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101

Anne Eskola

Good Learning in Accounting

Phenomenographic Study on Experiencies of Finnish Higher Education Students

JYVÄSKYLÄN YLIOPISTO

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ABSTRACT

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One of the current priorities in educational development in Finland is to improve the efficiency of higher education system. At the same time, the competences needed in professional life have become more varied. The present study explores learning in the discipline of accounting to find out what the core elements of successful learning processes are. The study is carried out on the polytechnic level in Finnish higher education context.

The study takes a qualitative research approach and uses phenomenography as a research method. The study identifies variation in good learning in the field of accounting. These different ways of experiencing learning situations are represented in the form of categories of description. The data is collected from diaries, interviews and observation material. The analysis is focused on the search for good learning conceptions and then supplemented by the search for structural relationships between them. The results are the key aspects of good learning in accounting, i.e. both the nature and structure of the phenomenon.

The purpose of the study is to present interpretations on what good learning in accounting is followed by multiple sources of evidence. The frame of reference is focused on prior literature as well as what is found from the analysis of the data. The results aim at answering the quests for changes in higher education and to open the area of accounting education research in Finland by finally constructing an interrelated model of good learning for accounting. Hopefully, the present study can serve as a starting point or reference for larger investigations. On the practical level, the study aims at giving insights for accounting educators and administrators designing and realizing higher level studies of accounting.

The results reveal that there are three key elements in learning accounting outcome space; the student in the focus of good learning experiences and the teacher and the teaching methods as important mediators. These elements are in relation to each other in certain ways. The key qualities in the student are the personality, higher order thinking skills and learning styles and approaches. As to the teacher, the key attributes are the meta programmes, teaching style, responsibility and feedback. Collaborative learning methods supplemented by self-study methods like writing, exercises, work experience and practical training are important methods. The conception of learning has an influence on how the position of the student and the teacher are seen in the learning process. It is also notable that there is a clear difference between absolute learning experiences versus learning experiences in relation to some external reference point like expertise level.

Keywords: accounting, learning, teaching, accounting education, higher education, phenomenography, Finland, polytechnic

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Anne Eskola

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1 INTRODUCTION

One of the current priorities in educational development in Finland is to improve the efficiency of the education system. At the same time, higher education institutions in Finland are under increasing financial pressure. Government funding is no longer a question of head counting only, but educational institutions' performance measurement is playing an increasing role in their financing. Educational institutions need to emphasize their ability to serve the needs of businesses and society in general to legitimize their existence and funding. Therefore, it is in any institution's primary interest to give their students assistance and tutoring, and to familiarize them with the teaching and learning methods so as to help them perform as best they can – both in terms of the quality of learning outcomes and the time limits imposed.

Finland has ranked among the top in the OECD's PISA [1] (Programme for International Student Assessment) studies of learning results with high performances in mathematics, science, mother tongue and problem solving. The Finnish results are significantly better than those of any other 56 OECD countries in the survey as a whole. The proportion of weak students has been lower than in any other country surveyed. The differences between individual schools are among the smallest comparing to other participating countries. On the basis of the results, the students entering the secondary education and the higher education in Finland should be well prepared to analyse, reason and communicate effectively. (OECD 2007.)

In the future, PISA continues to seek understanding of strong student performances, to become better at measuring them and to examine links between outcomes and educational processes. Moreover, in the coming years, PISA will offer countries more instruments for making linkages between students' experiences at school and their knowledge and skills near the end of secondary education. (OECD 2009.) It has been planned that, in the near future, an outcome

[1] The PISA programme is a jointly developed and internationally standardised assessment carried out every three years among 15-year old students. It assesses how far students near the end of compulsory education have acquired the knowledge and skills essential for full participation in society and measures, not merely the mastery of the curriculum, but important knowledge and skills needed in life.

measurement resembling PISA will be carried out also on higher education level.

Though an international and integral data on higher education outcomes is still missing, there is important research done on the national level. There is a great deal of evidence in Finnish higher education studies that the students' relation to studying has changed. Studying is nowadays seen as instrumental and performance oriented, and the whole process of studying has become more school like. Science as such is not appreciated but the studies are rather characterized by the promotion of individual material interests. This is reflected by the strengthening of vocationalism and the search of vocational identity. Both of these make the process of education more complex. (Vuorinen & Valkonen 2005.)

The increasing complexity of businesses has influences on the educational demands in the field of accounting. The same trend can be seen in any education with a vocational emphasis. Changes in globalization, technology, sources of information and businesses' operations place pressure on the accounting profession. Educational institutions are expected to serve the needs of society and especially business life. To meet all these challenges they should produce high quality students with the potential to become prospective accounting professionals with not merely accounting knowledge but also with analytical, technical, communication and interpersonal skills. In order to succeed in this task, educational institutions co-operate with businesses. It is also evident that businesses are becoming aware of their rights to expect educational institutions to produce them a stock of work force suitable for their purposes, and co-operation with educational institutions has given them a channel to express their expectancies.

1.1 Background

According to prior studies (Boyce et al. 2001; Granlund & Lukka 1997 and 1998, Järvenpää 2001; Kovar et al. 2003; Lin et al. 2005; Mainela et al. 2005; Matthews 2004; Nikolai & Wolk 1997) the skills needed to succeed in accounting are seen to broaden. The accounting profession needs graduates with a range of abilities. A good accountant is a business minded person who understands the company's needs and organization in a holistic way. The detailed, technical accounting is becoming less relevant than general accounting skills in association with a broad suite of adaptable generic skills which are transferable from one job to another. The key attributes for contemporary accountants include generic skills such as analytical and problem-solving skills, judgement and synthesis skills, personal and interpersonal communication skills, language skills, multicultural awareness, management, negotiation and organizational skills, and the ability to apply these skills creatively in unique situations. Also, an individual's character should be in line with the context and task requirement.

In addition to professional factors, a primary aim of accounting education is to further the individual emotional self-development toward maturity, interpersonal effectiveness and general psychological well-being. This means that the focus is also on the intellectual processes of education, personal development, and critical appreciation. Broad generic skills represent an essential component of social competency. Many aspects of thinking, including oral and written communication skills, principles of reasoning, and skills of argument construction and evaluation are shared across different fields of expertise. They can be thought of as enabling skills for learning and thinking. Ability to continuously develop one's job, accounting organization and systems has been identified as one of the most important competencies of accounting professionals. (Boyce et al. 2001; Järvenpää 2001.)

Recent studies (Chia 2005; Smith 2004) suggest that educators are supposed to reinforce their awareness of what the business community considers necessary for the potential employees. Since technical academic skills are seen to become less effective due to the speed of changes, educational institutions are expected to produce graduates with soft-skill competencies, knowledge needed to perform well in the changing condition and higher thinking abilities to solve complex accounting problems. Such terms as critical thinking, reasoning objectively or conceptual knowledge are commonly found in mission statements and programme goals of educational institutions.

Assessment within schools and programmes is a response to external pressures from the accounting profession and to internal pressures of institutions to improve the educational process. Improvement of accounting education at any institution can be represented as an iterative process of establishing educational objectives, designing the curriculum, developing a framework for delivering the curriculum, assessing outcomes, and then beginning the process again. From students' point of view, academic success is of primary importance, because academic failure creates emotional and financial costs for individual students and for institutions in terms of retention rates. (Gracia & Jenkins 2003; Stout et al. 2005.)

Marriott (2004) points out that "accounting educators face a number of challenges like instrumentality as students are motivated to study accounting not because of inherent love, or proven ability for the subject, but for vocational reasons linked to future extrinsic rewards. This suggests that learning in accounting often happens on surface level and teaching tends to encourage this approach. This is not only an accounting education phenomenon. The same applies to science and engineering studies. However, recent research also suggests that it is possible that differences in learning orientations are present in students before they even start their studies in higher education, which then might suggest that they make students to apply for certain studies."

According to studies (Beattie et al. 1997; Boyce et al. 2001), a predisposition to view the learning of accounting as consisting of rote memorization, which is confirmed by traditional teaching methods and heavy content-oriented workloads, easily leads to learning habits that are inconsistent with the devel-

opment of generic skills expected by future employers. However, students' approaches to learning can be modified. This makes approaches to learning interesting; by changing learning strategies, learning situations, teaching strategies and by developing general understanding of learning and teaching it is possible to improve the outcomes of learning.

There are calls (Cullen et al. 2004; Manninen 1994.) for accounting education and research to be more closely related to the demands of accounting practice. This means that the emphasis should go beyond practical skills and technical knowledge of accounting. From the accountants' point of view, the most appropriate way to update knowledge is to acquire research skills rather than undertake courses that focus on the communication of technical knowledge within a relatively narrow subject area. The need to direct intensive accounting research to examine what is experienced to be relevant knowledge in different contexts – like accounting – has become urgent. Research can play an important role in creating discussion and understanding between different interest groups living in different accounting realms.

1.2 Research topic and research question

> *"Research about students should be a primary mission of accounting education research. We should be interested in how students learn." (Apostolou et al. 2001.)*

This study aims at developing understanding of what good learning in accounting is. Since educational processes are very complex and since the requests for better performance, better learning or better teaching quite seldom explicitly utter what is meant by better performance or high quality learning outcomes, the purpose of this study is to find out the core elements of good learning experiences and the relations between the elements in the field of accounting, i.e. the ones that produce high-quality learning outcomes in accounting according to the learners' experience. Improving the whole learning experience can be seen as an ultimate purpose, but before this can be done, research is needed to reveal the experiences and to expand the understanding of key elements present in a successful learning process in an accounting context. A group of Finnish researchers in psychology (Lonka et al. 2004.) has expressed the need to improve the learning experience as follows:

> *"The demand for life-long learning in a rapidly changing environment calls for developing new practices in higher education. To foster optimal learning in our university students, there is a need to understand the learning processes that make high-quality learning outcomes possible."*

Marton and Tsui (2004) define learning process as the process of becoming capable of doing something as a result of having had certain experiences. Developing a learner's capability of handling novel situations is one of the most important educational aims. There is a wide variety of differing approaches to de-

scribing the ways in which students learn and study in higher education. The learning research pays attention to personal factors such as motivation, learning styles, personality types, and contextual factors such as curriculum design, course culture and assessment tasks and their relationship to how students choose or avoid particular learning strategies. Many studies in the field assume that an approach to learning is a student's response to a context. Since one important aspect of context is the nature of the discipline being studied, this emphasises the importance of this research being carried out within an accounting education context only. This type of knowledge provides a basis for discussing pedagogy in discipline specific terms. This explains why the studies quoted in the course of this research work have been chosen to be limited quite strictly in the area of accounting.

Tempone and Martin (2003) note that the accounting profession has expressed the attributes most commonly lacking among accounting students as being critical thinking, team work, the ability to communicate effectively and to define and solve professional problems. There is evidence that students do not transfer knowledge developed at school to professional problems. There is a great difference between seeing learning as being a consequence of teaching and seeing learning as the over-riding aim of education. To put learning and the student at the centre means it is experience rather than the curriculum or the teaching or teachers which is the focus. What is being supported is not just the development of knowledge, but ways of knowing, ways of practising and personal development. On the basis of all the above, this is why the student's experience will run all through the present study.

According to Byrne, Flood and Willis (2002) and Byrne and Flood (2004), accounting programmes need to produce graduates who are active, independent learners possessing the knowledge, skills and competencies necessary to perform effectively throughout their careers. In order to improve the quality of student learning, there is a need to develop a greater understanding of how students learn. Within the student learning paradigm, learning is not viewed as either a cognitive or behavioural process, but rather as the way a student experiences a learning situation. Learning is conceptualized as relational in that the way a student learns depends on the way in which he or she relates to a learning situation. The way a student relates to a learning situation is not an intrinsic characteristic of the student, but depends on the learning context. It embraces student-related features and captures circumstances that can be controlled by educators. Different academic disciplines may encourage different learning environments and thus differences in students' learning approaches across disciplines are inevitable.

On the basis of what has been evidenced in extant research work on learning and learning accounting, the concept of learning and the experiences of learning seem to encompass a variety of different aspects, and it seems inevitable that these aspects should be studied all at the same time and interdependently when trying to define what good learning in accounting is. This can give a holistic view on the topic. The formulation of research question assumes that

students' experiences are central in exploring what good learning is. Students' experiences are the result of the interaction of the student and the learning environment. The emphasis in the formulation process of the research question lies in its apparent simplicity. The idea is to give space for respondents' experience without presuppositions of what the possible answers might be. The research question can be defined as follows:

What is good learning in accounting?

Defining good can be done in terms of relativism. Good can be defined with the help of other concepts and it is explored in its context, i.e. learning. Thus good is what serves learning purposes. (Virtanen 2004.) In this study learning will be observed as being something that happens through the experience, and variations in ways of how people experience a phenomenon like learning will be the focus of the study. It is also assumed that learning should be a specialization within every discipline whether it is accounting or something else. In the case of this study, learning is defined as learning in accounting, which may be very different of learning in some other discipline.

1.3 Method and outcomes

The research method chosen for the present study is phenomenography. It is a research approach designed to answer questions about thinking and learning. Phenomenography is concerned with the subjective study of human experience. The objective is to see the world from the individual's perspective. The aim of any phenomenographic research is to identify variation in approaches to learning. Usually interviews or narratives give detailed data on qualitative variation. Phenomenography has developed from empirical studies of learning specifically in higher education. However, there is also a pure phenomenographic knowledge interest. Phenomenography focuses on the different ways in which people experience, see, perceive, apprehend, understand and conceptualise various phenomena. These different ways of understanding, or conceptions, are represented in the form of categories of description. A conception is the basic unit of description in phenomenographic research. (Marton 1994b; Marton & Pong 2005.)

Phenomenography is a very appropriate research method for researching learning. The phenomenographic perspective of student learning is relational; learning is constituted in the relation between situation and individual. This implies that research must take into account both the phenomenon and the learner and the context in which the phenomenon is experienced. The varying characteristic of the relation between subject and object, phenomenon and individual - within a particular context - becomes the object of research. It is defined as a structured set of categories of description. What is described is not only the phenomenon, but also how that phenomenon was experienced. Considering the

experience of learning, the learner cannot be separated from what is being learned or the context in which it is being learned. (Tempone & Martin 2003.)

Psychometric instruments using questionnaires have been widely used in accounting education research concerning the measurement of students' learning styles, their approaches to, and perceptions of learning, and other measures of individual differences. However, Duff (2001a; 2001b) – among many others - points out that the weakest aspect of survey-based research concerns the accuracy of measurement of the constructs being examined, and this has sometimes led to difficulties in interpreting the results of applied research.

The appropriateness of phenomenography in learning studies and the suggestions made by previous studies concerning the future examination areas needed and the methods suggested to follow the examination areas give some guidelines for the choice of research method for the present study. According to Wilson, Ravenscroft, Rebele and St. Pierre (2008):

> *"Moreover, accounting education research has to be undertaken without the benefit of a dominant paradigm, therefore often giving rise to a need for considerable novelty in approach."*

Pihlanto (1990) states that the notion of the human being is a basic aspect to be considered in research. The human being is in a crucial role in all the activities that are in the focus of research in accounting as well as in other socially accentuated disciplines. This emphasizes the importance of accounting scholars to be aware of the nature of agent at an individual level and to consider the human actor in a comprehensive way in the research framework. The concept of man defines what kinds of methodologies and problems can be dealt with by the researcher.

