capital and liabilities.

... the P&L shows the performance of a company ... it allows us to see if it [the company] had a good or bad performance in terms of results.. The P&L assists the management...

..The financial statements assist the process of decision making. That is, through the balance sheet, as I told you a while ago, we can see the financial status of the company... if the company has a good level of assets and capital ... if it has a good level of assets... then if it has... on the other hand, good results and good cash flow statements, it can be able to have liquidity, right?

In contrast, the majority of students provided vague and disaggregated explanations. For example, about the balance sheet and the P&L, Student 2 states:

Good question...now...well... the balance sheet and the P&L ... I know it's not exactly this but to me they are identical... I mean the main goal ends up being the same, I think...in different ways, though.

Then, he continues saying that:

Well, the balance sheet, I know it's a picture of the situation at that moment, of what we are studying and analysing, the company in question. The P&L, though, ends up, in my opinion, being a specification of what we are working on, I mean, it's more specific than the balance sheet.... It may not be exactly this, but ...from my present knowledge and what I recall... it may not agree with the reality... that's the idea I have right now, that the balance sheet aims to 'take a picture' of the company under analysis at that specific moment, we know how it's going on at that moment, we have information about assets, liabilities, capital. Whereas the P&L aims to establish 'one by one', to see in detail how we got to certain amounts, I think it's probably that...

And, about the financial statements, Student 2 mentions that:

Financial statements...in a very general way... I think they're not far from the idea of getting results financially speaking, that is, not so much about raw materials and industry, but, perhaps more about financial matters, that is...about.... maybe...I've heard about that...and I know what financial costs are... so.. it should... financial statements should...because of the name [of the statement] and what I've learned so far.. it should be pretty much that. So, when we speak about loans, shares and obligations... it should be around that, I think...

Student 2 admits that currently he does not remember the concepts and he provides an explanation for that:

I think it's a common problem, not only at university...well...the new technologies of information and communication...maybe...We have a bit of difficulty in acquiring and keeping knowledge in our mind, I mean, information is available for us whenever we need it... so, unconsciously, we don't memorise things so we need to revise them to keep them in mind....

As to Student 5, she claims that she does not know much about the P&L because this topic was not sufficiently discussed during introductory accounting classes:

... the P&L I think it's more about finance, I'm not really sure because I think we didn't develop this aspect of the P&L [...] I think it's more of a financial question, that has more to do with ...a more strategic part of the company... to find out which funds there are to invest to gain this or lose that.... I think it's a bit more about that, it's related... and it's obvious that it has to do with the results that the company can make.. either positive or negative. But then again, for instance, the

P&L is one of the topics we didn't really develop in introductory accounting... it was more about the balance sheet.

Indeed, most students do not understand or recall the concept of financial statements. Some of them mention just one of its components. For example, Student 4 relates the financial statements just to the P&L:

Financial statements.... I think it's the P&L... it tries to assess the company's performance, that is, if it has profit, or if it doesn't. I guess that's it...

whereas Student 8 relates them to the balance sheet:

When people speak about financial statements, the first thing I think about is the balance sheet... When someone speaks about financial statements I always remember that through the... basically the final result of a company we can learn about that company and, well, that's what comes immediately to my mind....we speak about that [financial statements] and I immediately think, well, maybe if I check the balance sheet, I can understand a bit of the company. That's the thought... [Interviewer: You mean, you relate the financial statements to the balance sheet, is that right?] Yes, that's more like it. Up to now that's the first thought.

In fact, when answering the question about her view on the P&L, Student 8 admits that:

.. the P&L has never been of great importance to me. [Interviewer: And why is that?] I don't know, maybe, because I think I have more difficulties in analysing a P&L than a balance sheet itself. [Interviewer: What's the difficulty? Can you explain it?] Well...because, maybe, it hasn't been fully developed [in classes] the P&L, maybe in this subject we would do more balance sheets...[the teacher would ask students to] prepare a balance sheet, balance sheet, balance sheet. And because it was the account I would do more often, automatically it became the statement that interested me the most. And because in classes we would study only that one, and because it was unlikely to have to do a P&L in an exam...maybe I would avoid [to study] the P&L because I didn't know how to analyse it....

This answer also shows that Student 8, like Student 5, argues that if she had discussed that particular topic in more depth in introductory accounting classes, she would have been able to develop and expand her explanation further.

Students 6, 7 and 9 stated they did not recall what the financial statements were, as follows:

... I've heard about the concept...hmm... I'm completely... I know I've learned that, I even remember doing an exercise...now... it's a bit more complicated....[Student 6]

..financial statements, I think it's about revenues... I'm not sure if it's that ... wait a moment...I've already spoken about that... at the moment I can't remember what it is exactly...[Student 7]

Financial statements it has a lot... to do with...well...at the moment I'm not being able to give you...well, to determine a line that separates...exactly these two contexts [financial statements and P&L].... I know there's a difference...but I can't remember it right now...[Student 9]

Finally, Student 3 displays a vague and inaccurate view concerning all of the concepts:

The balance sheet is ...and the P&L is... roughly, a sum up of everything that goes on in a company during a period of time... balance sheets are usually made at the end of the year... at the end but... the P&L helps the preparing of the balance sheet...we can see, for instance, in the P&L what we have spent and received to try to reduce expenses in order to get more revenues... basically...and the balance sheet... in the balance sheet we can see the whole situation of the company, if it's doing well or not... and what we should focus on... on assets or liabilities... the actual situation of the company and what should be done, in assets what should we change, what should decrease or increase... with help... and as I say, the P&L helps the balance sheet.. complements it.

Financial statements...well, isn't P&L one? ... In my opinion it's one of the financial statements... as well as the trial balance... which also helps the balance sheet ... that's the idea I have...

This student also complains about the way introductory accounting is taught as follows:

I think these basic concepts are taught too quickly... and we cannot grasp everything. One has an idea of what it is because you practice it... but in theory you cannot really explain what you've done. [Interviewer: You mean, you don't feel, let's say, absolutely sure about this concept?] No, not about the concept. As a concept, I'm not, but in practice...that's what I usually say, maybe in practice, if I see what it is, I can identify it, for instance a P&L ... a balance sheet... but if you ask me to explain what a balance sheet is, to explain the concept of a P&L or the concept of financial statements... all of a sudden I can't, it's not something I can fully explain.

In brief, the balance sheet seems to be the concept that most students understand or explain in a coherent and confident manner. Surprisingly, two of the four students who did not provide cohesive explanations were accounting students (Students 3 and 8). Apparently, the P&L and, particularly, the financial statements are complex accounting concepts which most students had heard about but can neither fully or even barely explain. On the whole, there was a predominance of negative learning outcomes as to the concepts relating to the preparation of the financial statements.

5.4.2. Accounting Concepts at the Macro Level: Broader Concepts

The broader concepts were selected so as to enable students to discuss and expand their views about the aim and scope of accounting, the purpose of accounting information, as well as the users of accounting information. These concepts are vital for students to understand the purpose of accounting and the wider issues concerning the context in which accounting operates. They are equally important for students to develop conceptual understanding of the wider context in which financial statements are prepared and used, as well as its impact on different planes and environments (e.g. the social and environmental dimensions). The analysis of students' answers was based on the official versions that were presented in Section 3. Nevertheless, alternative perspectives were indicated by students.

About accounting and accounting information, Student 1 provides a brief but clear explanation:

Well..accounting reports the events of the company, the financial situation... and basically the financial statements, in order to be analysed by users outside the company, basically, analysts and potential investors... the State among others... well...it's about preparing those statements to disclose them...

And:

Accounting information... I think that accounting information are the financial statements themselves... I think that they all reflect the accounting information of the company.[...] Well, accounting information tells you about the economic situation of a company... That economic situation can be also affected by other factors like the country's economic situation, the political stability, and other factors.... the price of raw materials and the access in terms of transports, infrastructure.

Some students relate accounting to bookkeeping. For example, Student 4 mentions:

..Accounting... when people speak about accounting, I immediately think about assets, liabilities, I immediately make the distinction [between them]. Then accounting immediately reminds me of the accounts [T's]...entries... everything that goes in... for instance, we make... it reminds me of double-entry which is ... we always have to do two operations...so, I think that... basically, that's it.

Then, she also relates accounting information to classifying and recording data, as follows:

I remember the teacher talking about accounting information during classes, but she never gave us a specific/explicit definition, but I think it's about...classifying and recording data... that is ... to assign value to things, then, put them in the balance sheet or in the profit and loss account or in other statements...I think that's accounting information...

Student 2, though, relates accounting to management. This is not the only case, as there are other students who also perceive accounting as management (Students 7 and 8). Still, he presents a wider perspective as to the impact of accounting in society as he mentions the concept of accountability:

Accounting can be perceived from various angles, but the one I identify myself with, and I haven't read it anywhere... so it's the way I see accounting...well it's after all, the presentation of accounts... Management, besides the motivational part has the accounting part...I believe these are the two parts. To manage or to administrate we need to know both parts... the leadership and motivation is almost born with us [...] Accounting, you manage to learn, it's the exact part of management. Accounting, for me, it's in practice, the management of what we own, that is, to report results, to make balance sheets, that is, to control... I think accounting is pretty much that, controlling what we have and to know how we spend [the resources]. I think accounting can do a lot of that, and it ends up doing a bit of 'accountability', which is so popular nowadays, which means assessing responsibility...

Similarly, Student 7 relates accounting to management, but from a different angle:

People think that accounting it's just about accounting, but it's not. Within accounting you have also to understand about other areas and you have to be prepared for everything. And, there you are, [accounting] organises all the information of a company, and then you gather the elements that you

will give to that company, so that the company can see how the situation really is, and what they have to do to change. Most times, even the manager doesn't know how the company.... he is not aware, well, no, it's not that...the manager has an idea about the company's situation, but...maybe, sometimes, he is not aware of the risks the company may have to face...and we, as accountants, after analysing [the information] we will give that information and we will be able to make a better analysis of the accounting information than the manager himself, and we will pass on that information and tell him 'look, it's best to change this...or perhaps you should do a better SWOT analysis of the market because something is going wrong...