Manninen (1995) defines the experience of knowledge as one used to refer to ethnomethodological-phenomenological perspective. It means that the constitution of knowledge is seen as an accomplishment which is based on an individual sense-making process. Since the topic of the present study is on the experiences of learners and their interpretation by the researcher, the research position is subjectivistic and based on the phenomenological philosophy. The discipline of phenomenology is a philosophical method that studies structures of conscious experience as experienced from the first-person point of view, along with relevant conditions of experience. It makes human experience its research object. The philosophers reflect their way of experiencing the specific phenomena. Literally, phenomenology is the study of phenomena, things as they appear in our experience. For phenomenologists, the essence of experience usually is interpreted as what is common to different forms of experience. (Marton 1994b; Stanford Encyclopedia of Philosophy.)

Phenomenological philosophy, in general, refers to studies where one task appears to be the development of ways of doing research. It is also important to notice the role of the researcher as a research instrument in this type of study. It is obvious that researchers vary in sensitivity and this could be seen as a problem from the traditional perspective, because of the requirement for obtaining

inter-subjectively reproducible data. However, it is also possible to argue that it is actually an advantage and not a problem that researchers may vary in sensitivity, because this means that different viewpoints will be obtained in the course of the study. (Manninen 1994; 1995.)

At this point it becomes necessary to define the difference between the notions of concept and conception – the latter being typical in studies in the field of phenomenography. A concept can be defined as an agreed category whereas a conception represents an individual construction from experience and knowledge. Concept describes object with the same defining features that have become recognized through research or widespread usage. Conception describes individual variation. Conceptions evolve through increasing knowledge and experience as they bring together additional aspects of the concept moving closer to commonly agreed definitions. Educators need to bring together the conceptional framework and experience because experience will not lead to change unless it is interpreted against a broader framework of understanding. (Entwistle 2007, 124; Entwistle et al. 2001.) Manninen (1997) examines the nature of conceptions and states that that reality is constructed by discursive conceptions of it. Therefore the role of language in constituting reality is so central that all attempts to discover the reality should be seen for what they finally are – forms of discourse.

Since phenomenography has been developed in educational research, mental models are in line with the knowledge interest of psychology. However, psychological models are not particularly helpful in solving practical pedagogical problems. Learning, thinking and understanding are dealt with as relations between the individual and what the individual learns, thinks about and understands. Understanding the relationship between the individual and what the individual is trying to learn, pedagogical opportunities are expanded. By changing what has to be learned, it is possible to change the relationship between the object of learning and the individual. The knowledge generated from phenomenographic research has direct and immediate educational relevance. (Marton 1988.) Phenomenographic methodology somewhat resembles qualitative grounded theory, and some researchers even see a danger of becoming atheoretical and folk psychological (Lonka 2004).

Phenomenographic research method emerged from educational research carried out in Sweden in the University on Gothenburg in the late 1960's and early 1970's by Marton [2] and Säljö [3]. The research took an experimental perspective. Marton (1994b) says that "the starting point was a simple observation that some people are better at learning than others. The aim of these studies was to take as little as possible for granted. The characterisation of the differences -

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2 Ference Marton is a Swedish professor of educational psychology at the University of Gothenburg who is best known for introducing the distinction between deep and surface approaches to learning and for developing a phenomenographic research methodology for educational research.

3 Roger Säljö is a Swedish professor of educational psychology at the University of Gothenburg whose research presents a socio-cultural perspective on human learning.

qualitative by nature - in the outcome of learning was based on students' estimations of their understanding concerning the task. Research results later evidenced that the relationship between approaches to learning and the outcomes of learning do not depend on forms of learning. At the focus of studies was learners' different understandings relating to a situation and learners' different approaches, i.e. differences in the way they experienced the learning situation. Then the focus of interest in the studies was shifted. Rather than exploring what emerges in a specific situation the studies focused on the learners' ideas about the phenomena."

The overall aim of phenomenographic research is to map the variation in ways of experiencing and conceptualising it. This is done within a number of interviewees, which is usually not very big. Indeed, a typical feature of the outcome is not how common or representative an experience is. What is important is the nature of the variation. Through exploring the different ways of seeing a phenomenon under scrutiny, a fuller understanding is developed. (Tempone & Martin 2003.)

Marton (1994b) says that "the different ways of experiencing a phenomenon are characterised by corresponding categories of description. The ways of experiencing actually represent different capabilities for dealing with or understanding the phenomenon. Some ways of experiencing the phenomenon are more efficient than others. This means that it is possible to establish a hierarchy of categories of description. It can also be said that a certain way of understanding something is also a way of being aware of it. Phenomenographic studies explore different ways of being aware of something in order to find out the differences in the structure of awareness and also the corresponding meaning of the phenomenon. "

The object of the study of phenomenographic research can be described "as variation in human meaning, understanding, conceptions, awareness or ways of experiencing a particular phenomenon. Outcomes are represented analytically as a number of qualitatively different meanings or ways of experiencing the phenomenon. The different meanings or ways of experiencing also include the structural relationships linking them logically one to another. The researcher aims to constitute not just a set of different meanings, but a structure relating the different meanings. This provides a way of looking at collective human experience of phenomena holistically, despite the fact that the same phenomena may be perceived differently by different people and under different circumstances." (Åkerlind 2005.)

Individual interviews have been the most used method for collecting data. However, it is worth of pointing out that how something is experienced can be expressed in many ways. There are phenomenographic studies where group interviews, observations, drawings, written responses, historical documents, artefacts and observations have been used as the main source of information. The individual is not the unit of analysis because it is possible that the same participant can express more than one way of understanding the phenomenon. (Marton 1994b.)

The researcher must set aside any presuppositions about the nature of the phenomenon. It is also impossible to construct hypotheses or interpretative categories in advance - though any such attempt will not be completely successful because it is difficult for the researcher to set aside implicit personal beliefs. Therefore it is important that the researcher holds empathetic understanding of the individual's experience. Also, because sampling involves presumptions that certain kinds of individuals have certain kinds of conceptions it is considered impossible to sample the material. (Lucas 2001.)

The analysis usually starts with a search for meaning or with a search for variation in meaning. It is then supplemented by a search for structural relationships between meanings. In the early phase, reading through transcripts should be done as with a high degree of openness for different interpretations. Subsequent readings are more focused on particular aspects. However, later readings are still open to new possible interpretations. The whole process is iterative. It means sorting and resorting of data, comparisons between the data and the developing categories of description and defining relations between the categories themselves. The important point is the search for key qualitative similarities within and differences between the categories. (Åkerlind 2005.)

In practice, the analysis is realized so that the first way of reducing the data is to distinguish between what is immediately relevant. This relates to the way of experiencing the phenomenon. The second step is to identify distinct ways of understanding or experiencing the phenomenon. There are two ways of doing this. One is based on similarities. Another one can be used when two expressions reflect two different meanings or two ways of understanding the phenomenon. These cases can be thematized due to the contrast effect. The researcher can identify and group expressed ways of experiencing the phenomenon. Then focus is shifted from the relations between the expressions to the relations between the groups. This is done in order to establish the critical attributes of each group and the distinguishing features between the groups. The researcher develops the set of categories of description. Using these categories of description it is possible to characterise the variation in ways of experiencing and understanding a phenomenon. There are logical relations between the categories of description. As they represent different capabilities for conceptualising the phenomenon, a hierarchy can be established. This complex of categories of descriptions is referred to as the outcome space. The categories of description and the outcome space are the main results of a phenomenographic study. (Marton 1994b.)

Marton (1994b) and Åkerlind (2005) both describe the nature of phenomenographic analysis by saying that "there is a hermeneutic element present. The different steps are taken interactively. Each step has implications both for the steps that follow and for the steps that precede. The analysis goes through several runs in which the different steps are considered simultaneously. The set of categories or meanings that result from the analysis are not determined in advance but emerge from the data. The researcher needs to be willing to con-

stantly adjust thinking patterns in the light of reflection, discussion and new perspectives and to maintain focus on the collective experience. "

What is represented in the phenomenographic analysis is best described as a two dimensional matrix. Results of phenomenographic research are the key aspects of the meaning of the phenomenon. The two dimensions of the matrix represent what is focused on by interviewees (this is called the referential dimension), and how it is experienced by the interviewee (this is called the structural dimension). The mapping shows that some people see a phenomenon in question in less complex ways than others. It also shows how the different responses are related. The responses present a hierarchy of understanding of the phenomenon. In the hierarchy higher-order conceptions incorporate lower order ones. (Tempone & Martin 2003.)

"What emerges from this type of research is insight into the structure and nature of the variation in responses. There may be an unlimited number of ways of experiencing and conceptualizing a phenomenon, but there is a limited number of ways of conceptualizing the key concepts in that area. Variation in meaning is infinite, but variation in the key aspects of the meaning is limited. The outcome is not intended to be a collection of experiential data that represent the understanding of individuals, but rather insight into the structural overview of different categories of knowing. Each category is signified by specific key aspects of the matrix. What is given overall is a map of the understanding of the key aspects of knowing the phenomenon under investigation by the data set under investigation." (Tempone & Martin 2003.) According to Åkerlind (2005) there are three primary criteria for judging the quality of a phenomenographic research outcome and they are:

1. that each category reveals something distinctive about a way of understanding the phenomenon;
2. that the categories are logically related;
3. that the variation be represented by a set of as few categories as possible.

1.4 Position

"It is important to note that qualitative research is affected by unforeseen events and stochastic factors – it is a bold jump into the unknown" (Vaivio 2008).

Chua (1986) states that it is common for accounting as a science that there has been a relatively one-sided world view and that accounting studies can be classified in three categories; mainstream studies, interpretive studies and critical studies. Mainstream accounting studies posit that there is a reality independent of people. These studies are typically hypothetico-deductive by nature and they take the empirical world as objective. Interpretive studies lean on subjectivism and social interaction becomes objective reality. The studies typically try to in-

crease the understanding of how people act and the purpose of their acts. Critical studies claim that separate ideas can only be understood in an entity, and understanding a change and processes is crucial. This means that any scientific knowledge is only temporary.

Until 1970's the accounting research was mostly normative by nature. The main purpose of this kind of research is to give instructions for different actors in accounting. From that on till recent years, the mainstream of accounting research years has been deductive and positivist in nature. This means that the theories have been chosen ex ante and the research has focused on the description of empirical phenomena. Each new research setting has been based on the existing theories whose accuracy has been tested with empirical research data. The task of science has been seen as stating whether something is true or not. Normative statements on practical issues are not part of this research tradition. The contribution of deductive and positivist studies can be seen as reinforcing certain institutionalized theories. At the same time, they can be criticized for an excessive focus on accounting technology and for seeing a human being as an actor either almost meaningless or a very simple and mechanically reacting creature. The practicality of the research results is often hard to find because the purpose of research results is to achieve a certain level of generalizability, which leads to abstract research results. This kind of research tradition is still very strong in the USA and in Anglo-Saxon countries. (Malmi 2005; Pellinen 2004; Pihlanto 2006.)

Another strong research tradition that gained ground in 1980's is the interpretive research tradition where the researcher tries to understand the people in organizations through their subjective concepts of their own situation and context, and thus understand their acts and decisions. The pursuit for making a human being as part of accounting research has motivated the accounting researchers to explain the human actor in economics with the help of the theoretical framework of other social sciences. Accounting has been scrutinized as an essential part of organizations and society. These kinds of studies have mainly utilized qualitative research methods or methods borrowed from sociology. Comparing to research work in the positivist tradition, these kinds of studies tend to be more advanced with regard to their assumptions concerning human behaviour. However, they can be criticized for leaning too much on some general theory of man or society so that the empirical part of studies is in danger of being quite limited, not to talk about the fact that the practical applications of these kinds of studies can sometimes be quite modest. (Lukka 1999; Malmi 2005; Pellinen 2004.) This research tradition has spread especially in Europe (Aaltio 2006).

The interpretive paradigm takes a subjectivist approach in analysis and tries to understand the world as it is at the level of subjective experience, individual consciousness and subjectivity within the frame of reference of the participant of action – as opposed to the observer. It thus tends to be nominalist, anti-positivist, voluntarist and ideographic. Social world is created by the individuals and social reality is regarded as a network of assumptions and inter-

subjectively shared meanings – the ontological status of the social world being extremely questionable and problematic in the light of theorists located within the paradigm. (Burrel & Morgan 1989.) The studies are stamped by the position of the researcher in the research process, the special features of data gathering, and the analysis and interpretations of the data in the search for new understandings and contributions to the field (Aaltio 2006).

The dominant assumptions of interpretive methods are: First, the belief about knowledge seeks for scientific explanation of human intention, the adequacy of which is assessed with the help of logical consistency, subjective and common-sense interpretation. Second, the belief about physical and social reality is such that reality is assumed to be subjectively created. Third, the theory seeks to explain action and understand how social order is produced. This indicates that the researcher is also a subjective interpreter. This socially stamped world of research is thus more complex and diversified in comparison to the objective observation-related world of the mainstream perspective. This kind of research in accounting takes into account all essential features of human being operating in the field of accounting creating a holistic conception of man. (Pihlanto 2003a; 2004.) Pihlanto (2006) defends the applicability of interpretive study results:

> *"Within the interpretive research, it is totally possible to develop theories that are relevant from practical point of view since the empirical perceptions are made inside the community and they concern the people there in their everyday job. Thus the theories, even theoretical ones, developed on the basis of this data inevitably have a connection to the reality. The connection is reinforced and the applicability of the results increases if the practicality is not just a side product, but the main target in addition to the theoretical targets. "*

The interpretive paradigm is used when the man and his reality is the object of study. The interpretive paradigm in accounting studies defines accounting as something that is born and develops in the interaction between people. The image accounting creates about reality is a choice where some things from the mass of information are taken into account and some others are left out. It is typical for interpretive studies that there are no pre-constructed assumptions and that the research process happens in the interaction. The process of understanding is vital. (Virtanen 2004.)

This study can be positioned in the interpretive paradigm using the classification of Burrel and Morgan (1989). The interpretive paradigm is depicted in figure 1. It thus runs counter to positivism by positing that knowledge precedes any understanding and that there are inherent organising principles within man's consciousness by which sense data is structured and thus understood. Phenomenology is one representative of interpretive paradigm. In phenomenology analysis penetrates beyond superficial description of appearance or intuition. It is typical that all assumptions of everyday life are brushed aside in the pursuit of pure subjectivity. (Burrell & Morgan 1989.)

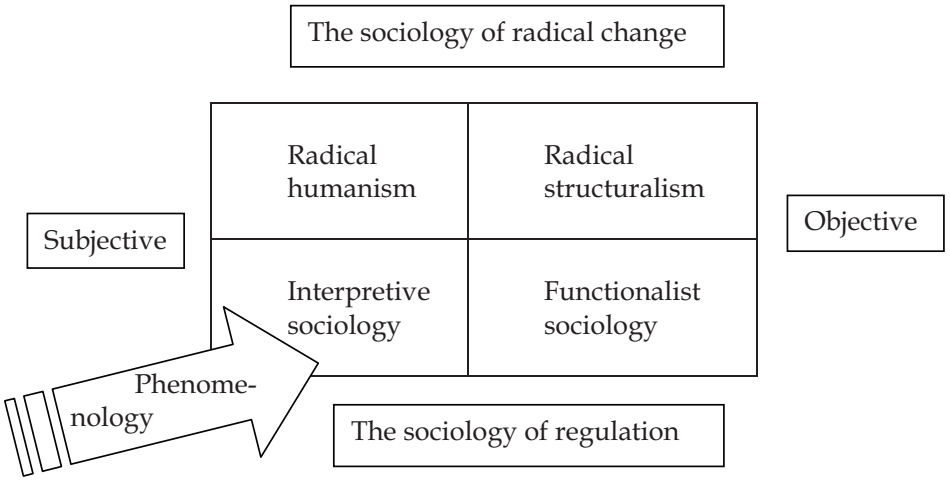

FIGURE 1 Interpretive paradigm according to Burrell and Morgan (1989)

Vaivio (2008) describes what qualitative research in accounting means by saying that it is "approximately the same as the entire interpretive research tradition in accounting. It tries to develop theoretically valuable interpretations. It is typical for this kind of research to use multiple sources of evidence, such as interviews, documents and other texts as well as forms of participant observation within the research site. At its best, a qualitative study is a theoretically informed, focused, intensive, well-documented and plausible analysis that increases our understanding - in a certain context in real life. Qualitative studies can address fundamental, practical problems and a well-positioned qualitative study can also take a survey study as a point of departure. Qualitative accounting studies can be aimed at theory discovery, theory refutation, theory refinement or specification of existing theory. At a minimum, a qualitative study should contribute to theory by comparing its findings with those of other relevant studies. Also, the external validity and theoretical insights of a qualitative study can be further improved by complementing it with a large-sample statistical study."

Qualitative research in accounting thus assists understanding of the relationships between the researcher, the types of research questions, the methods, the context and the findings that are subsequently generated. The consequence has been an accounting discipline that is increasingly pluralistic in its acceptance of ontological, epistemological, theoretical and methodological diversity. The latter one can be seen as a clear strength of qualitative research; there is a wide range of both methods for researching and analysing data and intellectual frameworks for explaining the resultant research findings. (Humphrey & Lee 2004.)

Phenomenology and phenomenography can be classified as empirical study. As it is empirical research, the researcher is studying the awareness and reflection of the subjects. Phenomenography falls within interpretive research and is distinguishable within this area in two main respects. One is that it aims

to describe experience collectively rather than individually and to focus on the differences rather than the similarities in this experience. The other is that the objective is not to make statements about reality but statements about reality-as-perceived. Statements about reality-as-perceived are generally referred to as conceptions. Other terms such as beliefs, theories, orientation and knowledge are also used, indicating uncertainty about the ontological and epistemological status of conceptions and also the level of complexity of what the concept of a conception denotes. The general consensus appears to be that conceptions are regarded as being context-dependent and relational—the product of an individual's interaction with world or meanings attached to phenomena which then mediate the response to situations involving those phenomena. (Lucas 2001; Leveson 2004; Marton 1994b.)

Research in learning has started with concepts being derived from psychological and sociological research and that were applied to higher education. Many North American researchers still continue this line. Elsewhere, especially in Europe and in Australasia, alternative methodologies have been used more often to provide qualitative descriptions of students' experiences on learning and teaching. In the recent years, there has been a growing interest in student learning research which has its origins in Sweden and Britain and has been taken up enthusiastically in Australasia. This line of research originally began with conventional survey methods with self-report inventories but later on it has shifted more towards students' experiences of learning. Originally the emphasis was on individual differences in learning but later it moved towards influences of teaching and assessment of learning. (Entwistle 2000, 156; Entwistle et al. 2000.)

According to Beattie, Collins and McInnes (1997), if we look from historical perspective, it can be seen that changes in society have called higher education for a change as well. Back in 1980's, changes in the USA called for flexible and broad-based accounting curriculum with the minimum focus on procedural accounting. Approximately at the same time, similar developments happened in Australia, Canada and the UK, though the accounting education system in all above mentioned is different from the American one. However, the common feature of renewals is the quest for more conceptual form of learning. To achieve this target, it is considered necessary that students should be assisted to adopt a deep learning method as opposed to a surface one. The concepts of deep and surface learning were developed in 1970's and 1980's and they are now considered established in higher education literature. The four main groups in the research of deep and surface learning are:

The Lancaster group [4]
The Australian group [5]
The Swedish group [6]
The Richmond group [7]

The two first groups can be described as educational psychologist groups placing their emphasis on psychometric measures and inventories of learning characteristics. The two last groups emphasize qualitative methods. In its early phase the Lancaster model was a simple input-output model of learning. The Australian model focused on the learning process, the Swedish model incorporated intention and contextual factors. The Australian and the Swedish group have as a common denominator the intentionality and selection of approach in studying. The Richmond model distinguished a fixed learning style from a learning approach. Later on, the Lancaster group brought the external factors in the model and introduced meta learning as a link between student, task and outcome. (Beattie et al 1997.) A quote from Wilson et al. (2008) sums up the difficulties in accounting education research:

> *"Students as subjects bring many, many potentially confounding variables to the researcher's table. In addition, the educational process resists strict control. Education research is, we would argue, more challenging than research with more well-behaved laboratory subjects and well-controlled data sets. Well-done education research involves all the complications and difficulties of other research streams within the accounting domain, and should be evaluated accordingly. "(Wilson et al. 2008.)*

The quests for changes in education are familiar in Finnish higher education context as well. Teaching and studying in higher education institutions have often been considered as being far away from the ideas of knowledge-building discourse, resembling rather knowledge transmission. This has led to attempts to develop learning-enhancing teaching and these developments are based on the constructivist view of knowledge acquisition and its pedagogical applications. (Tynjälä 1999.)

According to Tynjälä (1999), higher level instruction can be viewed from four perspectives: disciplinary, working life, research on expertise, and research on learning perspectives. This is described in figure 2. Disciplinary considerations are related to the content of a specific domain and concern questions such as what should be taught and how the knowledge base should be organized. From the point of view of working life, central issues are the needs of the workforce, the learning outcomes, and the skills and knowledge future employees are expected to possess. From the viewpoint of research on expertise, basic considerations relate to the nature of expertise in specific fields and to the question

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4 The Lancaster group is led by Noel Entwistle, a UK educational psychologist specialized in student learning in higher education.
5 The Australian group is led by John Biggs, is an Australian educational psychologist specialized in the quality of learning outcomes.
6 The Swedish group is led by Ference Marton.
7 The Richmond group is led by Gordon Pask.

of whether there are general features that are common to experts independent of the domain they represent. From the perspective of research on learning, the questions concern the basic processes of how knowledge is acquired and how the learning process can be supported. This study can be positioned in the last mentioned section. The purpose is to investigate the topic from the perspective that puts the learning process at the central focus and the main interest of the research work.

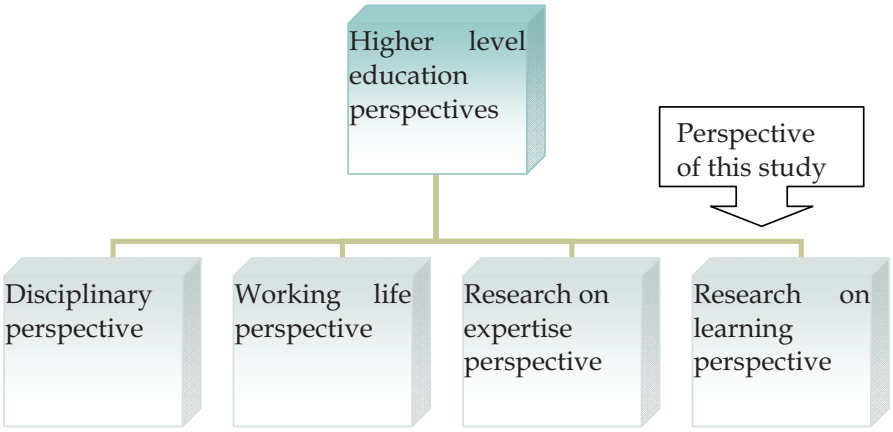

FIGURE 2 Research on learning perspective according to Tynjälä

Heikkilä and Lonka (2006) state that such a complex phenomenon as learning cannot be explained without adopting a multidimensional and systemic view. All traditions share a general assumption that self-regulatory activities are mediators between personal and contextual characteristics and actual achievement or performance. The learning context is not an objective entity, but it is perceived, observed or interpreted by the students. In explaining studying the different research traditions need to be integrated because the research traditions provide differing explanations for the same phenomena; success in learning. However, the interplay between motivational, cognitive and affective aspects of student learning has not been systemically examined yet. Although a notable amount of research has been carried out on learning approaches, self-regulated learning, and cognitive strategies separately, it is not known how they are interrelated. Sharma (1997) urges the need to direct the accounting education research towards exploring the utility of the concepts to be found in the higher education literature in conducting "much needed behavioural research in accounting education".

1.5 Conception of learning

The conception of learning as such can be seen having importance on experiences in learning. However, it can be stated that there is no single generally accepted definition of learning. Differences between the traditions and constructs emerge both from theoretical backgrounds and from methodologies. Nonetheless, all traditions agree that experience is an important component of successful learning. No matter what the perspectives and scientific backgrounds are, there are certain common elements that they each would define as learning: something happens to the student and leads to change in behaviour. (Heikkilä & Lonka 2006; Marriott 2004.)

A conception of learning is defined by Tynjälä (1997; 1999) as a coherent system of knowledge and beliefs about learning and related phenomena. Research on conceptions proceeds along two broad lines: cognitively oriented studies of mental models and experientially oriented phenomenographic studies. Cognitive studies seek to uncover mental representations and changes in them. Phenomenographic research aims at capturing the different ways in which people understand and describe phenomena. In the background of many studies of conceptions is Piaget's [8] assumption that conceptional learning resembles the development of scientific theories. It might be assumed that if students' everyday experiences of learning and studying are based mainly on situations that reflect the behaviourist view of learning, students' conceptions of learning develop in the same direction. Similarly, a learning environment based on the constructivist view may influence the students' views of learning in the direction of constructivism.

Since the conception of the phenomenon under scrutiny, i.e. learning and learning accounting specifically, is vital for any phenomenographic study, the conception of learning will be defined for the purposes of this study in order to help the interpretations of the data. The conception of learning will first be discussed in the light of constructivism and then in the light of what emerges from the data.

The constructivist view of learning is not a unified theory. Instead, it can be seen as a collection of diverse dispositions having some general common features. The theory assumes that the learner has a set of experiences. The model is based around the actions a learner takes to reorganize new information and beliefs into an understandable format. Learning is not seen as a passive receiving of information and knowledge cannot be simply transmitted to the learner. Instead, learning is achieved when the learner creates new internal meanings from newly presented information. Learning is a process of developing connections and new understandings rather than memorizing content. The

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[8] Jean Piaget is a Swiss philosopher, natural scientist and developmental psychologist reputable for his work in studying children and for the theory of cognitive development and the constructivist theory of knowing.

learner's previous conceptions and beliefs about the topic create dissonance. This dissonance is resolved as new models are created to explain the incongruities in the learner's prior knowledge and understandings. Constructivism requires students continuously to develop their knowledge and understanding as they explore real-world problems for the first time. Learning is contextual in nature. Students taught with constructivist negotiate meaning from divergent perspectives to solve a problem. Teacher's role is to pose problems in realistic, meaningful contexts and to model behaviours that facilitate and ensure that learners attend to inconsistencies and errors arising in their mental representations. The teacher thus becomes a coach rather than a presenter of knowledge. (Smith 2004; Springer & Borthick 2004; Tynjälä 1997.)

Constructivist learning theory applies to learning at all ages but it seems to be especially suitable for advanced learners such as higher education level students. Since higher level educational institutions are communities for producing knowledge, it would actually seem paradoxical that instruction and student learning in a higher level educational institution would be dominated by the knowledge transmitting paradigm on learning accompanied by reproductive assessment methods. (Tynjälä 1997.)

In addition to explicitly constructivist approaches like radical constructivism and social constructivism, the phenomenographic tradition of research on learning has also been seen as a version of constructivism, although phenomenographers make a distinction between their own position and constructivism. Phenomenography differs clearly from radical or cognitive constructivism, but it has fundamental similarities with social constructivist views. Although there are great differences between the emphases of different constructivist positions, there seems to be no fundamental contradiction or incompatibility among the theories, only the practical difficulty of including different aspects of each view at the same. (Tynjälä 1999.) This study is located in the field of phenomenographic studies being close to socio cultural constructivist learning theory (figure 3); thus accepting both the importance of individual constructs as well as the importance of social constructs at the same time.

Phenomenographic research deals with the content aspect of learning. Learners' conceptions of what learning actually is are considered crucial for the way in which students experience learning, and thus for what approach students adopt in specific learning tasks. Whatever phenomenon or situation people encounter, it is considered possible to identify a limited number of qualitatively different and logically interrelated ways in which the phenomenon or the situation is experienced or understood. In subsequent studies this recurring principle has been applied also outside the educational context. (Marton 1994b.)

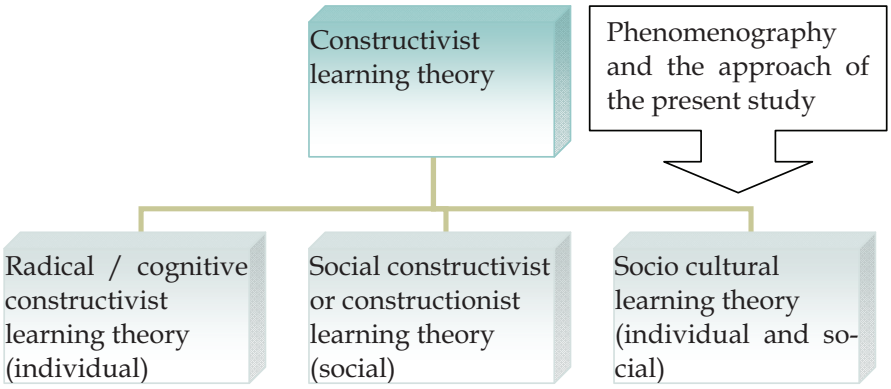

FIGURE 3 Constructivist learning theory

Thus learning is considered a function of both student and context. There is a well-established and substantial body of research which supports the contention that students' approaches to learning are related to their conceptions of learning and their perceptions of teaching context. These approaches determine the quality of the learning outcome. Two major lines of research have contributed to this finding: phenomenographic research focusing on ascertaining students' conceptions and approaches to learning and the qualitative differences between both conceptions and approaches, and inventory-based research on students' orientations to studying, as described in figure 4. (Lucas 2001.)

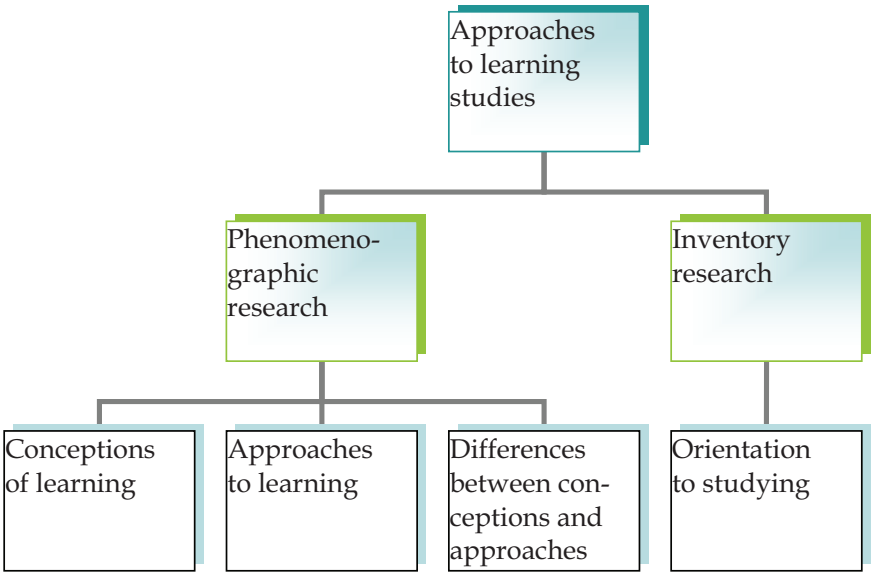

FIGURE 4 Approaches to learning research

Learning implies that the learners develop capabilities for experiencing situations and phenomena in certain ways. For every kind of situation and phe-

nomenon it is possible to identify a limited number of different ways a situation or phenomenon can be experienced. The differences can be understood as critical aspects that define the situation or phenomenon as experienced. Therefore, students can be prepared for the unknown variation of situations in the future through experiencing variation in their education. (Bowden & Marton 2004.)