[...] Nowadays, accounting is a theme for the most important things. To create a company... the development of a company needs an accountant, that's mandatory, to be able to analyse the company. Besides the manager, ok, he has background knowledge, but that's not his specialty...

Moreover, Student 7 believes that accounting encompasses the organisation of several aspects and information of a company. For example, when talking about the role of accounting, he mentions:

It's a technique used by accountants, who organise all the information of a company. Any information, relating to the staff department, even law department issues [i.e. legal aspects] you have to have a lot of knowledge on law...

Like Student 4, Student 7 also perceives accounting as a technique. But, simultaneously, he considerably expands its function to the whole spectrum of areas involved in a company's life. Student 9, though, relates accounting to the wider context and stresses its broader nature:

... well...accounting...accounting is more about ... How can I explain this in a way...objective way... It has more to do with the ...hmmm... it facilitates... on a company level ... because it's the basis of the information which a manager has to manage within a company... the decision making, the development...I don't see accounting just as a numeric base [as numbers]... like the production cost...what does it involve...the questions of financial accounting are much more of a broader nature and we have a much wider context.

In fact, contrary to most students, Student 9 highlights the social role of accounting. And, she clearly states that she does not relate accounting simply to 'numbers'. In addition, she shows a broader view about accounting information and its purpose as follows:

Accounting information has to do with the information given in the present moment... I mean that which we record [recording data] at the end of a month, at the end of.... that information it's used to prepare the financial reporting and the annual accounts [financial statements]...

Then, she includes the social and environmental reporting in her comment:

Accounting information can provide social information [...] it's also important to know about environmental issues....to know about the company's activities in the social context ...well, the company is not an isolated entity [...] its impact on the environment, for instance...

Some students (Students 5 and 10) express a different view about the need for accounting information. They also perceive it to be connected with taxation in general, and the need to minimise the amount of payable tax in particular (i.e. tax avoidance). Indeed, in Portugal, as Ferreira *et al.* (2007, p. 172) explain:

Accounting earnings are regarded as the pie to be distributed among the government (through taxes), debt holders (financial institutions) and a restricted number of shareholders. [...] Thus, the economic role of financial statements is strongly attached to tax purposes, guiding in most of the cases manager's accounting choices.

To some extent, this is illustrated by Student 10 when explaining his view about accounting. Firstly, he presents more of an official definition of accounting, yet, at a certain point, he shifts to presenting his own view:

Accounting, let's say, it's an information system ... that supports management at different levels [...] and all that information that we prepare can be the key to success or, on the contrary.... If we carefully study the information at an internal or external level, right? ... management accounting and financial accounting... if we carefully study the norms, if we carefully study the procedures, if we carefully study all those rules...we can be very useful to the managers, but, on the other hand, if we don't do that it's halfway for a certain company or business group to not achieve success, right?.... But that's not what really happens, right? Well, in our country...because....

Clearly feeling uncomfortable, Student 10 continues:

In our country...I think that accounting, at least that's my personal experience..... accounting it's used...accounting is related to taxation, right?

Then, he expands this idea and talks about tax avoidance:

The country's entrepreneurial background...which is mainly composed of small entities... [accounting] it's used as... ..as the way to avoid paying taxes... or the way to save money... at the moment... under the circumstances...that's how I think people see accounting nowadays... They think of accounting and think 'Oh, how can I avoid taxes?'...or... 'How can I record that in a different way?'...

Finally, Student 10 concludes:

...and accounting can be a bit, let's say, perverse....if not properly applied...

In the last bit of his comment, student 10 refers to tax evasion, which, according to Marques and Azevedo-Pereira (2009, p. 228):

Undoubtedly, tax evasion is a major problem in Portugal, and one of the areas where chartered accountants are more susceptible to taking illegal and unethical actions.

This is especially true in a country where “accountants tend to be seen as a professional group that faces a career highly exposed to ethical dilemmas” as tax evasion is acknowledged to be a major problem (Marques and Azevedo-Pereira, 2009, p. 227). Yet, Student 10 refers to his personal experience and he has already worked in accounting

related tasks. This also demonstrates a questioning attitude that Student 10 reveals when analysing the context in which accounting is integrated.

As to the users of accounting information, Student 3 identifies a very limited scope of users. Indeed, she mentions that accounting information is used specifically by the accountants, managers and the owners:

The information [accounting information] is not entirely 'extensive' [exposed/disclosed] to all the people in a company...it's more restricted. Of course, many times, even the owners do not want to show the situation that the company is in...the company is confined to that group [accountants, managers, owners] and the information stays right there.

This view reflects the accounting value of secrecy, which is common to European continental accounting systems⁴⁷ (e.g. Alexander and Nobes, 1994). Then, the interviewer asked student 3 whether she gained that perception from classes or elsewhere. Student 3 replied:

I like to watch the news, actually watch [gives emphasis], watch the news on television, documentaries [...] Well, my opinions are based on what I learn both in classes and watching the news on TV...

Student 3 does not even notice that her perceptions could not have been learned in classes since they are in opposition to the discourse displayed in introductory accounting syllabus and textbooks. She simply ignored that textbooks consider several users of accounting information as, for example, the public. Nevertheless, this might be explained by the fact that she mentions she avoids reading and mainly watches the news on television. It might also reflect the strong influence of cultural aspects on the students' views through the media. Likewise, Student 5 begins to state that a lot of people in the company can access the accounting information, but she exclusively mentions the accountants, the managers and the owners:

..I think that a lot of people within a company can use that information. First, the ones who provide that information are the accountants, but, after the accountants have all that prepared, they have to show it to the managers in order to be able to give a reflection on the strategic and management aspects of the company...but, the owners who may not understand a thing about accounting, you have to do something about it so that...or [explain] in a easier way so that they really can understand what's the economic and financial situation of the company.[...] And that's also a bit of what accountants do [the job of accountants]...it's about a lot of things.

⁴⁷ Secrecy reflects the information being, whenever possible, restricted to those that own or manage the business, and being displayed/disclosed only when absolutely necessary.

In fact, this seems to be a preconception that students bring to introductory accounting courses and are unable to let go of. In addition, what happens in the ‘real world’, regarding the majority of the Portuguese companies appears to reinforce these ideas (Kuteeva, 2006).

Another important aspect is related to the educational level of the owners of companies in Portugal. Despite the fact that accounting uses complex terminology and requires knowledge from several other areas (e.g. law, economics and management), to some extent, Student’s 5 comments also reflect the level of education of the owners of companies in Portugal. Even within the Portuguese accountancy profession one can find this pattern/feature. For example, Marques and Azevedo-Pereira (2009, pp. 228, 238) state:

Nowadays, the CTOC imposes a tough set of procedures on applicants for membership. Besides holding a degree in accounting, business studies or economics, every applicant needs to pass a tough examination procedure which includes examinations in financial accounting, managerial accounting, and Portuguese tax law. In parallel, it also requires an exam to evaluate the candidates’ knowledge of the Chartered Accountants Deontological Code.

However, the authors note:

It has not always been like this. Older accountants that became members of the Chamber a long time ago exhibit, on average, lower education levels.

Contrary to most students, Student 2 goes beyond the shareholders primacy perspective and considers the user needs of other stakeholders:

..Every shareholder, every creditor, every employee, these are interested parties; every customer is an interested party.

Similarly, Student 9 shows a broader view about the users of accounting information. She shows a greater social awareness of the impact and role of accounting information than other students do. She displays an awareness of ‘wider issues’ and an comprehensive view of the purpose of accounting information and its users as follows:

...From the manager to the general public...[anyone who] for instance, wants to invest in the company....or buy goods [stocks]...or just anyone who may wish to work in the company to know about....basically the reliability of the company businesswise... within the governmental context...to analyse the impact of the company in the economy ...or simply as I was saying before to the general public...[...] so it can be used by different types of public, let’s say, users.

Interestingly, while Student 4 was not confident about the concept of accounting information, she was very confident and objective concerning her explanation about the users of accounting information. Indeed, she immediately answered:

The various users....there are internal and external users. The external users are the consumers, then, we have customers, suppliers, the government itself can use the information, then, investors, for instance, internal and external. Then, within the internal [users], for instance, the employees may want to know about any particular information, or the managers also must access that information. I mean, the company has to prepare the statements [the accounts] considering that several users will want to access that information.

Students' explanations of the broader accounting concepts have highlighted cultural aspects relating to the Portuguese accounting context. In fact, the explanations of Students 3, 5, 7 and 10 have illustrated different features which are distinctive of the Portuguese accounting system. For example, Student 7 provides insight into the type of activity chartered accountants carry out in Portugal, Student 3 reveals the secrecy feature (i.e. accounting value of secrecy) and Student 10 indicates the role and influence of taxation. These are all accounting students. And, these views show perceptions (or preconceptions) which, like Lucas (2000, p. 497) mentions, 'arise from students' everyday experience of life' and, in some cases (Students 3 and 5), affect students' views on particular matters. On the whole, there was a predominance of positive learning outcomes. In general, non-accounting students displayed better learning outcomes than accounting students as to the concepts relating to financial reporting.

5.5. CONCEPTIONS OF ACCOUNTING AND THE LEARNING OF INTRODUCTORY ACCOUNTING

In general, most students are aware of the importance of introductory accounting within the learning of accounting (Students 1, 2, 3, 5, 6, 7, 9 and 10). For example, Student 3 highlights the relevance of the basic topics within accounting, as for many students introductory accounting is the first contact with accounting:

I had never studied accounting before, and since I got here [higher education] I felt that many teachers, thought that all students came from this subject area and so they would skip some basic concepts, mainly theoretical concepts [...] sometimes they would skip them [the basic concepts] because students would supposedly have studied them before, at least the basic concepts.... and many students come from the science area...or economics like myself... but not from professional programmes within accounting area...[...] it would have been much more useful... during the first week or so, to have had classes only about basic concepts, more theoretical and basic concepts [...] So, explaining the most basic concepts to the students I think it would be much more helpful because afterwards we still have another two years of our degree and we need the most basic concepts...