Indeed, a conception of learning encompasses an element of what, i.e. the object of learning, and an element of how, i.e. the way of going about learning or aspect of learning. In reality, students' descriptions seldom capture both dimensions. Building on the theories of Säljö, refined later by Entwistle, conceptions of learning can be described as a construct consisting of six different levels that create a hierarchy:

1. the increase of knowledge,
2. memorizing,
3. acquisition of facts and procedures that can be retained and used in practice,
4. abstraction of meaning,
5. interpretative process aimed at the understanding of reality, and
6. changing as a person.

(Entwistle 2007; Lord & Robertson 2006.)

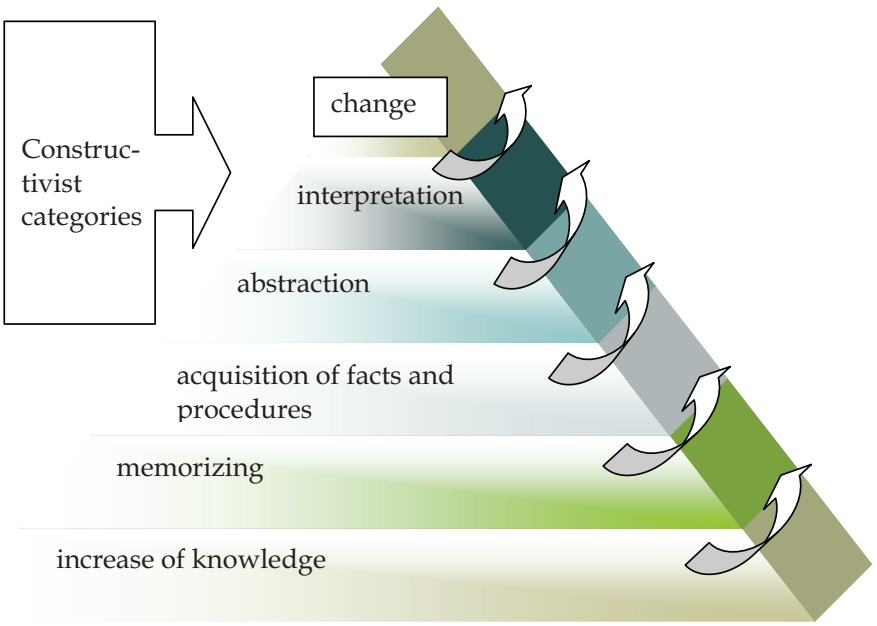

FIGURE 5 Conceptions of learning

These six conceptions can be seen as a hierarchy that is outlined in figure 5. The first three categories position learning as something that is external to the

learner. Learning is seen as a reproductive, functional, instrumental and quantitative process. Learning either just happens, or it is done by teachers and thus leaves a very passive role for the learner. The latter three categories that can be considered constructivist highlight the personal aspect of learning. Learning is something a student does in order to understand the world. Research has also shown that conceptions of learning are not stable characteristics of students, but the conceptions change over time and with different learning experiences as students proceed through their studies. (Byrne & Flood 2004; Lord & Robertson 2006.)

The first two and last two levels are usually relatively easy to understand and they are familiar. However, the two levels in between, i.e. the comprehension-learning level, are also crucial. Comprehension involves translation, interpretation and connecting newly learned and previously learned materials. At the rote level, students can recall the teacher's definition of a concept, but at the comprehension level, they develop their own meaningful and correct definitions, explain ideas and their importance and learn how to make predictions based on understanding ideas. This is the first step into critical thinking. One implication of the constructivist view of learning is that the development of students' conceptions of the phenomena studied is seen as a central learning outcome. (Brightman 2006; Tynjälä 1999.) According to Lindblom-Ylänne and Lonka (1999), many studies on learning have evidenced that the core concepts of learning are that knowledge and cognitive strategies are constructed by the learner, and that learning involves qualitative modification, not just the accumulation of new information in memory.

1.6 Contribution

The research in the field of general education and educational psychology is very brisk in Finland producing studies both on elementary education level and on higher education level. However, the higher education research does not cover all disciplines yet, though there have been large inventory studies in some disciplines. The extant studies can be found, for example, in the fields of psychology, medicine and education, but accounting – or business in general - is still an area where the studies are not numerous.

Until 1990's the accounting studies in Finland have mainly been nomothetical by nature with an action-analytical approach. Traditionally, the most popular topics have concerned financial accounting, corporate financial analysis, finance, management accounting and societal or strategic issues in accounting. Recently, the emphasis has been shifting towards behavioural and humanistic studies and the qualitative side of accounting reality. Research atmosphere is international, but there has also been a genuine Finnish accounting doctrine especially in financial accounting in the form of an accounting theory and in management accounting. (Näsi & Näsi 1996.) Studies on accounting and education or learning are few in Finland, and so are the qualitative studies in the field

of learning accounting. This study aims at opening the research in learning accounting in the Finnish context. Also, this study is aims at answering the quests and further research suggestions presented in previous qualitative learning accounting studies.

As to suggestions made on the basis of extant research body, it can be stated that theoretical and empirical research in accounting education can be related to four variables in a learning model borrowed from cognitive psychology. They are criterial measures, characteristics of the learners, learning activities and the nature of materials. Specific areas of interest are questions concerning the relation between accounting curricula and practise environment, balance between technical knowledge and skill sets and students' ability to learn on their own. More research is needed concerning instructional approaches in accounting education and their outcomes, the effect of context in various instructional approaches and study materials and educational technology. Developing an accounting education knowledge base depends on many things like investigating meaningful research questions, using appropriate research methods as well as integrating results with related existing accounting and general education research. A continuation of efforts to describe the learning styles of accounting students has been encouraged especially with the aspect of borrowing from the learning styles work of other educational researches. More research is needed in the identification of personality types most likely to succeed in accounting, the characteristics of the students in general and the influence of the learning context on students' approaches to learning and learning outcomes. Also, more research is needed in exploring the factors associated with major selection, career choice and predictions of performance. It is also relevant to go on with studies on assessment and faculty issues. (Apostolou et al. 2000; Rebele et al. 1998a; Rebele et al. 1998b.)

It can also be noted that there is practical benefit that education research provides. Those who read get informed of effective teaching approaches and practices. Those who conduct it benefit because research in general makes people into more enquiring individuals, more reflective practitioners, and better scholars. But it should also be noted that research does not make things any better unless it changes the teaching practice. Those who undertake pedagogic research are likely to know and understand students and learning better than those who have not undertaken pedagogic research, and thus they are also more equipped to make their students into reflective learners, and to help the weaker students achieve educational goals. (Wilson et al 2008.)

This study aims at finding out what the core elements in good learning experiences in accounting are. The study aims at constructing an interrelated model of elements of good learning for accounting. Since learning processes specifically in accounting have not been studied in this setting in Finland earlier, the outcomes of the study should produce a model that adds to the theory of learning in accounting referencing educational research more generally, and also compare the findings with other relevant studies published elsewhere. As Lucas (2001) states, there is scope for further phenomenographic research

within particular disciplines both in its own right or as a basis for development of an approach to learning inventory specifically for accounting.

As a result of data collected from higher education students studying accounting at the polytechnic context in Finland, this study should produce conception of good learning in accounting as experienced by the learners, but not seen as individual qualities. The conceptions of good learning are categories of description that appear in different situations, and the set of categories is stable and generalizable between the situations though individuals may move from one category to another on different occasions. Data collected and analysed in one particular setting can be valuable later when integral data collected for the whole OECD area on higher education is done. It is desirable that this kind of data and analysis can serve as a starting point or reference for larger investigations.

The results should reveal specific aspects associated with good learning experiences in accounting – which may be very different from good learning experiences in some other area since learning is contextual and relational. The outcomes are expected to reveal something relevant that has not been explored earlier in this context, and they should contribute in extending the understanding of learning processes in a subject specific area of education – taking into account that the ability to add something new in the scientific discourse in the field is one important aim in any dissertation. On the practical level, they should give insights for accounting educators and administrators designing and realizing higher level studies of accounting, the primary aim of all studies being, of course, the improvement of the learning process.

1.7 Context

This chapter introduces the context of the present study, i.e. the Finnish higher education system and more precisely the polytechnic setting, which has as a specific feature a heavy emphasis on the development of professional skills, development of individual skills and on the applicability of studies from the working life standpoint. It is a typical feature of polytechnics that pedagogy plays an important role in teaching and that there are requirements concerning the outcomes of education measured by the Ministry of Education on a regular basis.

The Ministry of Education is the highest education authority in Finland, supervising all levels of education. It has defined the fundamentals of Finnish education policy; quality, efficiency, equity and internationalisation. The Ministry of Education and the National Board of Education are responsible for implementing education policy and for administering the education system at the central government level, but many decisions are taken by the education providers themselves. (Ministry of Education 2007.)

Education is seen as a factor for competitiveness. Education policy aims at promoting the competitiveness of society. The basic right to education is re-

corded in the constitution. Public authorities must secure equal opportunities for every resident to get education, irrespective of their financial standing. The lifelong learning principle is integrated into education policy with the aim of educational equity and high level of education among the population as a whole. The education system is expected to reinforce everyone's capacity for learning, because lifelong learning implies that everyone has sufficient learning skills and opportunities. (Ministry of Education 2007.)

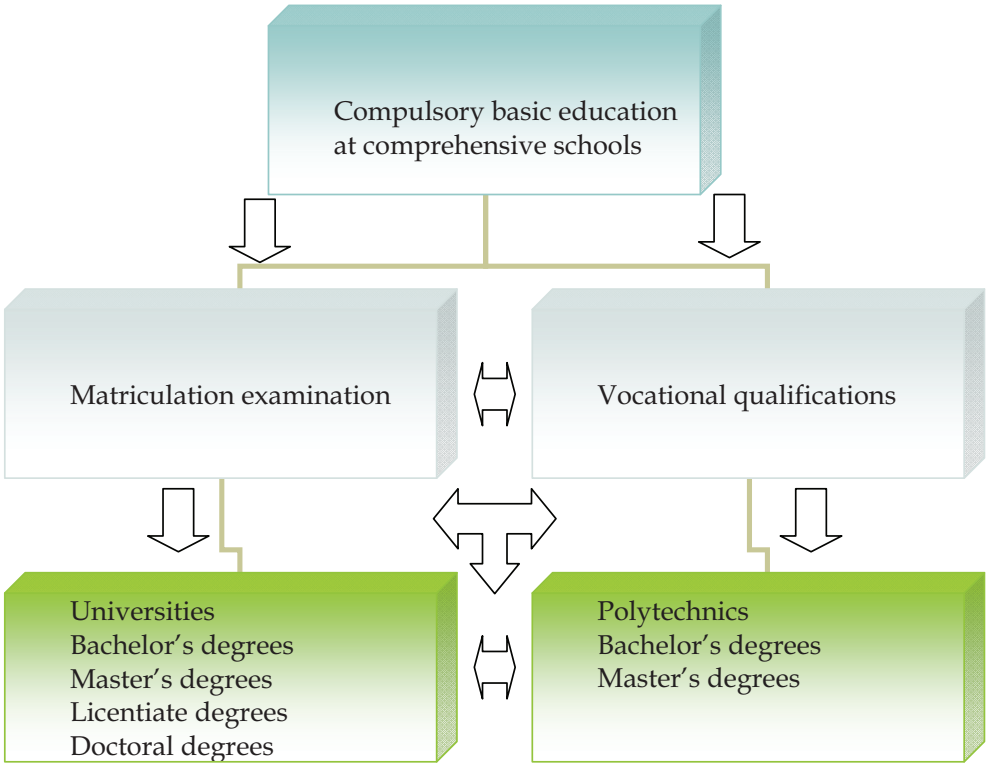

FIGURE 6 Finnish education system by English translations

Figure 6 describes the Finnish education system as a whole. The education system is composed of nine-year basic education in a comprehensive school. The comprehensive school is preceded by one year of voluntary pre-primary education. After the comprehensive school there is upper secondary education, comprising both vocational and general education. After that there is higher education, provided by two complementary sectors: universities and polytechnics. Universities, which can be either academic or artistic institutions, focus on research and education based on research. The role of polytechnics is to offer work-related education in response to needs of labour market and regional development. Thus, universities conduct scientific research and provide instruction and postgraduate education based on scientific research. Polytechnics train

professionals in response to labour market needs and conduct research and development which supports instruction and promotes regional development. After the introduction of this dual system in the beginning of 1990's, the structure of the Finnish higher education system has become more comparable with the higher education systems of other countries in Europe. (Ministry of Education 2007.)

Research evidences that there are differences between educational orientations of those who have chosen polytechnic education and of those who have chosen university education. The polytechnic applicants are more practically oriented and the university applicants, characteristically, are more interested in theory. The students are also able to distinct the different characters of polytechnics and universities and see polytechnic education as being close to practise and to provide students with good professional competence and connections with working life, whereas university education is seen as emphasising theory and offering broader degrees. (Vuorinen & Valkonen 2008). This study focuses on polytechnic level studies.

At the moment, there are 28 multi-field polytechnics in Finland. They are run either by local authorities or by private foundations and co-financed by the government and local authorities. Finland has 20 universities. All universities are state-run and mostly financed from the state budget, but they also get financing from public bodies and income from commercial services. Students' opportunities to progress from one level of education to the next are guaranteed by legislation. In practise this means that a student completing one level is always eligible for the next level studies. Universities confer Bachelor's, Master's, licentiate and doctoral degrees. Polytechnics confer Bachelor's degrees and Master's programmes. (Ministry of Education 2007.) However, it should be noted that even if the English translations of the degree titles are similar, the contents and the emphasis of the studies are different and the original Finnish language degree titles are different too.

The purpose of the Ministry of Education is to reduce the number of universities and polytechnics by the year 2012 to 15 and 18 respectively by centralizing the presently scattered units. The ultimate aim of these changes is the streamlining of operations and the improvement of quality both in education and research and development. Performance and quality measurements thus put the educational institutions in a situation where they should be able to improve them both at the same time.

The development plan for education and research, adopted by the government every four years, outlines education and research policy for the years to come. In addition to legislation, the government programme and the development plan, polytechnic provision is governed by performance agreements. The Ministry of Education, the polytechnics and their maintaining organisations conclude three-year performance agreements, in which they agree on target results and their monitoring and on major national development projects. Degree studies give a higher education qualification and practical professional skills. They comprise core and professional studies, elective studies and a final

project. All degree studies include practical on-the-job learning. There are no tuition fees in degree education, and the students can apply for financial aid. (Ministry of Education 2007.)

Students apply for polytechnic studies in a national application system. The polytechnics determine the admission criteria and arrange student selection and entrance examination at their discretion. The extent of polytechnic degree studies is generally 210-240 study points, which means 3.5-4 years of full-time study depending on the field of study. Education is arranged as degree programmes. The entry requirement is a certificate from an upper secondary school or the matriculation certificate, a vocational qualification or corresponding foreign studies. The requirement for Master's studies in polytechnics is a Bachelor's level polytechnic degree and at least three years of work experience. The polytechnic Master's, which is 60-90 study points and takes 1.5-2 years, is equivalent to a university Master's in the labour market. (Ministry of Education 2007.)