Yet, students also mention that introductory accounting is a difficult subject (Students 1, 2, 3, 5 and 9). For example, Student 1 admits that he had difficulty in learning the subject of accounting at the beginning, and he also mentions the failure rates in introductory accounting to illustrate the difficulty that students feel about the learning of the subject:

...well...by now I'm more used to it, I feel more comfortable [with the learning of accounting] but the beginning was very hard... and the evidence of accounting not being an easy subject... well, the failure rates are there for everyone to see.

Student 2 reinforces this view, when saying:

...people find it hard [introductory accounting], first, because they usually associate it with mathematics; secondly, it's a subject that requires a lot of work and dedication, it requires a routine.... And students, for example me, sometimes, we are not in that mood....

Student 3 also revealed that, at first, she had felt a lot of difficulty in learning accounting. Although she came from an economics programme at secondary school, she explained that this was very generic and she felt a significant difference as follows:

When I got to introductory accounting I was ... [laughter] ...staring at that as I had never seen it before in my life, then with study, of course,... with a lot of study I started to understand things... and then, yes, I began understanding...[...]

Therefore, it seems that students in general struggle with the learning of accounting, and especially those students who have no prior knowledge of accounting. In addition, the accounting jargon poses particular challenges and students struggle to understand the accounting terminology. For instance, Student 9 recalls the beginning of her studies in accounting and mentions:

By that time... how did I feel...well at first it ended up being a bit...a bit... a bit of a shock...everything was new... well, a shock, but I don't say this in a negative sense, but it ended up being a bit of a shock because it had, well it has.. terminology that is too...it's too specific to that subject... and that is very specific... and we had to adjust...and I say we, as I saw that my colleagues would feel the same [had that same experience]...

Similarly, although Student 7 stated that he enjoyed the study of introductory accounting, he identified the conceptual framework as a difficult and boring topic because it is highly directive (it conditions students' behaviour) and entails concepts which are not expressed in everyday language. He further explains that:

...there was a part which was a bit boring, for instance, the conceptual framework [Interviewer: Why do you say boring?] well...because it's a lot of theory and we have to know what others say and we have to do as others tell us to do, and for us, in introductory accounting, that's not always... we don't have... we don't know how to interpret those concepts as they are presented...

Student 7 also acknowledges that, by that time, students do not yet possess habits of interpreting concepts. It seems that they have not yet developed the critical thinking skills needed for the interpretation of accounting concepts under a principles-based approach.

Similarly, Student 9 acknowledges that the learning of the SNC entailed more difficulty as it required more attention to detail and concentration on that conceptual framework:

The second part [of the syllabus] was more difficult...because we had to put that [the topics] into the perspective of the SNC and apply it, these were things that required more attention, much more detail and not to skip/miss anything...

Enjoyment *versus* dullness is also a common theme amongst students' conceptions of accounting. Students 1 and 10 find introductory accounting a boring subject. In fact, Student 1 admits that:

I think accounting is very rigid/fixe... it has ... how can I explain this... it has many rules to follow and apply... and you cannot get away from that, when dealing with an issue...and that makes the learning a lot more difficult.

Student 10 avoided admitting that he felt accounting boring but, at some point, he ended up saying that he felt that introductory accounting was a dull subject as it had many rules and regulations. It appears that, in general, students do not enjoy the study of accounting. For example, when mentioning that students fail a lot in the examination of introductory accounting, Student 1 says:

I'm not sure if it's a subject that students like or not, I guess they don't...because of the high failure rates and because it's a difficult subject.

And students mainly focus on passing the exams, as Student 2 explains:

...we worry too much about 'How will I pass the subject?' instead of thinking 'I want to understand this [subject] because it will be important [in the future]...

Indeed, as Lucas (1998) points out, for some students, it seems that accounting lacks immediate relevance and it is a matter of faith as to its usefulness in the future.

During the interviews some students expressed their perceptions (or other people's perceptions) about the accountancy profession (Students 3, 8 and 10). For example, when talking about their future career as accountants, Students 3 and 8 expressed their views about the perspective that the general public has about the accountancy profession.

In fact, student 8 says:

...One thinks that an accountant is always doing the same things, every single day...well...it's always...it's monotonous. Always the same things (...) I guess I had the same idea everybody has...that an accountant is someone boring⁴⁸

And Student 3 states:

... as an accountant I don't want to worry just about numbers. I have to worry about peoples' well-being and all the rest [...] I'm not saying this based on any study or anything like that...it's really my personal opinion and it's something I want to do when I become an accountant...

These comments reflect that these students feel that the accountancy profession is perceived as involving notions of, on the one hand, dullness and boredom, and, on the other hand, objectivity and emotional detachment. Moreover, Student 3 rejects the idea that accounting is solely about numbers. In contrast, Student 4 mentions that she finds that accounting is an interesting subject as she likes numbers:

I like numbers...and in accounting we quantify everything, so I think... I don't know, I think it's interesting... I can't explain it very well... How to calculate/quantify something and then sometime afterwards that value changes, we will have depreciations and all that stuff... I think that's interesting in that sense.

Her enjoyment seems to be connected with the logic and 'the certainty of a technique' (Lucas, 1998). When giving examples of topics she enjoyed the most, she said:

I enjoyed preparing balance sheets... I thought that was interesting, that thing of always having to equal... the assets equal the liabilities plus capital... I used to enjoy doing that, and then when it wouldn't work out, having to go backwards to check what went wrong...I thought that was fun...[Interviewer: Can you identify why it was fun?] I don't know... because I think that in reality... I don't know, I can't explain it very well... Actually, I think it's not that simple, I mean, assets must equal liabilities plus capital. It actually doesn't seem to work like that, but then numerically speaking and in terms of the company's statements, it really works like that [Interviewer: You mean that between reality and 'that' practice, something is not working? It doesn't match?] No, I'm not saying it doesn't, but apparently, perhaps if I hadn't studied accounting I would think that wasn't really like that, assets, liabilities, capital had to equal...[...] I don't know, I had never thought it would be that exact....

In fact, as Alexander and Nobes (1994, p. 11) mention, it looks as if, by means of magic, the balance sheet, 'which contains lots of big numbers', 'arrives at the same figure twice'. In addition, like the authors mention, students perceive the balance sheet as 'the culmination of a long and complex recording process', which, when not balancing demands the review of the whole process. This explanation also reveals that this student does not question what she learns. She focuses on the mechanical process of preparing the balance sheet instead of focusing on the meaning. And, she accepts the teaching without

⁴⁸Student 8 uses the Portuguese expression '*pessoa cinzenta*' meaning a boring/dull person. In this context, this expression is the equivalent to the English expression 'grey suit brigade' also found in Lucas (1998, p. 171).

questioning or further exploring the connection between theory and practice. This pattern frequently appeared during her interview.

Student 9 mentions that after the initial shock she felt, she somehow enjoyed the study of accounting. This student explained how she felt about the first part of the syllabus of introductory accounting [that is, before studying the conceptual framework]:

..I remember that in the first part of the syllabus...of course it was much easier [laughter]... I remember having lots of fun doing the exercises [...] it ends up being a bit mechanical because if we understand the way it works, we only have one way of doing it. So, it's a matter of mechanising that and understanding it as much as possible, because there aren't many doubts about it... because if it works like this, it will always work like this...well, it can differ a bit in one aspect or other, or it can be presented in a way or another.. but the way of solving it [the problem, the exercise] doesn't differ much from those parameters. So, this was a subject I passed without any effort.

Student 9 seems to enjoy the fact that 'there is only one way of solving problems/exercises' and that 'there are not too many doubts about it'. Like Lucas (2000) mentions, some students enjoy the fact that 'there is a right answer' and they have no doubts about what to do to solve problems and exercises (or pass the examinations). Yet, this student did not provide coherent explanations about the specific concepts. Apparently, in this part of the syllabus, she focused on the technique and failed to understand the function of the statements/accounts. Nevertheless, she mentioned that she would have liked to focus more on the meaning of the numbers and the financial statements:

Perhaps...sometimes what I missed... well, I thought maybe it would be more important... indeed to spend a bit more time on what those numbers meant in the business context. I mean, ...hmmm...sometimes... picking up in real balance sheets... of real companies and basically establishing a parallel with their situation at that moment...or what did those numbers mean to the company, what were the consequences...basically...hmmm...giving life to that what was only on paper.

In a confusing and rather strange way, Student 8, when talking about the balance sheet reveals that:

I've always had a weird history with balance sheets [laughter] ...well, because during classes the balance sheets would hardly ever work out for me. That was frustrating because I couldn't get a balance sheet done... well, the P&L was almost impossible unless I would make up a value in the balance sheet and then ok...let's do the P&L! ..and then during the tests, as strange as it may seem, it would always work out...I think that I could even have got a lower mark, but the fact that the balance sheet was correct, that was a victory....

Nevertheless, this explanation is consistent with her fragmented and inaccurate explanations about the two accounts/statements. According to Lucas (1998, p. 213), a mechanistic approach to the learning of accounting is seen as "allowing students to avoid the issue of conceptual understanding". In fact, this appears to be the case of Students 4, 8 and 9.

On a different matter, students who had some prior accounting knowledge revealed that they felt frustrated when attending introductory accounting with non-accounting students. For instance, Student 6 mentions that:

...the negative aspect was having classes together with other programmes. We were around sixty and...that was a lot of people... Sometimes, if there was any kind of distraction we couldn't hear what the teacher was saying; we could lose our line of reasoning...that was a bit disturbing...

She also said that she would have liked to have seen some of the topics further developed, but because other programmes also attended her introductory accounting classes, that was not possible.

...there are parts of the syllabus that teachers teach on the surface and, sometimes, there are aspects I would rather see further developed, as I feel that if I knew more about them it will be easier for me...