The students in this study are all business students of the JAMK University of Applied Sciences located in Jyväskylä in Central Finland. The institution expresses that its educational target aims at developing theoretical knowledge and practical professional competences with interaction with regional economic life, the industry and organizations, which allows students to participate in various cooperation and development projects, in addition to completing practical training periods in authentic environments and workplace situations. The objective of the studies is to educate experts for planning, development, counselling, educational and managerial tasks, as well as for entrepreneurship. (JAMK University of Applied Sciences 2008.)

Studies consist of basic and professional studies, elective studies, a practical training period, a bachelor's thesis, and a maturity test, and the flexible modes of learning which are applied include contact teaching periods, online learning, and independent study. Studies emphasize, in addition to professional, social and ethical competences, data acquisition and communicational skills, as well as the development of individual learning skills. The aim is a critical approach to acquired knowledge and the use of knowledge in real-life professional tasks and problem situations in order to develop initiative, cooperation skills, responsibility, independence, and creativity in students using a competence- and learning-based curriculum which emphasises students' learning process and its facilitation. (JAMK University of Applied Sciences 2008.)

The purpose of business education is to create business competence among students. The aim is to develop analysis, cooperation, interaction and problem-solving skills using concrete tasks where students learn to plan business operations, market and sell, and master bookkeeping and budgeting. The first year of the studies consists of the common basic studies where all students study entrepreneurship, marketing, financial administration, management, and international business. During the studies students will create contacts with the industry through projects and assignments and by working with the partner companies of the degree programme, and if they intend to start a business of

their own, they will receive individual guidance related to the promotion of business. (JAMK University of Applied Sciences 2008.)

The education is based on pedagogical strategy of the school. The strategy guides the planning, realization and evaluation of education. The pedagogical strategy takes a humanistic conception of man and a constructivist conception of learning. Studying is based on each student's personal study plan facilitating student guidance and the monitoring the progress in studies. The degree programme uses learning methods that simulate working life situations. They include versatile collaborative methods like problem-based learning method and studying is also possible online and in foreign languages. Studies alternate from knowledge-based theory to its application to practice in the partner company network that offers students opportunities for practically oriented studies. Work experience is supposed to facilitate studies and the comparison of new things against prior learning and experiences. If students are already working, they can have studies tailored to contribute to the development of their tasks. (JAMK University of Applied Sciences 2008.)

A business graduate should have a strong business thinking ability and a holistic approach to development. The prospective employment of students most probably will be in trade or business services, in the duties of the state, municipalities, parishes, associations and organizations, or in the banking and insurance sector. The graduates work in a variety of positions, such as bank employees, project coordinators, sales managers, financial assistants, shop managers and entrepreneurs. The employment rate is approximately 84 % right after graduation. (JAMK University of Applied Sciences 2008.)

The organization of education has been designed so that the student can choose his studies flexibly according to his own personal study plan reflecting the student's personal interest. The supply of studies is varied and in addition, the student can choose virtual studies in Finnish Online University of Applied Sciences. It is also possible ton include studies completed in other universities, both domestic and foreign, in the degree. The students also have a possibility to include in the degree their previously achieved learning outcomes regardless of how, when or where they were achieved. The basis for recognizing learning outcomes is the equivalence of learning outcomes and the objective of learning in the curriculum.

The school offers close connections with working life in terms of practical training, which accounts for quite a big share of the degree, i.e. 30 study points out of 210 study points in total. The network in working life is also adding to the curriculum by offering teaching aid at the school and tutoring aid in work places where practical training happens. Since students have practical projects as included in the curriculum and since all project works at the end of studies are required to have an assignor and from working life, an extensive network is a prerequisite for successful achievement of educational outcomes.

The studies are administered in different degree programmes. The one relating to this study has an intake of 110 students each year chosen on the basis of their former performance at school and an entrance test. There are almost 600

primary applicants of which the amount of 110 is chosen. The drop-out rate has been approximately 7 % during the past years. The reasons for drop-outs are mixed and the school does not have a systematic method of collecting information concerning the background for them, though the figure is followed on a constant basis and considered to be an important indicator besides the number of primary applicants.

1.8 Description of data analysis

> *"The analysis is not a measurement but a discovery procedure. The discovery does not have to be replicable, but once the outcome space of a phenomenon has been revealed, it should be communicated in such a way that other researchers could recognise instances of the different ways of experiencing the phenomenon in question. After having studied the description of the outcome space another researcher should be able to judge what categories of description apply to each individual case in the material in which the categories of description were found. As far as such a judgement is concerned there should be a reasonable degree of agreement between two independent and competent researchers." (Marton 1994b.)*

Phenomenography is a method with a strong empirical emphasis where the object of study is variation in ways of experiencing a particular phenomenon. This is why the analysis was started with an open mind without any pre-constructed categories - letting the research data speak. The analysis in this study concentrated on mapping variation in experiences of good learning in accounting and the inclusive relationships between the different ways of experiencing learning in accounting.

The outcomes have been developed from the researcher's analysis and interpretations. The emphasis was in the collective experience based on diaries, interview data and observation data on videos collected in the sample groups. The two latter ones were transcribed as verbatim as possible. Since the material was collected in the Finnish language, the translation of material happened at the same time as the transcription. All the translations were made by the researcher. The quotations used in the text to illustrate the findings brought about by the data are thus translations from the original utterances. The data collected is considered representing the full range of possible ways of experiencing good learning in accounting, and constituting a description of good learning as it was experienced in the population represented by the sample group.

The outcome comes as a limited number (as limited as possible) of qualitatively different ways of experiencing good learning in accounting. These are called categories of description. They are not the same as the actual ways of experiencing; rather they are characterisations of key aspects of experience. It should be noted here that the actual utterances of good learning experiences were often preceded, chronologically, by the descriptions of bad learning experiences; as if there were no good without bad or as if the definition of good was easier to find with the help of its opposite. These utterances of bad learning experiences were part of the data, though they have mostly been left out from

the quotes chosen to illustrate the findings. The selection was made of those utterances that directly described good experiences.

The outcome also includes the structural relationships between different ways of experiencing good learning in accounting. This was done highlighting the key aspects found in the data in order to link and separate the ways of experiencing. Bearing in mind the commonly accepted criteria on the quality in this kind of phenomenographic research, the categories were chosen so that they reveal something distinctive, that they are logically related as a hierarchy and that they are as few as possible. It is evident that this part of the outcome cannot be directly extracted from the respondents' utterances but is based on the interpretation made by the researcher. This should be borne in mind when scrutinizing the results of the present study.

The data for the study was collected between two years in 2008-2009 from four kinds of sources: diaries in writing (with a very open task design), group interviews (also with a very open task design and very open questions in the beginning), actual learning situations in accounting observed and individual interviews. The writing of learning diaries happened in a longer period of time (3-4 months) in a diary-like format in order to give the informants enough time to give mature and well-established descriptions about the phenomenon. The analysis started using a preliminary sample that consisted of five diaries that were written during approximately four months. The preliminary analysis was done before the full set of transcriptions was taken in preparation. The preliminary analysis of diaries was later reconsidered in the light of the video interviews, observation data, individual interviews and additional diary material. Later on, these five additional diaries were collected so that the total number of diaries was 10 at the end.

Table 1 lists the students who wrote the diaries accompanied with a short description concerning their age and their position as a student. Since the Finnish first names might be unfamiliar for any reader, the sex of the person is always indicated at the end of the name.

TABLE 1 List of students who wrote a diary

Interviewee	Age	Description
Katriina (f)	54	Specialized studies *
Kirsi (f)	35	MBA student, 2nd year *
Jenni (f)	22	BBA student, 2nd year
Maarit (f)	45	BBA student, 2nd year
Anneli (f)	42	BBA student, 2nd year
Heidi (f)	27	BBA student, 3rd year
Anita (f)	21	BBA student, 2nd year
Tea (f)	23	BBA student, 2nd year
Pasi (m)	23	BBA student, 3rd year
Jaana (f)	29	BBA student, 3rd year

* Basic education is BBA

After the preliminary analysis of the diary data, five group interviews were recorded. There were always three people participating in a group except for one group that consisted of two people, so that the number of interviewed was 14 people in total. The groups were chosen so that the participants were friends and knew each other well and the interviewees in the pair were a couple who lives together. This choice was made in order to make the interview situation as easy and relaxed as possible and also in order to get information not only from each interviewee himself or herself but also from their friends. The list of students who participated in the group interviews is presented below in table 2.

TABLE 2 List of students who participated in group interviews

Interviewee	Age	Description
Paula (f)	25	BBA student, 3rd year
Anni (f)	20	BBA student, 2nd year
Vilja (f)	24	BBA student, 2nd year
Satu (f)	23	BBA student, 2nd year
Timo (m)	21	BBA student, 2nd year
Tuuli (f)	22	BBA student, 2nd year
Riina (f)	31	BBA student, 3rd year
Marjut (f)	22	BBA student, 2nd year
Sari (f)	40	BBA student, 3rd year
Silja (f)	43	BBA student, 3rd year
Niina (f)	22	BBA student, 2nd year
Sanna (f)	22	BBA student, 2nd year
Joona (m)	25	BBA student, 3rd year
Kaisa (f)	21	BBA student, 2nd year

What influenced the selection in addition to voluntarism was the fact that the sample in a phenomenographic study should be chosen for heterogeneity rather

than for representativeness. This automatically leads to a situation that phenomenographic research outcomes do not enable generalisation from the sample group to the population represented by the group, because the sample is not representative of the population in the usual, i.e. positivist, sense of the term. (Åkerlind 2002.)

The interviews lasted from half an hour to one hour. First the researcher asked the students to talk about good learning in accounting on the general level basing on their own experiences. Some groups used a lot of time to talk about their experiences, some groups needed questions earlier. Also the groups that used a lot of time for their own descriptions were asked questions at the end of the interview. The questions were semi structured and they had been formulated on the basis of the findings from issues that were raised in descriptions, or in prior interviews or in prior studies of the same kind. In the course of the interview, the researcher also questioned about new issues that were brought about. The general aim and attitude of the researcher was to avoid all judgment and have an empathic attitude towards the interviewees.

Since the amount of material in one interview was very big, it was considered useful trying to make the data more manageable. This was done by selecting excerpts or utterances that seemed to contain the key aspects that also were present in the larger transcript, while removing perceived irrelevant or redundant parts of the data. The number of interviews was restricted for the same reason. Also, the use of numerous quotes in the text was seen important for reliability reasons; to give the readers steps in the interpretation process in a detailed form and to present examples that illustrate them.

At this point, the main purpose was to find out what could possibly emerge from the data. Any predetermined ideas were dropped as much as it is possible to do so and the first reading was done with an open mind without any attempt to foreclose anything. The main point was in identifying similarities and differences in diaries and interview data and the possible relationships between categories as a set rather than individually.

The whole readings process was iterative. The first readings were kept as open as possible. The analysis started with a search for meaning. Then it was supplemented by a search for relationships between meanings. After the open readings the emphasis was more focused on particular aspects. Even at this point, any new interpretations were considered possible. The material was sorted and resorted many times while the categories were developed and redeveloped at the same time. The main emphasis was in the search for key similarities within and differences between the categories. This meant that the quotes or utterances were grouped and regrouped according to similarities and differences on the basis of different criteria. This was done as long as the rate of change became very small. These selected quotes finally represented the data that was used for next analysis.

The next step was to look for a meaning that could be revealed by the quotes. This interpretation phase was also iterative and had to be done many times from different perspectives, because there were so many aspects present

at the same time that looking at them all at once would have been impossible. The utterances were put in categories on the basis of their similarities and the categories were differentiated on the basis of their differences. At this reading the focus was kept on structural components of the categories of description. The final phase concentrated on borderline quotes that did not seem to fit to any of the proposed categories.

At this point of the study, the main categories of description seemed to be forming, but in order to make sure that the saturation had been reached two observation data sets were added. The first one was a group situation of 12 people who worked in groups of four people (i.e., there were three groups at once) solving an accounting problem together. The second one was a classroom situation where the same 12 people were working on accounting problems using a computer. Both observation situations lasted one hour and a half. The researcher was the teacher in both of these classroom situations. The videotaping was done by an assistant. The list of students who participated in the observations is given in table 3 with an indication of those students who were selected for individual interviews after the observation that happened in classroom situations first.

TABLE 3 List of students who participated in observation

Interviewee	Age	Description
Piia (f)	20	BBA student, 2nd year
Anu (f)	21	BBA student, 2nd year
Hanne (f)	23	BBA student, 3rd year *
Janne (m)	26	BBA student, 2nd year
Jaakko (m)	21	BBA student, 2nd year
Mikko (m)	21	BBA student, 2nd year
Sonja (f)	24	BBA student, 3rd year *
Marika (f)	25	BBA student, 3rd year *
Heli (f)	22	BBA student, 2nd year *
Maiju (f)	22	BBA student, 2nd year
Meri (f)	20	BBA student, 2nd year *
Henri (m)	22	BBA student, 2nd year

* students chosen for individual interview after the observation

This observation data was also videotaped and then transcribed, and on the basis of the data, five students observed were asked to be interviewed separately a couple of days later from the observed classroom situations. These students had expressed in the class that they had had difficulties in learning some aspect of the learning task, and, according to the researcher's interpretation, they had overcome the difficulty in learning during the class and finally learned well. These individual interviews lasted about half an hour each. Both the observation data and the individual interviews connected with the observation data were added to the existing data, and once again, all data was reinvesti-

gated in the light of the new material. At this point it became evident that the saturation point in terms of key issues had been reached, because the additional data did not produce any significant or important new elements in the earlier categories of descriptions, but only reinforced the existing ones. The total number of different sources of data can be found in table 4 that presents a summary of the contents of the data.

TABLE 4 Contents of the data

	Number	Number of people
Diaries	10	
Group interviews	5	14
Observations	2	12
Individual interviews	5	

A number of quotes have been left in the written analysis to illustrate the category in question. These quotes are usually quite short in order to make the analysis as clear as possible with respect with the key aspects of meaning. They were separated from the transcript and combined for analysis in one decontextualised pool of meanings where they are seen as representing particular meanings. The danger of reducing appropriate consideration of the context within which the quotes were made was bigger this way, but on the other hand, the researcher was part of the context and thus very familiar with the topic. Also, from a practical point of view, removing irrelevant or redundant components of the data helped in making it more manageable. This is often recommended in the methodology literature. (Åkerlind 2002.) In order to make the quotes easier to read, the interviewees are listed with a short description. When the quotes appear in the text, they will be noted with the name of the interviewee.

1.9 Structure of report

The first chapter of this study has thus given a short background for the topic and outlined the research topic and the research question. The method chosen is explained in detail and the realization of the study with the possible outcomes is defined. The study is defined in terms of its position in the research field and of its contribution as comparing to extant studies. The key concept of the study, i.e. learning, is defined for the purposes of this study. Learning is examined in the light of education psychology and different learning theories. This chapter also introduces the context of the present study and the description of different steps in the phenomenographic analysis taken for this study.

Chapter two is a general overview of the historical development of accounting education research. The overview presents the studies in a comprehensive manner and concentrates especially on studies that can be considered

the root studies of the present one. Those phenomenographic studies will be presented more in detail.

In chapter three, studies focusing on the student will be discussed. The chapter introduces essential prior literature on learning in the field of accounting from the viewpoint of the present study. At this point, the studies have been divided quite roughly into three categories; studies on personality and career choice, studies on meta cognition and self-regulation, and studies concerning learning approaches and context. This division will serve as a frame of reference for later interpretations.

Chapter number four deals with the most important mediators in good learning experiences. They are two, namely the teacher and the methods, and more precisely, some qualities in the teacher and certain teaching methods complemented by certain self-study methods. The assessment methods will also be discussed in this chapter.