In a way, Student 7 supports this perspective, as follows:

...I think that, for instance, our programme shouldn't have joint classes with other programmes. Apart from the syllabus being the same and the topics being the same... but, if we are attending one degree programme we shouldn't have classes with other programmes ...perhaps we would pay more attention in class and I think ... students' attention... and concentration... and also the teachers' attention... because it would be easier for him to clarify doubts...hmmm...perhaps...it would be different...

In summary, students' conceptions of accounting in the current study are in line with the categories of description identified by Lucas and Meyer (2005) and Duff *et al.*, (2010), namely, reality behind accounting, the social importance of accounting, enjoyment, questioning, numbers, worry and objectivity.

6. CONCLUDING REMARKS

It seems that half of the students (Students 2, 3, 7, 9, 10) wish to evolve and develop as persons (learning as transforming), yet they expect this to happen within learning environments where lecturers will tell them what notes they should take, and that the exams will require only the material provided in those notes and so on (teaching as transmitting). These students seem to value 'learning as transforming', yet, they expect to develop their own understanding with the close assistance of 'lecturers who tell them exactly what to put down in their notes' and, for example, without reading a lot for themselves. Nevertheless, these findings are in line with the literature which reports dissonant patterns of learning. In particular, the findings suggest dissonance between students' conceptions of learning and preferences for teaching. Although the number of

students that were examined in the current study does not allow for the generalisation of the findings, this was also reported in Essay 2 with larger numbers of students.

It was interesting to note that Student 3, the student with the worst learning outcomes (i.e. fragmented explanations), stated she enjoyed studying accounting. In contrast, Students 1 and 10, the ones with better learning outcomes (i.e. cohesive explanations), admitted they did not enjoy studying accounting. This seems to contradict the literature that associates enjoyment with deep learning processes and with positive learning outcomes (e.g. Lucas and Meyer, 2005).

In the cases of Students 1 and 10, their positive learning outcomes seem to be significantly associated with a questioning attitude when learning and studying accounting alongside the wish to understand the meaning and reality behind accounting. A questioning attitude is also related to the development of critical thinking skills, and the two students are amongst the older students. They are twenty two years old (Student 10) and twenty three years old (Student 1). In particular, Student 1 suggested that introductory accounting would benefit from non-traditional teaching methods, such as active learning (e.g. group activities), rather than lecture-based methods. It appears that he has already experienced this type of teaching in other disciplines, thus, he feels its benefits. In contrast, younger students, such as Student 5 (eighteen years old), Student 3 (nineteen years old) and Student 8 (nineteen years old), displayed the worst learning outcomes. And, in the case of Student 3, she points out the significant change she has felt in relation to the learning environment when going from secondary school to higher education. This comment was also made by other students (Students 2, 5, 6, 7 and 9).

Dissonant patterns of learning were seen amongst almost all ages, that is, from the age of nineteen years old (Student 3) to the age of twenty two years old (Student 10). Similarly, they were seen in every subject area. That is, among accounting students (Students 3, 7 and 10) and non-accounting students (Students 2 and 9). Nevertheless, previously, both Students 7 and 10 were from the science area. The surface and strategic/surface processes of learning were both associated with accounting students (Students 5, 6 and 8) and non-accounting students (Student 4). Nonetheless, as noted before, Student 5 was previously from the science area. Therefore, it is difficult to get a clear idea about the nature of the relationship between students' learning profiles and

subject area within the sample. Dissonance seems to be linked to both worse and best learning outcomes. Although, there is a predominance of dissonant patterns of learning combined with negative learning outcomes (Students 2, 3 and 7).

On the whole, the findings suggest a predominant relationship between poor learning outcomes and surface or dissonant patterns of learning. In contrast, the deep processes of learning were linked to positive learning outcomes (Student 1). These findings are consistent with the students' approaches to learning literature (see Essay 1). Yet, one should bear in mind that all but one student had already passed the subject of introductory accounting, and that the learning outcomes considered in the current study are based on students' explanations about some of the accounting concepts (fundamental concepts, though) they have studied in introductory accounting.

There was also a predominance of both surface and strategic/surface processes of learning among female students (Students 4, 5, 6 and 8), which is in line with the findings in Essay 2. Furthermore, female students tend to enjoy the learning and studying of introductory accounting (Students 3, 4, and 8) more than male students do (Students 1 and 10), which is in line with Marriott and Marriott (2003). As to the subject area effect, accounting students appear to be more in need of assistance as to the learning of introductory accounting than non-accounting students. Accounting students had a poorer performance concerning broader concepts (i.e. aspects relating to financial reporting) when compared with non-accounting students; and, they were not much better as to the specific concepts as well (i.e. aspects relating to the preparation of financial statements). Future research should seek to find out whether this behaviour is consistent with larger numbers of students and, if so, what are the possible explanations for that. In addition, Students 6 and 7 complained about attending introductory accounting classes together with non-accounting students because it negatively influence their learning. They claimed this circumstance creates larger numbers of students in the classrooms, which disturbs their concentration and this delays classes as teachers get distracted as well. They also claimed that non-accounting students were not as interested in learning the subject as they themselves were; which causes non-accounting students to get more easily distracted and, as a result, disturbs the classes. This is also consistent with Lucas and Meyer (2005) as they state that accounting students tend to enjoy accounting more than non-accounting students. It might be the case that non-accounting students are more concerned with the

understanding of the purpose and the wider scope of accounting than learning about the financial statements and accounting rules and other technical aspects. Future research should further assess the perspectives and feelings of both accounting and non-accounting students about the learning introductory accounting.

The learning of introductory accounting is perceived as both important and difficult. In fact, a common perception amongst students is that introductory accounting is a difficult subject. Nevertheless, students' arguments about the reasons why this is so, are diverse. These arguments were presented either as relating to the students themselves or relating to students in general. In brief, students find introductory accounting to be a difficult subject because: most students fail to pass the exam and, as a result, students in general worry about the study of the subject (Students 1 and 2); students usually fear and do not enjoy accounting as they relate it to mathematics (Students 2 and 7); accounting is 'fixed' and is about rules and regulations (Student 1); finally, repetition and precision makes it a boring subject (Student 10) and a boring profession (Student 8). Surprisingly, Student 4 enjoys accounting because she says accounting is essentially about numbers and mathematics, which she is keen on. Not surprisingly, Student 10, who admitted that he does not enjoy studying the subject of introductory accounting, mentions that he will not pursue postgraduate studies in accounting, which is in line with the findings of Geiger and Ogilby (2000). This is also consistent with Lucas's (2000) findings, when she argues that accounting students do not necessarily enjoy the study of accounting.

Thus, students' conceptions of accounting are either related to aspects of surface processes of learning (numbers, worry and objectivity) or related to aspects of deep processes of learning (reality behind accounting, the social importance of accounting, enjoyment and questioning). Also, a focus on the technical aspects of accounting is linked to surface patterns of learning (Student 4), while a focus on the meaning and understanding of accounting is associated with deep patterns of learning (Student 1).

As previously mentioned, although most students had passed the subject of introductory accounting, some of them admit that their knowledge of the subject is insufficient. Despite the fact that most students are aware of the importance of introductory accounting, it seems that students in general struggle with the learning of introductory accounting and there are some complaints about the way introductory accounting is taught. For example, some students claim that the basic concepts are taught as if students had prior

significant knowledge of accounting [which was common many years ago in secondary schools, for example, in the 1980s and 1990s]. Yet, currently, only a limited number of secondary schools provide professional accounting courses. Other students specifically mention that some topics are not sufficiently discussed or explained in class (e.g. P&L); and, furthermore, they do not know some of the accounting concepts because of their 'blind' trust in the new information and communication technologies and their constant and immediate availability. Students also feel that what they learn in introductory accounting does not always reflect the 'real world'. In fact, the Portuguese accounting system and the development of the accountancy profession mirror the national accounting environment, which, in turn, affects the teaching and learning of accounting in Portugal (Kuteeva, 2006). Like in Lucas (2001), it is interesting to note that some of the ideas that students had before attending introductory accounting courses/modules remain in their minds even after the course. These powerful preconceptions are deeply rooted in students' views and, in some cases, are strictly connected with cultural features. Thus, cultural aspects also emerge from students' explanations. Addressing the subject of introductory accounting should equally focus on the country's accounting and business/economic context and acknowledge the differences concerning other countries. This would prevent students from thinking that what they learn in class is different from what happens in the real world as illustrated by Student 10.

In addition, students complain about the number of students in classes and the fact that accounting students and non-accounting students attend together the same introductory accounting classes. Finally, students complain about the teachers' behaviour towards them, that is, they feel that the teachers behave in an authoritarian, impersonal and detached way. Indeed, it seems that students' perceptions about the learning environment reported in the current study are largely the same as those reported in Wierstra *et al.* (1999). Moreover, students expressed the wish that introductory accounting subjects would incorporate more active learning activities and less traditional teaching methods in order to establish and understand the link between theory and practice; and that a greater focus was given to the meaning of the 'numbers' and their impact on a company's life. This is an important aspect to consider within the teaching of introductory accounting. Future research should focus on the teaching approaches of lecturers in Portuguese higher education so as to examine the aforementioned aspects.

It is interesting to note that, although the new accounting system is principles-based, thus implying a higher degree of judgment, most students seem to focus on rules and procedures in accordance with a rules-based accounting system, which tends to reduce the exercise of professional judgment. Only Student 7 acknowledged the need to interpret complex concepts when referring to the conceptual framework, which, according to him, was a boring topic as it entails 'a lot of theory'. It was also noted that, consistent with the SNC's conceptual framework, none of the students mentioned the regulators as one of the user groups of accounting information. This suggests that students limit their study to the SNC's conceptual framework and do not examine other accounting conceptual frameworks as, for example, the IASB's conceptual framework. Nevertheless, these findings reveal a lack of independent learner skills, which is in line with the findings reported in subsection (5.3.) as well as in Wierstra *et al.* (1999).