In chapter five the empirical data of the study will be presented with quotes from the material. These will be commented and compared with the results of extant studies. In this chapter, learning is defined as it appeared in the setting of the present study. This was seen essential because the data of the present study reveals that the definition of key conceptions very much define how the data can be interpreted. This chapter contains the main outcomes of the present study. The outcomes are first divided into different categories; the key elements of good learning and the mediators in good learning. They are the personality, higher order thinking skills, learning styles and approaches, teacher and teaching methods. The results will be discussed in the light of those qualities in the categories that seem to be crucial for good learning experiences.

Finally, in chapter six, the results of the study will be summed up in one model that includes elements of good learning in accounting explained more in detail and also the relationships between them. The contribution of the present study will be scrutinized in the light of prior studies in the field both from the theoretical and from the practical point of view. The critical analysis of the results will be drawn up. Finally, the last chapter will outline some suggestions for future research.

2 OVERVIEW ON ACCOUNTING EDUCATION RESEARCH

The state of accounting education research is active and vibrant. A rich tradition of empirical research in accounting education has developed over the past almost 40 years. Most of the earlier research has been quantitative studies with questionnaires as the most commonly used method of data collection. Many types of scales have been developed to assess attitudes, perceptions or opinions for examining hypothesized relationships with other constructs. Much research in accounting education has focused on measuring students' learning styles, their approaches to, and perceptions of learning, and other measures of individual differences. Arguably, the weakest aspect of survey-based research concerns the accuracy of measurement of the constructs being examined. (Apostolou et al. 2001; Duff 2001a.)

This line of research is still very popular in North America. However, since the publication of the Bedford report in 1986, accounting education has been the subject of international criticism and debate. It has been criticized for its narrow focus and emphasis on mechanical procedural approaches. Following the Bedford Report, the (then) Big 8 accounting firms stated that accounting education should focus on developing analytic and conceptual thinking. Changes in the practice environment and the problems accounting education was seen to have in response to these changes caused a number of groups to call for changes in the delivery of accounting education. In 1989, the American Accounting Association (also known as the Bedford Committee) and the Big Eight accounting firms together issued calls for enhancement in "Perspectives on Education: Capabilities for Success in the Accounting Profession". The Practise Involvement Committee of the Administrators of Accounting Programs Group suggested in 1995 that there should be more collaboration between accounting faculty and practitioners in many areas like curriculum development, and that there is an overall need for changes in accounting education. (Ballantine et al. 2008; Rebele et al. 1998a.)

The responses to the previous mentioned guests can be divided into two major groups: prescriptive studies on what educators should do and descriptive

studies on what educators are doing. The prescriptive articles have concerned, among others, topics like competencies and curriculum change. In 1990, the Accounting Education Change Commission expressed the importance of lifelong learning as the objective of accounting education emphasizing skills, knowledge and professional orientation and suggesting learning by doing, group work and creative use of technology. The descriptive articles have investigated the curriculum-wide efforts intended to develop competencies (like communication, interpersonal and intellectual skills, accounting knowledge and professional orientation), different pedagogical enhancements like the use of case-based teaching and cooperative learning approaches. (Apostolou et al. 2000; Rebele et al. 1998a.)

Research on innovative instructional approaches has received a lot of input. Most of the studies have been concerned with individual subject areas like financial accounting and integrating the computer in learning accounting. The largest portion of studies relates to introductory accounting, which has been seen as having the primary objective of making students to learn about accounting as an information development system and communication function to support decision making. It should also be noted that introductory accounting has been seen as having the emphasis on teaching the students to learn on their own. Non-introductory topics have been investigated, among others, in the light of teaching approaches, pedagogical enhancements, technical issues, course contents and ethical considerations. Measured by the number of articles, curriculum and instruction have kept their position as the most researched areas of accounting education till lately. (Paisey & Paisey 2004; Rebele et al. 1998b; Watson et al. 2003.)

In addition to curriculum and instructional approaches related studies, another important pool of studies measured by the number have concentrated on students themselves. This kind of research was in its infancy at the start of 1990's but there has been a considerable growth since then. Empirical studies have investigated associations and descriptive studies offer evidence about students based on observations, surveys and opinions. Student learning styles, personality and cognitive abilities and accounting student personal traits have been of interest in articles on learning styles, personality and cognitive abilities and personal traits. Factors associated with accounting major selection, career choice and predictions of performance have also been investigated as well as selection of entry-level accountants from an employer's point of view and ethical and moral reasoning and ethical behaviour. Most of the studies in the student sector have been empirical by nature. (Paisey & Paisey 2004; Rebele et al. 1998b; Watson et al. 2003; Watson et al. 2005.)

The distinction between deep and surface learning has been much discussed. The concepts of surface and deep approaches to learning have gained enormously success among researches from 1970's on starting from Sweden. Two distinct learning approaches are clearly related to different categories of learning outcome. Students achieving a high level of understanding have adopted a deep approach to learning. In contrast, students with a low level of

understanding have adopted a surface approach. However, the foregoing studies fail to present a clear and consistent picture of accounting students' approaches to learning. The difficulty in interpreting the results can be attributed to different instruments used and to the psychometric properties of these instruments. The majority of studies have relied upon validation studies conducted in different settings and assumed that students from different disciplines are commensurable in terms of their approaches to learning. (Byrne et al. 2002; Byrne et al. 2004.)

In addition, studies on educational technology, assessment and faculty issues have interested researchers since 1990's. By the late 1990's, this has been a growth area in accounting education research in the USA. Topics like course delivery modes and different instructional strategies like case studies, group work, intensive learning, co-operative learning and competence-based learning have got attention by researchers. Student ratings of teaching are often used to provide documentation of teaching effectiveness. These kinds of studies mainly stem from the general education literature. In addition, there are studies in student diversity, multiculturalism, gender and race. Studies in the area of application of educational technology in learning are divided in two major sectors: computer-based and other technologies that promote learning. (Paisey & Paisey 2004; Rebele et al. 1998b; Watson et al. 2003.)

Assessment research can be divided in two different research areas: outcomes assessment and classroom assessment. Outcomes assessment concentrates on institutional efforts to measure educational outcomes and classroom assessment includes the measurement of learning and teaching effectiveness. It is a new area of research in accounting education. It can be said that since 1980's the emphasis has shifted from inputs to outputs and it means that student learning outcomes should be assessed by considering how to continually improve the educational delivery process, especially because outcomes assessment is now an expectation of accreditation bodies. Classroom assessment techniques provide formative feedback to individual instructors and since effective teaching produces learning, assessing learning is tantamount to assessing teaching effectiveness. As to the assessment of faculty, the research productivity and accounting programme rankings, teacher effectiveness, gender differences, coauthorship and comprehensive overview of research productivity have been investigated. Also the ethical practices on research and fundraising have been studied as well as the evaluation of accounting faculty using promotion and tenure decisions and other evaluation issues. The career development in the light of doctoral programme and job-related experiences of students and faculty has also interested researchers. By the end of 1990's, however, it seems that the pool of faculty issue studies has been diminishing. (Apostolou et al. 2000, Paisey & Paisey 2004; Rebele et al. 1998b; Watson et al. 2003.)

2.1 Conceptions and perceptions of learning studies

In recent decades there has been an increased emphasis on interviewing students to obtain their conceptions and perceptions of learning. This has led to a growing awareness of learning as relational, complex and contingent and to a specialised area of educational research referred to as students' approaches to learning. (Leveson 2004.) Students' approaches to learning research, which was developed originally in the United Kingdom, is motivated by a need to understand learning in context. This kind of research reflects an interest in understanding of students' perspectives and values students' voices. It contrasts with traditional methods of educational research that use constructs such as intelligence or ability, personality, or learning style to classify students - approaches all criticized by approaches to learning scholars for being top-down and acontextual. Utilized in accounting it should allow accounting educators to support more effective and more enjoyable learning within accounting and encourage students to adopt positive attitudes to learning, which will in turn produce better learning outcomes. The approaches-to-learning theory does not focus on any one aspect of learning, but learning as a whole. This line of research provides a rich source of literature. In particular, the research provides accounting educators with a range of models, instruments, and perspectives to evaluate and integrate teaching interventions towards intended outcomes. This kind of research has gained popularity in Europe and in Australasia. (Duff & McKinstry 2007.)

Indeed, it can be said that many of the research work carried out outside the United States like in Canada, Australia, China, Taiwan, UK, New Zealand, South Africa and the Netherlands concentrates on the issue of students with topics like choice of career and major, skills and characteristics, learning styles and approaches, and recruitment and career opportunities. These kinds of studies have appeared in the literature especially from the late 1990's. (Apostolou et al. 2001.)

Two most widely used developments of instruments in students' approaches to learning research are the Approaches to Studying Inventory developed by Entwistle et al. (1979) and Biggs' Study Process Questionnaire (1987). The quantitative studies can be broadly categorized into three areas: cross-sectional studies that consider inter-group differences, psychometric evaluations of instruments, and determination of contextual factors. In recent decades there has been a shift away from reliance on psychological constructs which rely on more narrowly defined variables for generality across contents and situations. The research on learning in general has drawn increasingly on qualitative methodologies. They produce rather broad concepts derived specifically from the educational context to describe learning and teaching. Students' approaches to learning theory has in fact become a meta theory for conceptualizing teaching and learning, which has gone in two major directions: phenomenography and systems theory. (Duff & McKinstry 2007; Entwistle et al. 2001.)

Quality student learning is a key objective of higher education. Students' approaches to learning have an influence on the learning outcomes. Gaining an understanding of approaches is a crucial pre-requisite to designing and implementing effective teaching and learning strategies. Prior research on the relations between conceptions of learning, perceptions of the learning environment and approaches to learning characterises learning approach as a combination of a strategy and motivation. These are related to student characteristics and perceptions of the learning context. Approaches to learning have been studied by Ramsden (1979), Entwistle and Ramsden (1983), Ramsden (1985), (1991) and (1992), Biggs (1987) and (2003), Entwistle (1998), Marton and Booth (1997) and Entwistle et al. (2002). Conceptions of learning and especially the notion of deep and surface learning have been studied by Säljö (1979), van Rossum and Schenk (1984), Marton and Säljö (1984), Marton et al. (1993), Crawford et al. (1994), Gow et al. (1994), Marton and Booth (1997), Jackling and Wigg (1997), and, in accounting, Sharma (1997) and Lucas (2000). The findings of studies like van Rossum and Schenk (1984), Trigwell and Prosser (1991), Ramsden (1987) and (1992), Gow and Kember (1993), Crawford et al. (1994), Kember (1997), Marton and Booth (1997) evidence that conceptions of learning in accounting that centre on knowledge acquisition and technique are more likely to be associated with surface learning approaches and thus inferior outcomes. It is generally believed that students will adapt their approach according to their perceptions of the learning environment as has been suggested by Ramsden (1987) and (1992), Biggs (1993), Laurillard (1997), Prosser and Trigwell (1999) and Mladenovic (2000). Discipline specific studies are warranted by Meyer and Eley (1999), Neumann (2001) and Lucas (2001). (Leveson 2004; Jackling 2005; Lord & Robertson 2006.)

In the light of the increasingly complex demands of accounting education, there is a need to develop greater insights, using both qualitative and quantitative methods, into how accounting students approach their learning (Gow et al. 1994; Sharma 1997; Beattie et al. 1997; Booth et al. 1999). Various quantitative studies in accounting have evaluated students' approaches to learning using instruments developed in other fields of higher education. They have found a link between approach and performance (Davidson 2002; Duff 2004), differences in approach between genders (Lucas & Meyer 2005; Elias 2005), changing approaches over the course of study (Gow et al. 1994; Elias 2005), and differences in approach of accounting majors to non-accounting majors (Lucas & Meyer 2005). Some accounting education researchers have combined questionnaire instruments (Sharma 1997; Lucas & Meyer 2005), and others have questioned the validity of the measurement instruments and the appropriateness of comparison of scores between disciplines (Birkett & Mladenovic 2002; de Lange & Mavondo 2004). Also the division into deep and surface learning has been questioned by Hall et al. (2004). Differing approaches have been used to test the relationship between students' approaches to learning in accounting and measures of the quality of learning outcomes, including the use of examination performance as a measure of learning outcomes by Duff (1996), Booth et al. (1999),

Byrne et al. (2002), English et al. (2003) and qualitative data analysis related to perceptions of accounting by Gow et al. (1994), Sharma (1997), Lucas (2001) and Lucas and Meyer (2003). It is generally agreed that qualitative measures of learning outcome are better indicators of student learning than quantitative measures such as examination performance (Trigwell & Prosser 1991; Ramsden, 1992, 2003). De Lange and Mavondo (2004) and Lucas and Mladenovic (2004) pointed out the need for more qualitative research because there are only a few phenomenographic studies in accounting education. (Jackling 2005; Leveson 2004; Lord & Robertson 2006.)

2.2 Phenomenographic studies

Phenomenography, although it has been widely used in higher education research, has been very scarcely used in the studying of accounting education (Lord & Robertson 2006). Most common methods used in accounting education research have been the description of and reflection on teaching, literature review, statistical analysis of data and questionnaires. Although qualitative methods have been prominent, many of them have been employed only infrequently. These infrequently used methods include case studies, action research, comparative studies, interviews, historical studies, phenomenographic studies, content analysis, game theory, repertory grids and focus groups. (Paisey & Paisey 2004.) A literature search of accounting education reveals one qualitative research (Jackling 2005) and four investigations that employ phenomenographic methods to identify students' approaches to learning: Sharma 1997, Lucas 2001, Leveson 2004 and Lord and Robertson 2004. The present study uses as a starting point these phenomenographic studies on learning in the accounting context. They can thus be considered as a set of root studies for the present research.

The first phenomenographic accounting study that was motivating the present study is Sharma's study from 1997. The study examined accounting students' learning conceptions, approaches to learning and the influence of learning-teaching context on approaches to learning. Sharma's study was motivated by the fact that the previous accounting education studies had not investigated the reasons why accounting students lacked the qualities that accounting educators and employers desired. The study concentrated on investigating how students learn, what they conceive learning to be and how the learning-teaching context influences learning. The majority of second-year accounting students conceived learning as an increase in knowledge and acquiring knowledge for future application. The findings of this study suggest that accounting students learning conceptions and approaches to learning may offer a reason for them lacking the adequate analytical and critical conceptual skills. In addition, the study results suggest that students' perceptions of the learning context influence their learning approaches. The results also indicate that students were highly syllabus-bound and experienced fear of failure and their learning ap-

proaches were not distinctly surface or deep but more in the grey area. However, the students' learning approaches were associated with their perceptions of the learning context. (Sharma 1997.)

The second phenomenographic study of learning in accounting context is Lucas' study from 2001. It explored deep and surface approaches to learning within introductory accounting and the students' conceptions of accounting. The findings reveal that both deep and surface approaches could be identified. The study also distinguished the features characteristic of the deep and surface approaches within accounting. They are the format and relating approaches to learning. The key aspects of learning accounting for students reveal that students who focus on passing the subject exhibit a particular form of surface approach. This is called format approach by Lucas. Since the students do not show interest for inherent meaning in accounting, learning becomes mechanic and concentrates on learning the format. On the other hand, some students' individual approaches to learning are such that they relate what they learn to relevance in career or learning within higher education generally. They have a relating deep approach to learning. In addition there were two features that were critical to an understanding of the context: students' preconceptions of accounting and their perceptions of the relevance of accounting. Both features appear to predispose students to take a format approach to the learning of accounting. (Lucas 2001.)