Finally, although the number of students examined in the current study does not allow for the generalisation of the findings, the views students present call for a deep analysis of the ways in which accounting is being taught and the current accounting discourse. This is indeed a real challenge for accounting education in general, and introductory accounting in particular. That is, finding the ways to tackle students' preconceptions by harmonising the accounting (textbook/academic) discourse with the real world of business and the specific accounting and economic environment. In addition, "consistent with a widely held preference for principles rather than rules, there is a case for reviewing the balance between technical material and contextual socio-economic aspects of accounting in introductory financial accounting training manuals" (Ferguson *et al.*, 2008, p. x). Therefore, regardless of whether students become preparers or users of accounting information, wider issues concerning the social and environmental aspects of accounting along with the ethical and cultural dimensions, should be highlighted in introductory accounting. If introductory accounting courses mainly focus on the accounting technique, then bookkeeping will be the main aspect of accounting for those students who do not continue their studies in accounting (Lucas, 1998). Furthermore, this alternative approach would promote the development of both critical thinking skills and judgment, thus favouring the adoption of the desired deep patterns of learning (e.g. Ferguson *et al.*, 2005).

CONCLUSION

CONCLUSION

The current thesis adopted the *Students' Approaches to Learning* (SAL) theoretical framework in order to investigate aspects of learning and studying within introductory accounting courses in Portuguese higher education. For this purpose, the research used both quantitative and qualitative research methods. The thesis consists of four essays. The first essay reviewed the essential literature in relation to the four distinct empirical studies reported in the remaining three essays. The empirical studies collected data from a sample of students at five higher education institutions, universities and polytechnics both from the public and private sectors. Data was collected through the use of three questionnaires and a semi-structured interview. A summary of each essay follows, highlighting the main findings and contributions, as well as limitations and suggestions for future research.

The first essay aimed to examine the extent to which the students' approaches to learning theoretical framework could be useful and applied to the current research. Accordingly, it reviewed the students' approaches to learning perspective, focusing on its background and development, and providing a deepened understanding of key concepts within student learning. It examined research which focused on students' conceptions of learning, approaches to studying and perceptions of the learning environment. This review revealed relationships between students' conceptions of learning, their perceptions of the learning environment, their approaches to studying and learning outcomes. It also revealed disciplinary area variation concerning the mentioned aspects of learning along with the impact of subject matter on student learning. Similarly, it addressed the phenomenon of dissonance as to its nature, causes and consequences.

In addition, the essay reviewed the existing literature on accounting education, particularly that which adopted the students' approaches to learning conceptual framework, focusing on introductory accounting research. Finally, it reviewed the Portuguese context in which the study was carried out. Therefore, it examined the Portuguese higher education system and the views on the Bologna process. In addition, it analysed accounting education and introductory accounting within this setting. And, it concluded with a review of the studies which adopted the students' approaches to learning perspective to examine aspects of learning in Portuguese higher education.

Drawing on educational psychology research, and aiming at answering the second set of research questions, the second essay focused upon students' conceptions of learning, approaches to studying and preferences for teaching. For this purpose, the study adopted a quantitative research approach and used the ASSIST inventory. The reliability and validity of ASSIST was tested and the results validate its use with students of introductory accounting in Portuguese higher education. The research considered a diversified range of programmes (accounting and non-accounting), thus, providing a wider analysis concerning student learning within introductory accounting.

Evidence revealed that introductory accounting students show a preference for a strategic approach to studying, combined with deep patterns of conceptions of learning (i.e. conceiving learning as transforming) and surface patterns concerning preferences for teaching and learning environments (i.e. favouring teaching as transmitting). Therefore, the results revealed a dissonant pattern of learning. In particular, they suggest dissonance between students' conceptions of learning and preferences for teaching. Apparently, introductory accounting students seem to value the idea that learning is about developing as a person, but they expect it to happen without, for example, reading a lot for themselves. They also expect to develop their own understanding with the assistance of 'lecturers who tell them exactly what to put down in their notes'. Although the results are in line with the literature that reports dissonant patterns within student learning, especially concerning first-year students (e.g. Lucas and Meyer, 2005), this circumstance is contrary to the learning objectives supported by higher education and accounting professional organisations (e.g. Ferguson *et al.*, 2005; Byrne *et al.*, 2009). In fact, great emphasis is placed on the need to increase the adoption of deep patterns of learning by students. Therefore, suggestions were made in order to further examine the dissonant pattern found in the results as to its possible causes. In addition, the results indicated the impact of the subject area on approaches to studying and the impact of gender on both conceptions of learning and approaches to studying. Finally, suggestions for future research highlighted the importance of examining other aspects of learning, such as students' conceptions of accounting. Acknowledging the limitations of the use of inventories and quantitative research methods (e.g. factor analysis), suggestions were made to further examine students' patterns of learning with other research methods, such as those applied in qualitative research (e.g. phenomenographic procedures).

In order to answer the third set of research questions, the third essay draws on accounting education conceptual frameworks in order to examine students' conceptions of accounting (and expectations of learning accounting) and their motivations, expectations and preparedness for higher education. For this purpose, the ELAcc inventory and the *Motives, Expectations and Preparedness for University* questionnaire were used to assess the mentioned aspects. As in Essay 2, the research considered a diversified range of programmes. It also investigated whether subject area and gender have any impact on the mentioned aspects of learning.

Concerning students' conceptions of accounting, the results revealed significant differences between specialist and non-specialist students. For example, accounting students' expectations about the study of accounting seem to be greater than non-accounting students. Nevertheless, the results suggest that, over time, and in the case of accounting students, the deep patterns concerning conceptions of accounting tend to decrease. Therefore, suggestions were made for further investigation into this circumstance as to its possible causes. The findings also suggest that male students score higher on surface scales concerning conceptions of accounting (e.g. lack of interest and exam focus) than female students.

Concerning students' motivations, expectations and preparedness for higher education, evidence shows that while accounting students feel more enthusiastic with the idea of studying accounting than non-accounting students; they lack academic confidence, and other features relating to intellectual growth and independent learner skills when compared with non-accounting students. It is acknowledged that there is the need to work with accounting students on the previously mentioned issues and to further investigate the reasons that could cause this attitude/behaviour. Evidence also suggests that female students feel more prepared to face the requirements and responsibilities of higher education than male students.

Similarly, suggestions have been made in order to investigate these contextual and background features of students' approaches to learning, drawing on phenomenographic research approaches.

Finally, drawing on both educational psychology and accounting education research in order to answer the fourth set of research questions, the fourth essay examined aspects

of learning and studying introductory accounting subject matters. The research also aimed to investigate and expand the knowledge and findings reported both in the literature and in the former essays. In addition, it examined students' learning outcomes concerning several accounting concepts. The study drew on qualitative data collected from students' answers to a semi-structured interview about their learning and studying experiences in general, and in particular, within the subject of introductory accounting. To do so, the study used a phenomenographic research approach to understand the way students experience the learning and studying of introductory accounting.

Owing to the number of interviews, the study does not allow for the generalisation of the findings. Also, in some cases, it did not provide clear patterns as to, for example, the relationship between student learning profiles and subject area; thus, in that sense, it was not possible to confirm or contradict prior findings. Nevertheless, the findings confirmed some of the results and conclusions reported both in the literature review and the empirical studies. For example, the gender analysis confirmed aspects/features reported in Essays 2 and 3. Also, the results reported in the literature about the relationship between dissonance and learning outcomes were also confirmed. In this case, evidence suggested a relationship between poor learning outcomes and surface or dissonant patterns of learning. Moreover, several students presented a dissonant learning profile, which is consistent with the findings reported in Essay 2 with larger numbers of students, but additionally, the study provided insight into its causes and effects. Therefore, based on students' own descriptions of their learning and studying experiences, it was possible to understand that students want to develop as persons, yet, they lack independent learner skills and feel significantly dependent on the teachers' assistance; and this is so, because of the learning environment and the type of teaching they were used to in secondary school. As Meyer (1991, p. 315) points out, it seems that students at this stage (i.e. the first years of higher education), do not yet possess "a referential basis on which to build".

In fact, students noticeably struggle to cope with the higher education learning environment itself. And, on top of that, students consider introductory accounting a challenging subject. Some of the reasons for this circumstance appear to be related to students' misconceptions of accounting; other reasons seem to be related to the inherent difficulty of the technical terminology used in accounting subjects. But, perhaps, most importantly, the students' learning outcomes revealed that some students are not aware of

the broader scope of the discipline of accounting. Therefore, without understanding the context in which accounting operates (in its different aspects and with its different features), these students struggle to relate more specific topics, such as the balance sheet or the P&L, with, for example, the purpose of accounting and accounting information (and the information needs of its users). It was also interesting to note that despite the fact that most students had received positive marks in introductory accounting; a significant number admitted that their knowledge of the subject is insufficient.

Students also made complaints about the way introductory accounting is taught. These were related to issues such as: teachers assuming that students have already prior knowledge of accounting; concepts not being sufficiently discussed and explained in classes; the topics they learn in class do not always match the reality and the real world; the number of students attending the same introductory accounting class affects students' attention; and both specialists and non-specialists students attend together the same introductory accounting classes. Finally, they complain about the teachers' attitude towards them. Accordingly, lecturers behave in an authoritarian, impersonal and detached way, lacking openness and attention to students' problems and difficulties in the learning of the subject. In addition, students expressed the wish to experience different teaching methods within introductory accounting, avoiding more traditional approaches commonly used in teacher-centered learning environments. Students also expressed the wish to focus more on the relationship between theory and practice, and the meaning behind accounting numbers.

On another topic, cultural aspects were also present in students' answers. Features of the Portuguese accounting context emerged from students descriptions of accounting, accounting information and its users. Especially significant was the focus students' placed on learning rules and regulations over concepts and principles. Finally, the amount of data collected during the interviews was so vast that not all the aspects were reported in the current study. And this was also because of the content and nature of the study itself. These will be subjected to further examination and analysis in future research. Furthermore, the study posed several other questions relating to the learning and studying of introductory accounting. Therefore, suggestions were made to further examine these aspects and questions in future research.

Overall, this thesis addresses questions and approaches issues relating to student learning within introductory accounting. In particular, it represents the first research into

the learning of (introductory) accounting within Portuguese higher education. Therefore, it provides an overview of the learning and studying of introductory accounting modules within this specific context. In addition, it also provides useful insight into learning and studying in Portuguese higher education. This is particularly important because, in the last decade, significant changes have been introduced into the Portuguese higher education system as a result of the Bologna process. The evidence reported in this thesis might also be of interest to other countries that currently experience similar learning environments, such as other countries within the EU. In fact, in some cases, similar findings have been reported in countries such as the UK and Ireland.

More specifically, the overall findings strengthen the argument of the cross-cultural applicability of the three research instruments used in the current research. In addition, the findings highlight the need to consider the different programmes (subject area) in which introductory accounting is taught. In the case of accounting students, evidence also highlights that they seem to need more assistance during this phase of their learning of accounting. Future research should seek to further investigate this evidence. Also, Essay 4 provides insight into gender analysis. It suggests that other factors, such as the students' maturity and cultural context, influence the analysis. Thus, future research should consider the complexity of the gender dimension and focus on factors other than gender *per se*.

From the discussion above, the findings raise important issues and questions for the introductory accounting syllabus and for Portuguese higher education. Teachers are encouraged to reflect upon the discipline's content (and syllabus) and their teaching methods. It seems that a balance is needed between technical knowledge and the contextual aspects of accounting. In fact, currently, the introductory accounting syllabus mainly focuses on bookkeeping and emphasises the memorisation of accounting rules, regulations and procedures. It does not include research or encourage the development of critical thinking. In addition, introductory accounting textbooks tend to ignore wider issues in accounting education and inform from a single theoretical perspective. Therefore, a proposal is made to include wider issues in the introductory accounting syllabus along with a research-based approach to the learning of introductory accounting. It is believed that this approach would promote the development of both critical thinking skills and the exercise of judgment which, in turn, would encourage the adoption of deep patterns of learning.

As for Portuguese higher education, one of the objectives of the Bologna process was to create a student-centered learning environment. Nevertheless, within the learning of introductory accounting, as previously noted, students complain about the classes being filled with students, which causes distractions and disturbs the teaching and learning. In addition, students also complain about the teaching of introductory accounting. And, students state that they feel a great change when going to higher education as they were used to a considerably different learning environment, one in which they had a closer relationship with the teachers. Nevertheless, this perception might be intensified by “a lack of understanding of the nature of university learning” (Gibney *et al.*, 2011, p. 363). Indeed, in contrast with the higher education learning context, secondary education learning environments are perceived to be highly structured and supportive. Therefore, most students, at this point in their lives, probably have not yet developed autonomous learning behaviour. This was supported by the findings reported in Essays 3 and 4.

This is an important message for higher education, as students should be further assisted in their first years within this new and highly demanding learning environment. Moreover, when entering higher education students display unrealistic expectations about learning and studying within this new environment concerning, for example, the level of commitment which is required along with the demands on their time. In addition, students frequently fail to recognise the need to acquire new skills essential to their new activities; and display high levels of anxiety both for personal and academic reasons. As a result, dissonant patterns of learning are more common when students enter a new phase of education and may result from students failing to react appropriately to a changing educational environment. However, students displaying dissonant patterns of learning are ‘at risk’ of failing. Therefore, degree attainment and student retention is a major concern for higher education, especially regarding the first year (OECD, 2012).

This thesis also strengthens the argument that “heterogeneous student cohorts present particular challenges to educators” especially where the context is “the widening participation within higher education and the growth of first-year ‘introductory’ modules, which are taught to large numbers of students, including both specialists and non-specialists” (e.g. Lucas and Meyer, 2004, p. 459). This is the case for introductory accounting within Portuguese higher education. Therefore, it is hoped that the findings stimulate higher education institutions, accounting education and accounting professional

bodies to consider the aforementioned aspects when developing the introductory accounting curriculum and to consider the ways of encouraging the adoption of deep patterns of learning and studying within (introductory) accounting.

The study raises several other questions and future research should seek to address them. For example, and adding to the aforementioned suggestions for future research, the findings revealed in this study could be used to develop a research instrument in order to assess students' perspectives of the learning and teaching of introductory accounting with larger numbers of students. Finally, as previously noted, there are limitations to this study. For example, it does not provide a defined approach with improved detail but rather offers generic proposals for developing students' critical thinking skills and deeper patterns of learning. Future research should seek to develop specific proposals in order to integrate research into the introductory accounting syllabus, and test their adequacy in this particular context as well as assess its developments. In addition, the whole analysis was carried out from the students' perspective. Therefore, assessing the teachers' perspective concerning the learning and teaching of introductory accounting courses would be of great value in order to enhance the knowledge of this topic. Also, examining the teaching approaches within this context would increase the understanding of aspects of learning within introductory accounting.

APPENDICES

Appendix A: The Portuguese version of ASSIST inventory

O presente questionário visa recolher informação acerca das abordagens ao estudo e aprendizagem dos **estudantes de disciplinas de introdução à contabilidade** no ensino superior em Portugal. Esta informação destina-se a ser analisada no âmbito de um estudo integrante de um Doutoramento em Contabilidade. O questionário é da autoria do Professor Noel Entwistle e seus colaboradores (ETL Project, Centre for Research on Learning and Instruction, University of Edinburgh) e a versão portuguesa utilizada foi traduzida por Chaleta *et al.* (2010).

Pretende-se que responda a **todas** as questões de uma forma **rápida e intuitiva**, seleccionando a opção que melhor reflecta a sua abordagem ao estudo e aprendizagem. Garante-se a total confidencialidade das respostas dadas. Agradecemos a sua colaboração.

Idade: Sexo: Masculino Feminino Nacionalidade: _____
Instituição de Ensino: _____ Curso: _____ Ano:

Nota: Para cada afirmação seleccione com um círculo a resposta/opção que mais se aproxima da sua percepção/entendimento.

A. Quando pensa no termo 'aprender', o que é que isso significa para si?

	Discordo completamente	Discordo	Não concordo nem discordo	Concordo	Concordo completamente
a) Certificar-se que se lembra bem das coisas.	1	2	3	4	5
b) Evoluir como pessoa.	1	2	3	4	5
c) Construir o conhecimento adquirindo factos e informação.	1	2	3	4	5
d) Ser capaz de usar a informação que adquiriu.	1	2	3	4	5
e) Compreender a matéria nova.	1	2	3	4	5
f) Ver as coisas de um modo diferente e com mais significado.	1	2	3	4	5

B. Abordagens ao estudo: Quando estudo....

	Discordo completamente	Discordo	Não concordo nem discordo	Concordo	Concordo completamente
1. Procuro encontrar condições para estudar que me permitam prosseguir o meu trabalho facilmente.	1	2	3	4	5
2. Quando trabalho num exercício tento fazer o melhor para impressionar o professor.	1	2	3	4	5
3. Questiono-me frequentemente sobre se o trabalho que estou a realizar vale mesmo a pena.	1	2	3	4	5
4. Habitualmente esforço-me para compreender o significado do que estou a aprender.	1	2	3	4	5
5. Organizo o meu tempo de estudo cuidadosamente de modo a aproveitar melhor esse tempo.	1	2	3	4	5
6. Acho que me devo concentrar na memorização de grande parte do que tenho para aprender.	1	2	3	4	5
7. Revejo cuidadosamente o trabalho que elaborei para verificar o raciocínio e ver se faz sentido.	1	2	3	4	5
8. Sinto, muitas vezes, que me estou a afogar na imensidão de material que tenho para estudar.	1	2	3	4	5
9. Olho para os argumentos/informação cuidadosamente e tento chegar à minha própria conclusão.	1	2	3	4	5
10. É importante para mim sentir que estou a fazer o melhor que consigo.	1	2	3	4	5
11. Sempre que possível, tento relacionar as ideias com que me deparo com outros tópicos ou assuntos.	1	2	3	4	5
12. Tenho tendência para ler pouco mais do que é exigido para passar.	1	2	3	4	5
13. Penso, regularmente, em ideias transmitidas nas aulas quando estou a fazer outras coisas.	1	2	3	4	5
14. Penso que sou muito sistemático e organizado no que diz respeito a rever a matéria para as frequências/exames.	1	2	3	4	5
15. Dou muita importância aos comentários dos professores de modo a obter melhores resultados na próxima vez.	1	2	3	4	5
16. Não existe aqui muito trabalho que eu ache relevante ou interessante.	1	2	3	4	5
17. Quando leio um artigo ou livro tento encontrar o significado exacto do que o autor diz.	1	2	3	4	5
18. Sempre que preciso consigo facilmente dedicar-me ao trabalho.	1	2	3	4	5
19. Grande parte do que estou a estudar carece de sentido: são pedaços e partes não relacionadas.	1	2	3	4	5
20. Penso no que quero deste curso de modo a centrar-me melhor no que estudo.	1	2	3	4	5