A third phenomenographic accounting learning study is Leveson's study from 2004, where she explored approaches to teaching in accounting. The study also investigated teachers' conceptions of teaching and students' learning. The study identified four qualitatively different ways of conceptualizing teaching and five ways of conceptualizing for learning and teaching approach. These were interpreted as falling under one of two orientations: teacher centred and content orientation and a student centred and learning orientation. This can be interpreted so that teaching in the discipline is viewed as a matter of transmitting facts and procedures or of encouraging students to develop their own accounting concepts. (Leveson 2004.)

Finally, the fourth phenomenographic study in accounting is Lord and Robertson's study from 2006 exploring students' experiences of learning in a third-year management accounting class. The study explored the ways in which students experienced their learning in the context of accounting lectures and tutorials. The study compared students' concepts of learning with the learning they believed was taking place during lectures and the lecturer's role in the learning process. The results show that students who approached learning with the intention of understanding the material valued didactic and interactive teaching approaches if they complemented each other. Students who approached learning in a surface way were seldom aware of the conceptual frameworks and critical thinking offered by lecturers. They did not value discussion-based tutorials either. Instead, these students preferred to be taught by the teacher. The study also reveals that students had differing perceptions about who is responsible for their learning. The maximum advantage was

gained when students considered learning as occurring in a self-teacher-peer partnership. (Lord & Robertson 2006.)

It is thus possible to conclude that the study in the accounting education field has been very active and that there are many international publications concentrating on this study line. The source material used for the present study has mainly been reduced to studies and their results published in the field of accounting education during the past ten years. This study mainly relays on articles published in Journal of Accounting Education, Accounting Education, Accounting Educator's Journal, Issues in Accounting Education and Journal of Education in Business (especially the three first mentioned). This implies that any extant research results cited in the scope of this study are relating in learning in accounting context.

In sum, this chapter has shortly outlined the development of accounting education research and presented the main research topics. It is possible to conclude that the number of studies in accounting education has been showing an increasing tendency. Also, the methodological choices have become more varied. As it can be concluded on the basis of this short historical review, there is a tendency in learning research towards conceptions and perceptions of learning and one appropriate method to investigate these is phenomenographic research methdod.

This review should offer a good starting point for this study. The following chapters will introduce recent studies in the field of accounting education with themes that are interesting for the purposes of the present study and its framework. The studies presented are not in the chronological order but instead, they have been classified by topic for the purposes of the present study. Later, this existing stock of studies also serves as a reference point when the results of the present study will be discussed in the light of extant findings. However, any strict selection between methodologies used has not been applied in the introduction of the following studies because it is assumed that any learning studies in the field of accounting regardless of methodological choices can give important insights into the topic. Lonka et al. (2004) point out that it should be noted that during recent years, research traditions have come closer to each other and current themes, emphasizing active, constructivist, situational, and collaborative [9] aspects of learning, are now accepted by researchers representing different traditions.

[9] Collaborative learning is based in Vygotsky's theories about the inherent social nature of learning. It is used for a variety of approaches in education.

3 STUDENT IN THE FOCUS OF LEARNING STUDIES IN ACCOUNTING

Research in psychology and education has shown that different personality types are associated with differences in how people prefer to learn, and the types of learning experiences under which they perform best. Personality, as it is defined for studies in learning and also for the present study, cannot, however, be considered a stable characteristic of a person, but rather a continuum of different tools a person is inclined to use.

The personality type classification may assist any researcher on how personality contributes to success in the field of accounting. The theory pays attention to those aspects that can be influenced in a learning situation and that are somehow controllable by the learner. It can be seen as having more practicality than aspects like intelligence, which are hard to control or change by choices made in a learning situation. Since personality type seems to affect learning style and approach preferences, there is a connection between these two, and it also seems plausible that a personality type has effect on higher order thinking skills a person is likely to exhibit.

The issue of motivation can be seen as an essential prerequisite for any learning and a determinant of career choice. There also seems to be a connection between a personality type and career choice. The concept of vocational personality type is used to describe this. It positions accounting professionals and students in a vocational category. It also describes those elements that are present when people make a vocational choice for accounting and tries to explain why the needs of working life and the supply from educational institutions are not always in line.

Meta cognitive patterns are unconscious thinking or mental sorting preferences that influence students' behaviour. This happens at a level above or meta to conscious awareness. The concept of meta cognitive patterns encompasses meta programmes and other similar theoretical frameworks, in particular beliefs about intelligence. Since meta cognitive patterns directly influence thinking, motivation and communication, they are important aspects of accounting students' personal competencies. Meta programmes determine an in-

dividual's preferred thinking style, referred to as cognitive style, and this way they are a determinant of personality. Meta cognition, the ability to control meta programmes, is one important aim of education and a prerequisite of life-long learning. In a phenomenographic study, the concept of meta programmes gives a tool to see the data from the perspective of language used and behaviour expressed which both can give valuable information on how a person experiences something that happens in reality. (Brown 2002; Brown 2003; Brown 2006a; Brown 2006b.)

The concept of knowledge structure is based on the premise that people organize knowledge into patters that reflect relationships among concepts and the features that define them. Knowledge structure is a separate and distinct learning outcome. It is a primary determinant of expertise in any professional field. Both the quantity and organization of knowledge stored in memory are important to learning and performance. (Curtis & Davis 2002.)

There is experimental evidence of individual differences in information processing strategies known as cognitive learning styles. Learning styles are thus seen to be quite stable characterisations of a person, something comparable to personality types. The concept of approach to learning is a qualitative description of what and how students learn. Approaches to learning are seen more as a question of choice made in a particular learning situation and context defined by the task requirements as seen from the students' point of view. This means they can be more easily influenced. However, the approaches to learning that an individual student can use depend on the student's conception of learning as such and the student's capability to understand, analyse and control learning, i.e. meta cognitive skills. Both learning styles and learning approach are considered having a remarkable effect in the learning process.

3.1 Personality and career choice

The impact of personality in learning can be explained in the light of different personality typology. One of the most popular theories concerning human personality traits is a Jungian [10] classification of personality types. [11] It shares some common themes with meta programmes in defining individual mental functions that are linked with personality. Even though the model is relatively old,

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10 Carl Gustav Jung was a Swiss psychiatrist and the founder of analytical psychology. One of his most notable contributions includes the concept of the psychological Jungian archetype. He also emphasized the importance of balance and harmony and cautioned that modern humans rely too heavily on science and logic and would benefit from integrating spirituality and appreciation of the unconscious realm.

11 Jung introduced the theory of psychological personality types in his book *Psychological Types* in 1921. The theory posits that there are eight functions divided into processes, attitudes and orientations toward the outer world. In 1936 Jung published a paper as an appendix to the book *Psychological Types,* where he states that personality types relate to basic psychological functions which are thinking, feeling, sensation, and intuition. The Jungian theory places heavy emphasis on these mental functions.

it still enjoys a lot of popularity because it is easily understandable and applicable and it does not seem to suffer from major theoretical deficits. [12] It should also be noted here that many studies in learning in the accounting context have used the Jungian classification as means to describe the effect of personality in learning.

Unlike other psychoanalytic personality theories the Jungian psychology de-emphasizes the role of the unconscious and focuses on conscious aspects of personality, decision making, and the effect of personality on understanding. The theory posits that for good balance in life a person should develop both a healthy outer life and inner life. However, the typology does not encompass all of human personality and its purpose is not to classify people into neat categories but rather to facilitate methodology for empirical research. (Bealing et al. 2006; Nikolai & Wolk 1997; Wheeler 2001.)

Personality types can be applied to characterise educational traits, learning styles, problem solving styles, decision making traits and cognitive styles among others. All individuals have typical differences in interests or attitudes towards the external world. These are called extroverted and introverted. Extroverted individuals prefer the outer world of people and things. Introverted individuals prefer the inner world of ideas and concepts. All individuals also have an orientation called judgment or perception toward their outer worlds which affects how they behave. All individuals use these four basic meta processes. However, it is worth of noting that they are extremes because each individual possesses both qualities but only have the predisposition to rely on some more than others. This predisposition determines the type. (Bealing et al. 2006; Nikolai & Wolk 1997; Wheeler 2001.)

Four psychological functions are described as follows (figure 7): sensation is to establish that something exists, thinking establishes what it means, feeling attaches a value to it, and intuition determines when it comes and whether it will last. People perceive their environment either by sensing or by intuition. Sensing type individuals tend to organize input sequentially whereas intuitive people start with a top down view of broad concepts which they put into a general framework to organize the input because they usually dislike detail oriented work. Individuals take decisions by thinking or feeling. Thinking types use a logical, objective decision process, while feeling types use a value-based or subjective process with more emphasis on how the decision will impact others. (Bealing et al. 2006; Wheeler 2001.)

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12 The Jungian theory has been used extensively in accounting studies by Pekka Pihlanto, a professor of Turku School of Economics in Finland. His research work has concentrated on the holistic concept of man and the role of individual actor in accounting research.

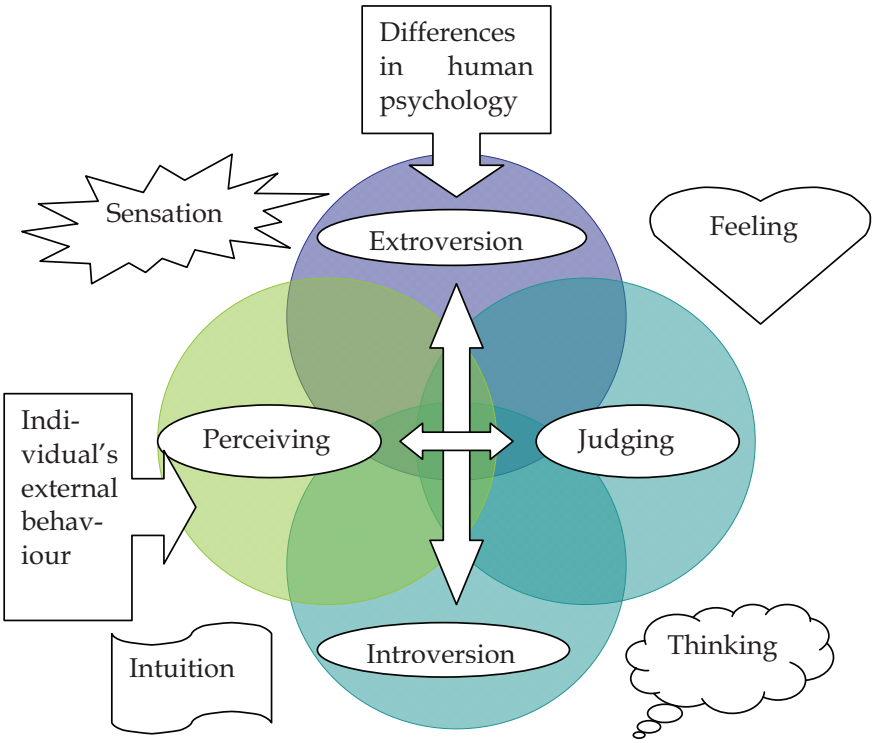

FIGURE 7 Basic psychological functions, personality types and behaviours

Perceiving and judging govern external behaviour because perception determines what a person sees in a situation and judgment determines what is done about it. Sensing refers to perceptions observed through five senses and individuals oriented toward sensing tend to focus on immediate experiences characterized by realism, memory for details, observation and practicality. Intuition refers to perceptions of possibilities and meanings and observation goes beyond what is visible. Intuition is characterised by seeing the big picture and developing imaginative, theoretical, abstract and creative characteristics. Thinking refers to the process that links ideas together by making logical connections focusing on cause and effect relationships. Individuals tend to be logical problem solvers, tough minded, analytical, objective and concerned with justice and fairness. Feeling refers to the process of making decisions by weighing the relative merits of personal values and group values. Individuals are characterised by understanding of people, concern for the human aspects, capacity for compassion and desire for harmony. (Nikolai & Wolk 1997.)

Research suggests that both accountants and accounting students have distinct personality preferences that differ from general population. Accounting is seen as primarily numerical, objective, quantitative, theoretical and non-

controversial with an affinity with mathematics and statistics, which all contributes to the fact that accounting fails to attract students with creativity and people-orientated attributes. According to the studies, accountants and accounting students favour sensing over intuition as a means of perception, thinking over feeling for making judgments, and judgment over perception as a method for dealing with the outer world. The typical accounting personality type is an individual concerned with detail, rules and procedures, orderly, precise, facts-oriented and good at observing, ordering, filing, recalling, sequencing and categorizing. The goal is to do things right, which makes these personality types well suited to the tasks performed by accountants. The personality type is also suited to tasks emphasized under the traditional curricula focusing on knowledge, comprehension, application and lecture. (Kovar et al. 2003; Worthington & Higgs 2003.)

Though many prior studies (Nikolai & Wolk 1997; Oswick & Barber 1998; Bealing et al. 2006) claim that accounting students usually represent sensing-feeling-thinking types of personality (depicted in figure 8), there is also evidence of introversion-intuition-judging (Lawrence & Taylor 2000).

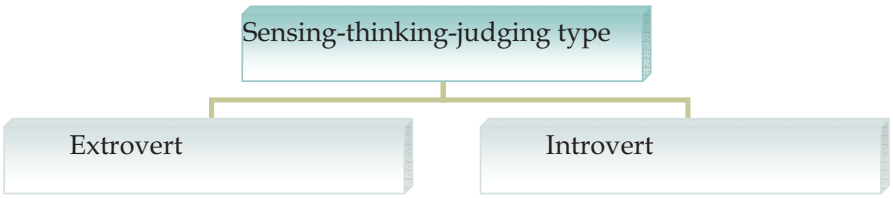

FIGURE 8 Prevailing personality types of accounting students by prior studies

Students have different personalities and cultural beliefs. In general, evidence indicates that a student's personality will determine his preferred learning environment or learning style. The type of learning environment may have either positive or negative effect on accounting student's performance because environmental factors can either encourage or discourage the development of natural preferences. However, it is impossible to develop all processes at the same time, and one of the processes usually becomes dominant. (Nikolai & Wolk 1997; Gul & Hutchinson 1997.) Personality and learning studies have mainly investigated the impact of certain personal traits in students' learning processes and learning outcomes. Many of them rely on Jung's theory of personality and its successors with the focus of defining either the most common personality types in a chosen field or the most suitable personality type for the field in question.

Accounting career aspirations or more general working life aspirations are connected to learning accounting. Career aspiration is a construct consisting of an individuals' occupational identity and career goals that are linked to individuals' expectations of occupations. Individuals' perceptions are ideas and judgements, which are, in turn, products of a mental process of organizing, in-

tegrating, and recognizing. Prior studies claim that students' preference to choose accounting as a line of study is a product of their prior positive perception of accounting. [13] On the other hand, students may develop career aspirations based on pre-conceived ideas, insufficient information and inaccurate perceptions about occupations. This all generates discrepancy between student perceptions and actual experience. (Danziger & Eden 2006.)

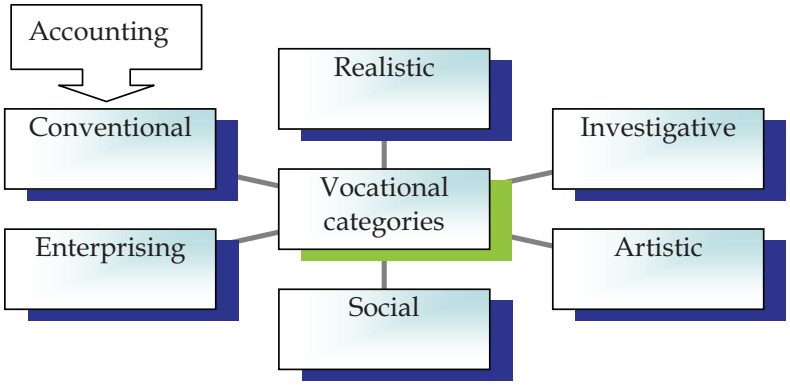

FIGURE 9 Vocational categories

The theory of vocational choice by Holland in 1960's was first to propose that an individual who possesses an accurate perception of self and reality selects an environment congruent with the personal orientation. According to the theory, accounting professionals and students tend to be conventional type individuals preferring activities that entail ordered and systematic manipulation of quantitative data and aversion of ambiguity. (Arquero & Tejero 2009.)