21. Quando estou a trabalhar num tópico novo tento imaginar como todas as ideias se ligam entre si.	1	2	3	4	5
22. Preocupo-me, frequentemente, se serei capaz de lidar devidamente com o trabalho que tenho para fazer.	1	2	3	4	5
23. Questiono-me, muitas vezes, sobre coisas que oiço nas aulas ou leio nos livros.	1	2	3	4	5
24. Sinto que estou a conseguir e isto ajuda-me a esforçar-me ainda mais.	1	2	3	4	5
25. Concentro-me em aprender apenas a informação necessária para passar.	1	2	3	4	5
26. Penso que estudar assuntos/temas académicos pode ser bastante excitante, por vezes.	1	2	3	4	5
27. Costumo seguir as leituras sugeridas pelos professores.	1	2	3	4	5
28. Tento não esquecer quando tenho um exercício e o que se pretende com ele.	1	2	3	4	5
29. Quando olho para o passado, por vezes, pergunto-me porque é que decidi vir para aqui.	1	2	3	4	5
30. Quando estou a ler, paro de vez em quando para reflectir sobre o que estou a tentar aprender.	1	2	3	4	5
31. Prefiro trabalhar regularmente durante o período ou o semestre do que deixar para a última hora.	1	2	3	4	5
32. Como não tenho a certeza sobre o que é importante nas aulas, tento captar tudo o que posso.	1	2	3	4	5
33. As ideias contidas nos livros ou artigos desencadeiam em mim longas cadeias de pensamentos.	1	2	3	4	5
34. Antes de começar a trabalhar num exercício ou questão de exame penso primeiro na melhor forma de o abordar.	1	2	3	4	5
35. Fico em pânico frequentemente se deixo o meu trabalho por fazer.	1	2	3	4	5
36. Quando leio, analiso os pormenores cuidadosamente para ver como é que eles se encaixam com o que está a ser dito.	1	2	3	4	5
37. Esforço-me muito nos meus estudos porque estou determinado a fazê-lo bem.	1	2	3	4	5
38. Oriento os meus estudos apenas para aquilo que é exigido para as frequências e exames.	1	2	3	4	5
39. Algumas das ideias que encontro no curso são realmente fascinantes.	1	2	3	4	5
40. Planeio habitualmente a minha semana de trabalho com antecedência, quer no papel quer na minha cabeça.	1	2	3	4	5
41. Fico atento ao que os professores acham que é importante e concentro-me nisso.	1	2	3	4	5
42. Não estou muito interessado neste curso mas tenho que o fazer por outras razões.	1	2	3	4	5
43. Antes de enfrentar um problema ou exercício tento primeiro ver o que está por detrás dele.	1	2	3	4	5

44. Habitualmente consigo gerir bem o meu tempo durante o dia.	1	2	3	4	5
45. Tenho muitas vezes problemas em compreender as coisas que depois preciso de recordar.	1	2	3	4	5
46. Gosto de brincar com as minhas próprias ideias mesmo que elas não me levem muito longe.	1	2	3	4	5
47. Quando termino um trabalho revejo-o com cuidado para ver se ele vai ao encontro do que é pretendido.	1	2	3	4	5
48. Permaneço acordado muitas vezes preocupado com trabalho que penso não ser capaz de fazer.	1	2	3	4	5
49. É importante para mim ser capaz de perceber o argumento/informação ou ver qual a razão por detrás das coisas.	1	2	3	4	5
50. Não acho difícil motivar-me a mim próprio.	1	2	3	4	5
51. Gosto que me digam com clareza o que devo fazer nos trabalhos escritos ou outros exercícios.	1	2	3	4	5
52. Às vezes fico viciado em assuntos/temas académicos e gostaria de continuar a estudá-los.	1	2	3	4	5

C. Preferências por diferentes tipos de curso e ensino: Prefiro...

	Discordo completamente	Discordo	Não concordo nem discordo	Concordo	Concordo completamente
a) Professores que digam exactamente que apontamentos devemos tirar.	1	2	3	4	5
b) Professores que estimulem os alunos a pensar por eles próprios e que mostrem como é que eles pensam.	1	2	3	4	5
c) Exames que permitam aos alunos mostrarem o que pensam sobre a matéria.	1	2	3	4	5
d) Exames ou testes para os quais é necessário apenas os apontamentos das aulas.	1	2	3	4	5
e) Cursos em que é claro quais os livros que temos que ler.	1	2	3	4	5
f) Cursos em que somos encorajados a ler muito por nossa conta sobre a matéria.	1	2	3	4	5
g) Livros que nos desafiem e forneçam explicações que vão para além das aulas.	1	2	3	4	5
h) Livros que contenham factos concretos e informação que pode ser aprendida facilmente.	1	2	3	4	5

O questionário termina aqui.

Agradecemos a sua colaboração

Appendix B: The Portuguese version of ELAcc (1.4) inventory

O presente questionário visa recolher informação relativa às concepções da contabilidade dos **estudantes de disciplinas de introdução à contabilidade** no ensino superior em Portugal. Esta informação destina-se a ser analisada no âmbito de um estudo integrante de um Doutoramento em Contabilidade. O questionário ELAcc 1.4, *Expectations of Learning Accounting Inventory*, é da autoria dos Professores Ursula Lucas, Angus Duff e Rosina Mladenovic.

Pretende-se que responda a todas as questões de uma forma **rápida e intuitiva**, seleccionando a opção que melhor reflecta a sua percepção relativamente à aprendizagem e estudo da Contabilidade. Isto não é um teste e não existem respostas 'certas' ou 'erradas'. Garante-se a total confidencialidade das respostas dadas. Agradecemos a sua colaboração.

Idade: Sexo: Masculino Feminino Nacionalidade: _____

Instituição de ensino: _____ Curso: _____ Ano em que está inscrito:

Nota: Para cada afirmação seleccione com um círculo a resposta/opção que mais se aproxima da sua percepção/entendimento. Em situações que envolvam/impliquem uma acção, imagine com que frequência tal poderá acontecer. Em situações que digam respeito ao que pensa ou acredita relativamente a algo, indique o quanto concorda ou discorda face à questão em causa.

O que pensa, acredita ou espera fazer relativamente ao estudo da Contabilidade?

	Discordo totalmente	Discordo	Não concordo	Concordo	Concordo totalmente
1. Vou gostar de ser capaz de resolver problemas em contabilidade.	1	2	3	4	5
2. A contabilidade é uma matéria entediante/maçadora.	1	2	3	4	5
3. Sinto-me preocupado(a) com a aprendizagem da contabilidade.	1	2	3	4	5
4. A matéria da contabilidade envolve/implica, sobretudo, cálculos monetários.	1	2	3	4	5
5. Na aprendizagem da contabilidade ambiciono apenas obter nota suficiente para passar no exame.	1	2	3	4	5
6. Quero obter a melhor nota possível em contabilidade para poder escolher os melhores empregos/cargos quando me licenciar.	1	2	3	4	5
7. Tentarei compreender qual a realidade por detrás das demonstrações financeiras.	1	2	3	4	5

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
8. Penso que é importante questionar a base na qual assentam as técnicas contabilísticas.	1	2	3	4	5
9. A contabilidade ajuda-nos a compreender de uma maneira nova as actividades desenvolvidas por uma empresa.	1	2	3	4	5
10. A contabilidade é essencialmente objectiva.	1	2	3	4	5
11. Vou gostar de contabilidade porque é gratificante conseguir dar uma resposta correcta a um problema.	1	2	3	4	5
12. A contabilidade é uma matéria aborrecida.	1	2	3	4	5
13. Fico ansioso(a) com a possibilidade de ter um 'bloqueio mental' quando estiver a aprender contabilidade.	1	2	3	4	5
14. A matéria da contabilidade envolve/implica, sobretudo, a realização de cálculos.	1	2	3	4	5
15. Não vou precisar de compreender os conceitos subjacentes à contabilidade para passar no exame.	1	2	3	4	5
16. Tenho um forte desejo de ser excelente nos meus estudos em contabilidade.	1	2	3	4	5
17. Tentarei ver como a informação contabilística é utilizada na vida real.	1	2	3	4	5
18. É importante ser capaz de questionar os pressupostos sobre os quais a informação contabilística assenta.	1	2	3	4	5
19. A contabilidade permite-nos criar novo conhecimento económico.	1	2	3	4	5
20. A contabilidade é uma ciência exacta, só temos de seguir as regras.	1	2	3	4	5
21. Vou gostar do rigor e precisão da contabilidade.	1	2	3	4	5
22. Neste momento a contabilidade não me interessa pessoalmente.	1	2	3	4	5
23. Estou preocupado(a) com a possibilidade de achar a contabilidade uma matéria difícil.	1	2	3	4	5
24. A matéria da contabilidade envolve/implica, sobretudo, números, quantias e fórmulas.	1	2	3	4	5
25. Não vou precisar de ler muito sobre a matéria em contabilidade.	1	2	3	4	5
26. Vejo-me basicamente como uma pessoa ambiciosa, que quer chegar ao topo no que quer que faça.	1	2	3	4	5
27. Tentarei compreender qual o sentido e significado da informação financeira.	1	2	3	4	5
28. Nos negócios é importante ser capaz de questionar a informação contabilística.	1	2	3	4	5

	Discordo totalmente	Discordo	Não concordo nem discordo	Concordo	Concordo totalmente
29. A contabilidade altera a nossa compreensão sobre o mundo dos negócios.	1	2	3	4	5
30. A contabilidade é uma actividade de natureza financeira, mais do que uma actividade de natureza social ou política.	1	2	3	4	5
31. Vou gostar de utilizar os conceitos abstractos que fazem parte da contabilidade.	1	2	3	4	5
32. A contabilidade não é uma matéria muito interessante.	1	2	3	4	5
33. Estou preocupado(a) com o facto de ser necessário ser bom a matemática para ser bom a contabilidade.	1	2	3	4	5
34. A matéria da contabilidade envolve/implica, sobretudo, o recurso à matemática.	1	2	3	4	5
35. Em contabilidade vou aprender apenas o suficiente para passar no exame.	1	2	3	4	5
36. Caso fosse necessário, estaria preparado(a) a sacrificar a minha popularidade entre os meus colegas para ter sucesso nos meus estudos e carreira futura.	1	2	3	4	5
37. Tentarei relacionar o que aprender em contabilidade com a realidade dos negócios.	1	2	3	4	5
38. Penso que é importante questionar as teorias nas quais a contabilidade assenta.	1	2	3	4	5
39. A contabilidade pode transformar o nosso entendimento sobre o mundo dos negócios.	1	2	3	4	5
40. Há poucas incertezas no âmbito da contabilidade.	1	2	3	4	5
41. Vou gostar do desafio intelectual inerente à contabilidade.	1	2	3	4	5
42. A contabilidade é uma matéria árida/improdutiva.	1	2	3	4	5
43. Estou preocupado(a) com a possibilidade de não conseguir compreender a contabilidade.	1	2	3	4	5
44. A matéria da contabilidade envolve/implica, sobretudo, a aplicação de técnicas numéricas.	1	2	3	4	5
45. Para passar no exame de contabilidade vou precisar apenas de aprender técnicas contabilísticas.	1	2	3	4	5
46. Para mim, conseguir notas altas é uma espécie de jogo de competição, e eu jogo para ganhar.	1	2	3	4	5
47. Tentarei compreender qual o papel da informação contabilística no mundo dos negócios.	1	2	3	4	5
48. Penso que é importante questionar as regras subjacentes à contabilidade.	1	2	3	4	5
49. A contabilidade permite-nos ver de forma diferente as operações no mundo dos negócios.	1	2	3	4	5
50. A contabilidade é incontroversa.	1	2	3	4	5

Appendix C: The Portuguese version of the ‘Motives, Expectations and Preparedness for Higher Education’ questionnaire

O presente questionário visa recolher informação sobre as expectativas, motivações e preparação para o ensino superior dos **estudantes de disciplinas de introdução à contabilidade** em Portugal. Esta informação destina-se a ser analisada no âmbito de um estudo integrante de um Doutoramento em Contabilidade. O questionário “*Motives, Expectations and Preparedness for University*” é da autoria das Professoras Marann Byrne and Barbara Flood.

Pretende-se que responda a todas as questões de uma forma **rápida e intuitiva**. Isto não é um teste e não existem respostas ‘certas’ ou ‘erradas’. Garante-se a total confidencialidade das respostas dadas. Agradecemos a sua colaboração.

Idade: Sexo: Masculino Feminino Nacionalidade: _____
 Instituição de ensino: _____ Curso: _____ Ano em que está inscrito:

Nota: Para cada afirmação seleccione com um **círculo** a resposta que mais se aproxima da sua percepção/entendimento.

1. Indique qual a importância dos seguintes aspectos/factores na sua decisão de vir para o ensino superior.

	Nada importante	Pouco importante	Não tão importante	Importante	Muito importante
1. Gosto da ideia de participar em desportos e actividades de carácter social na universidade.	1	2	3	4	5
2. Quero desenvolver a minha mente e capacidade intelectual.	1	2	3	4	5
3. Acabei por vir parar ao ensino superior.	1	2	3	4	5
4. Quero provar a mim próprio(a) que sou capaz de ser bem-sucedido(a) no ensino superior.	1	2	3	4	5
5. Queria estudar Contabilidade de forma mais aprofundada.	1	2	3	4	5
6. Ao concluir este grau académico vou aumentar a minha capacidade financeira.	1	2	3	4	5
7. Todos os meus amigos estavam a ir para o ensino superior.	1	2	3	4	5
8. Quero ter a oportunidade de alargar os meus horizontes e de encarar novos desafios.	1	2	3	4	5
9. Sou atraído pela possibilidade de ter uma vida social activa durante o curso.	1	2	3	4	5
10. Acredito que uma licenciatura irá abrir novas oportunidades para mim no futuro.	1	2	3	4	5
11. Estou interessado(a) em prosseguir estudos pós-graduados.	1	2	3	4	5

	Nada importante	Pouco importante	Não tão importante	Importante	Muito importante
12. Acredito que o ensino superior vai dar-me a oportunidade de melhorar a minha autoestima e autoconfiança.	1	2	3	4	5
13. Quero desenvolver um melhor conhecimento sobre mim próprio.	1	2	3	4	5
14. Como fui bem-sucedido(a) na escola, pareceu-me natural ir para o ensino superior.	1	2	3	4	5
15. Este grau académico vai permitir-me conseguir um bom emprego.	1	2	3	4	5
16. Queria ter a oportunidade de conhecer pessoas e fazer novos amigos.	1	2	3	4	5
17. Quero tornar-me numa pessoa mais culta/instruída.	1	2	3	4	5
18. O que era esperado de mim era que fosse para o ensino superior.	1	2	3	4	5
19. Este grau académico vai permitir-me alcançar o ensino exigido para a minha carreira profissional.	1	2	3	4	5
20. Este grau académico vai ajudar-me a desenvolver conhecimentos e competências úteis para a minha vida.	1	2	3	4	5
21. Quero mesmo muito obter um grau académico.	1	2	3	4	5
22. Vir para o ensino superior permite-me ter mais três anos para decidir o que realmente quero fazer.	1	2	3	4	5

2. Indique qual a importância que as perspectivas/opiniões das seguintes pessoas tiveram na sua decisão de vir para o ensino superior.

	Nada importante	Pouco importante	Não tão importante	Importante	Muito importante
1. Pais	1	2	3	4	5
2. Irmãos	1	2	3	4	5
3. Outros familiares	1	2	3	4	5
4. Amigos	1	2	3	4	5
5. Professores das disciplinas.	1	2	3	4	5
6. Tutores e psicólogos.	1	2	3	4	5

3. Indique até que ponto considera que a escola o/a preparou para os seguintes aspectos do estudo no ensino superior.

	Muito mal	Mal	Não tão bem	Bem	Muito bem
1. Saber o que é esperado de mim, em termos académicos, na universidade.	1	2	3	4	5
2. Ser capaz de trabalhar de forma independente sem muita orientação do professor.	1	2	3	4	5
3. Ser capaz de iniciar as minhas actividades de estudo.	1	2	3	4	5
4. Ser capaz de planear o meu tempo de estudo de forma eficaz, de modo a cumprir todos os prazos.	1	2	3	4	5
5. Ser capaz de me responsabilizar pela minha própria aprendizagem.	1	2	3	4	5
6. Estar disposto a pedir ajuda aos professores/tutores.	1	2	3	4	5
7. Ter à vontade na utilização de computadores.	1	2	3	4	5
8. Ter à vontade para trabalhar em grupo.	1	2	3	4	5
9. Ter confiança nas minhas capacidades para realizar actividades escritas (trabalhos e projectos).	1	2	3	4	5
10. Estar disposto a participar nas aulas.	1	2	3	4	5
11. Ser capaz de avaliar o meu próprio progresso/evolução.	1	2	3	4	5
12. Ser capaz de organizar a minha própria vida em geral.	1	2	3	4	5

4. Indique qual a importância dos seguintes factores na sua decisão de estudar Contabilidade.

	Nada importante	Pouco importante	Não tão importante	Importante	Muito importante
1. Gostei da disciplina de Contabilidade na escola.	1	2	3	4	5
2. Considero ter as características e competências adequadas ao estudo da Contabilidade.	1	2	3	4	5
3. Não me preocupei demasiado com o que iria estudar na universidade.	1	2	3	4	5
4. Quero ser um contabilista profissional e vi este curso como uma boa forma de alcançar esse objectivo.	1	2	3	4	5
5. Fico entusiasmado com as perspectivas profissionais disponíveis para os estudantes de contabilidade.	1	2	3	4	5
6. Quero aprender mais sobre Contabilidade.	1	2	3	4	5

7. Os meus amigos também queriam fazer este curso.	1	2	3	4	5
8. Os meus amigos também vieram estudar para esta instituição.	1	2	3	4	5

5. Indique até que ponto considera que o ensino superior vai permitir-lhe:

	Muito mal	Mal	Não tão bem	Bem	Muito bem
1. Desenvolver novas competências.	1	2	3	4	5
2. Aumentar a autoestima e autoconfiança.	1	2	3	4	5
3. Divertir-se.	1	2	3	4	5
4. Ter um estímulo e crescimento intelectual.	1	2	3	4	5
5. Alargar os horizontes.	1	2	3	4	5
6. Conhecer novas pessoas.	1	2	3	4	5
7. Aprender sobre novas ideias.	1	2	3	4	5

6. Como se sente relativamente aos seguintes aspectos:

	Nada confiante	Pouco confiante	Indeciso	Confiante	Muito confiante
1. Capacidade para lidar com os materiais do curso.	1	2	3	4	5
2. Capacidade para passar a todos os exames à primeira tentativa.	1	2	3	4	5
3. Capacidade para ter resultados acima da média nos seus estudos superiores.	1	2	3	4	5
4. Capacidade para alcançar resultados que o/a coloquem entre os primeiros 10% da sua turma (Top 10%).	1	2	3	4	5

7. Assinale, com um X, a opção que indica a importância que tem para si conseguir fazer esta licenciatura:

- Muito importante _____
- Importante _____
- Não tão importante _____
- Pouco importante _____
- Nada importante _____

Appendix D: Script of the interview with students

Esta entrevista visa recolher a sua percepção sobre questões associadas à aprendizagem/estudo/ensino na introdução à contabilidade. A sua participação acontece na qualidade de estudante que, no ano académico anterior, atendeu/assistiu a disciplinas de **introdução à contabilidade** no ensino superior em Portugal. A informação recolhida destina-se a ser analisada no âmbito de um estudo integrante de um Doutoramento em Contabilidade.

A entrevista vai ser gravada com a sua autorização e o seu conteúdo será acedido apenas pela equipa de investigação envolvida no projecto e apenas para os fins citados.

Agradecemos, desde já, a sua colaboração espontânea neste estudo e garantimos a total confidencialidade da mesma.

1. Como tem sido a sua experiência relativamente à aprendizagem e ao estudo em geral?
2. O que sente relativamente à aprendizagem e ao estudo?
3. O que é para si a contabilidade? Consegue descrever-me o seu significado e conceito?
4. O que sente relativamente à aprendizagem e ao estudo na disciplina de ‘introdução à contabilidade’?
5. O que pensa sobre o ensino e a forma de ensinar em ‘introdução à contabilidade’? Como gostaria que fosse?
6. O que sabe dizer acerca do ‘balanço’ e da ‘demonstração dos resultados’?
7. O que são as ‘demonstrações financeiras’?
8. O que é a ‘informação contabilística’?
9. Quem são os ‘utentes da informação contabilística’?

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