Noël, Michael and Levas (2003) suggest that personality stereotyping and related self-monitoring behaviours take place in students' selection of a business major. Accounting students are more reserved, prone to use concrete and focused thinking, affected by feelings, restrained, persistent, timid, practical and tense in their personal interactions. Self-monitoring behaviours of accounting students indicate that they are less likely than other major students to control the impressions that they make on others, adjust their behaviour to a situation or emotionally read others. This indicates difficulty with group projects and teamwork assignments.

Cognitive and situational explanations have been introduced in order to explain the complex interplay between student learning and motivation, and

13 There is not much research focusing on values, skills, and abilities of accounting educators, i.e. factors that are likely to affect students' perceptions on accounting career, even though research has shown that educators influence the career choice of accounting students. People often choose their first occupations based on limited information and much of the career information comes from teachers. For many disciplines like accounting, the academic career is very different from the practitioner career. (Braun et al. 2001.)

researchers acknowledge that motivation may vary in terms of context and subject area (Heikkilä & Lonka 2006). What makes students choose accounting studies and become motivated by accounting career can also be explained by vocational categories and vocational personality types. There are six vocational categories: realistic, investigative, artistic, social, enterprising, and conventional; and there is a specific vocational personality type associated with each of these categories. Individuals in the vocational category of conventional (including accountants and depicted in figure 9), can be described as having a preference for orderliness, unambiguous activities, and rules and regulations. (Braun et al. 2001.)

Accounting majors hold positive attitudes towards some of the perceptions of the accounting profession and the study of accounting. Accounting profession attracts students who are favourably disposed to the typical characteristics of the profession. (Tan & Laswad 2006.) As has been evidenced by many studies (de Lange's & Mavondo's 2004; Lucas 2001; Paver & Gammie 2005; Tan & Laswad 2006), motivation may be one of the most difficult aspects in accounting learning, since motivation for accounting is often extrinsic. However, this is not only an accounting problem. Many other vocationally oriented fields of study may suffer from the same phenomenon, which seem controversial at the first sight, because it is evident that students in most cases have made their choice of field of study on their own will.

Prior studies have also evidenced that the perceptions and stereotypes that people hold are important factors influencing career decisions. Studies like Braun, Gowan and Strefeler (2001), Byrne and Willis (2005), Tan and Laswad (2006) and Danziger and Eden (2006) have explored why an individual chooses one career over another and they have highlighted differences between accounting students' early employment experiences and their expectations of a career in accounting. It seems that accountancy practice and accountancy firms become less attractive to accounting students in the course of their studies. Unfortunately, the stereotypical accountant's image in society is one where the accountant and the accounting work is viewed as being dreary, cautious, dull, boring, unimaginative, methodical, impartial, conservative, uninteresting, monotonous, sombre, expressionless, mundane and repetitive coupled with the prospect of long time of study and professional examinations. The person-job fit literature helps us understand why it is important for individuals' interests, values, skills, and abilities to match the type of work they perform. The closer the match between the attributes of individuals entering a career and the attributes of the career, the more likely individuals are to be satisfied in their careers and the less there will be turnover in a job.

Research in accounting education (Kovar et al. 2003; Nikolai & Wolk 1997; Wheeler 2001) has also highlighted the importance of the traditional personal qualities that will be needed in the profession. Therefore, there must be a better mix of personality types both in students and faculty. Since academic accounting research has called for changes in teaching and incorporation of teaching methods to more effectively reach a broader range of student personality types

and learning styles, a faculty representing a mix of personality types is seen as more effective in implementing the change and in attracting and retaining students with the range of skill sets necessary to meet professional expectations. The majority of accounting faculty seems to represent sensing, thinking and judging types. They may thus resist changes involving critical thinking, creative problem solving and improving students' understanding of interpersonal relationships. They prefer structure and rule-based approaches. The majority also has preference for introversion which may make them resist improving students' group dynamics or communication skills. Also, faculty's preferences for certain pedagogical methodologies are associated with their own problem solving style.

Nikolai and Wolk (1997) suggest that the components of personality types of students and faculty are important because they relate to differences in learning and teaching styles. Over half of students are extraverts who prefer working in groups, taking and discussing while introverts prefer working alone, verbal reasoning and reading. They also favour written tests, ideas, relationships, concepts and rules unlike extraverts who favour oral tests, practical application, specific facts and examples. Majority of students prefer sensing over intuition. They prefer uncomplicated tasks requiring them to be careful, thorough and proceed in a step-by-step manner. They favour objective choice tests, based on memory of facts and details. Intuiting students prefer complex tasks calling for quickness of insight and understanding of interrelationships, timed essay tests or cases based on theory and grasping of concepts and possibilities, and learning something new all the time. A majority of students also prefer thinking over feeling. They are objective, logical, well-organized, sceptical, critical, and they prefer lectures as teaching method. Feeling students are subjective and prefer learning through personal relationships and group work. Majority of students prefer judging over perceiving. They like closure and structured problems, and they are decisive and work in a steady and orderly manner unlike perceiving students who like flexibility, informal and unstructured problems and managing emerging problems using innovative solutions. These students are curious and open to new ideas.

Oswick and Barber (1998) suggest that personality type does not appear to have a bearing upon the level of achievement on the introductory accounting level, even though it is a well-known research result that sensing-thinking-judging types are the most prevalent type. The fact that a certain type is prevalent does not necessarily mean that those students make the best accounting students. Instead, it is important to distinguish between aptitude and inclination. This strong overrepresentation of this type tells something about their tendency to gravitate towards accounting and accounting-related professions, but it should not be assumed that they necessarily have superior accounting ability. Other underrepresented types are just as likely to perform well in introductory accounting courses as their counterparts.

Lawrence and Taylor (2000) report in their study that most accounting students show preference for introversion, intuition and judging. The intuition

preference indicates a preference for creativity, and imagination. The judging preference indicates a desire for orderly and controlled life. However, mostly the two preferences do not appear together. Relationships appear to exist between personality characteristics and student performance on grade-influencing activities like assignments, examinations, absences, in-class participation and computer assignments. Open-ended problems and multiple-choice questions on examinations may favour the sensation preference. Essay examination questions and cases, on the other hand, appear to be personality type neutral. Class participation seems to favour students with a judging preference.

Bealing's, Baker's and Russo's (2006) study claims that any innate qualities provide individuals who possess natural abilities with a unique advantage in the discipline in question, though they are not automatically a guarantee of success. The study determined that the dominant type for an undergraduate accounting student was extrovert sensing-thinking-judging type. The sensing-thinking-judging profile of accounting students is very big across numerous studies, which leads to the issue of whether the profile is linked to superior performance in accounting classes. Though the sensing-thinking-judging type is dominant among business students, most in business do not rise in upper management. An extrovert sensing-thinking-judging type is described as a supervisor type whereas an introvert sensing-thinking-judging type is more like an inspector type. Both are logical fits for an accountant but for upper management positions it is also the characteristics of abstract reasoning, unstructured problem solving skills and broad perspective that are needed.

A study carried out by Kovar, Ott and Fisher (2003) reports the results of an experiment where the curriculum was reorganized based on complexity of the content and level of learning required. The changes were pedagogically sound. The primary reason behind the restructuring was to allow the students to achieve higher levels of learning by providing a more effective progression of learning activities. The new curriculum focused on communication, analysing skills, problem resolving skills and on dealing effectively with other people through the use of group problem solving and case work. According to the study, it seemed to appeal to individuals who focused on intuition, feeling and perception – the preferences considered more suited to higher levels of learning. This was supposed to attract a wider variety of students interested in interaction, critical thinking, and other people, and help students to see accounting knowledge as a coherent whole.

Gul and Hutchinson (1997) state that prior studies on interactive effects of extroversion and introversion personality traits and collectivism and individualism preferences or different learning approaches in general have shown quite mixed results because of the two critical conditions of learning: the characteristics of the learner and the learning environment. Personality and preferred learning styles feature strongly in students' academic achievement and bias towards particular subjects and styles of thinking but learning environment is easier to create so that it facilitates student learning.

Mladenovic (2000) writes that prior studies suggest that a single course is more likely to achieve its objectives in an aligned teaching and learning environment. Alignment means that the course objectives are aligned with curriculum, teaching methods and assessment. On the other hand, objectives are less likely to be achieved when only one aspect of the teaching environment is changed, such as the teaching method. In order to effectively challenge students' negative perceptions of accounting, Mladenovic suggest that the interrelatedness of the many factors in the context of learning must be acknowledged and an alignment achieved. Changing only one or two aspects of the learning environment is a piecemeal approach that may assist students in changing some perceptions.

Tan and Laswad (2006) state that there have been studies examining factors that have contributed to the decline in the number of students majoring in accounting and the quality or characteristics of students that choose accounting as their field of study. A student's decision is affected by various factors such as economics, social issues, work environment, the timing of the decision, aptitudes, other personal characteristics, job satisfaction, opportunity to be creative, autonomy, intellect and general interest in the subject area. While some students choose their majors for reasons that are entirely intellectual or compatible with their personal styles, others may be influenced by job prospects, family background, parental pressures, perceptions of different disciplines, and the curricular options available by universities. The influence of teachers and parents seems to be inconclusive, and non-accounting majors have exhibited unfavourable perceptions of the accounting profession. However, a consistent finding in many studies is that accounting students' discipline choice is heavily influenced by earnings potential and job market conditions or opportunities. Tan and Laswad's study reports that the first accounting course is regarded as one of the most important courses, because it shapes the students' perceptions of the profession, the skills needed and the nature of career opportunities. How students perceive the first course can attract or discourage majoring in accounting. Students' experiences with uninteresting accounting coursework, workload, rote learning, weak performance and perception of accounting can discourage students from pursuing an accounting major. Accounting majors hold positive attitudes towards the accounting profession and the study of accounting. Mathematical skills, academic performance, employment opportunities, workload, and interest in accounting study distinguish between accounting and non-accounting students' major intentions in studies, but results have been mixed depending on the country in question.

The research (Danziger & Eden 2006; Marriott & Marriott 2003; Worthington & Higgs 2003) suggests that the choice of a major is a function of students' overall interest in the profession, perceptions of individuality, structure, perceptions of how the profession deals with problems and tasks and the nature of these problems and tasks, mode of attendance and, to a lesser extent, gender influenced by personality. In the beginning, students usually have a reasonably positive attitude towards accounting profession. As the students advance in

studies their perception of and their attitude toward the accounting profession becomes less favourable - partly because education and internship offer an opportunity for students to acquire the knowledge and experience needed to reassess early perceptions. The process of attitudinal change appears to be gradual but it is evident that the knowledge gained during the course of studies has some unintended effects on accounting students' career aspirations. This can be described as an occupational reality shock. However, a high score is usually maintained with regard to the profession being well-respected.

In sum, this chapter has outlined studies relating to the impact of personality in learning accounting or in choosing accounting as a major or as a career. The results of different studies are mixed in many aspects but what seems inevitable is that personality as such seems to play an important role in learning. It also seems to affect the choice of study line and thus to have connections with motivation. Since the interplay of all above mentioned is intertwined it may be hard to separate them in such a complex mental process as learning. However, it is interesting for this study to find out what traits in personality, if any, specifically are the ones that define success in learning accounting and in producing quality learning outcomes.

3.2 Meta cognition and self-regulation

Brown (2002; 2003; 2006a) states that the term meta refers to being prior to and at a level above thinking itself. There is a distinction between what people think about (content thinking) and the way in which people think and pay attention to information (process thinking). Meta programmes [14] describe individual process thinking or thinking style, which is a higher logical level of thinking. They are unconscious sorting principles or models by which people filter, sort, and organize input to create and sustain representations of reality and personal coherence. The term meta cognition refers to a person's ability to understand and enhance his own knowledge concerning his own cognitive processes. This is fundamental for a student being able to learn to learn. An individual's perception of reality is not the same as reality itself. Meta programmes are a model for describing personality and behavioural preferences. The use of meta programmes is based on recognizing individual differences in personality which are reflected in the ways in which individuals behave, prefer to learn, motivate to take action and select language for communication.

For students it is possible to change the meta programme preferences. 11 meta programmes have been identified as especially relevant to higher educa-

[14] The meta programme model is based on Neuro Linguistic Programming, which originates from cognitive psychology and linguistics. It was developed in the early 1970's by Richard Bandler and John Grinder. It refers to ideas and techniques that relate to patterns of thinking, language, and behaviour and may be defined as the study of the structure of subjective experience, or, alternatively as the study of what works in thinking, language and behaviour. (Brown 2002.)

tion because they affect students' self-management and how they learn, and thus have a strong impact on their educational experiences. These programmes are, for example, the student's preference to work either alone or in a group or preference for deductive logic. It seems that there is a difference between what the natural meta programme preference is and what a learned one for the educational context is. The patterns that seem to be most important appear as pairs: towards/away from, internal/external, options/procedures, proactive/reactive, detail/general, sameness/difference, in time/through time, independent/proximity/co-operative, visual/auditory/kinesthetic. (Brown 2006a.)

Meta programmes are context specific. It means that individuals can use different meta programmes in educational context compared with their everyday life situation context. Some of the meta programme patterns may be more significant or dominant and may be preferred in most contexts. These are referred to as driver meta programmes and they have a significant effect on behaviour and the outcomes of a person's actions. Meta programmes thus have an impact on accounting students' educational experience. Studies on meta programmes show that some students display preference for one meta programme pattern, which has a heavy impact on the student's educational experience. On the other hand, some students display a strong preference for many meta programmes, and this kind of combination has a major effect on the student's experience in higher education. (Brown 2002; Brown 2006a.)

Unconscious thinking preferences are revealed by the behaviour or by the use of language. This is why, when carrying out studies on meta programmes, qualitative research methods have often been used to identify generic meta programmes. The language people learn and use has structure and may be described by a set of rules. In a similar way, human behaviour has structure and can be described by a set of rules. Meta programmes influence the language selected in communication. Language inevitably differs from the experience it represents. People are not usually conscious of the process of selecting words to represent experience. The particular language is thus a function of the meta programmes preferred in a particular context and the physical and emotional state. Meta programmes can also be viewed as a description of a set of behaviours that are evoked in a certain context and observation of the behaviours provides another way in which that person's meta programmes may be identified. Good communication arises in part as a result of a match in communication style and a match between the meta programme preferences of the teacher and the student. (Brown 2002; Brown 2006a.)

Some studies have explored the conception of meta programmes to describe behavioural traits that a person exhibits when interacting with other people. Studies by Brown (2002; 2003; 2006a) report that meta programmes represent an approach to describing personality preferences. They operate at an unconscious level, at a level meta to or above the content of the individual's conscious thoughts, and are powerful determinants of personality. Meta programmes assist in identifying thinking preferences and the way how people

sort and attend information. Meta programmes can be identified in the language people use and in the behaviour they display. Identifying students' and teachers' meta programmes makes it possible to improve communication and motivate people by appropriate use of language to match their meta programme preferences. This offers the potential to enhance teaching and increase students' motivation to learn and improve learning outcomes in accounting as was described in the study by Schleifer and Dull (2009).

Greenberg (1997) states that teaching of learning and thinking skills have become the targets of cognitive research in accounting education. The research has emphasized the importance of a framework, which is important for the organization of knowledge in attaining learning and thinking skills. A so called systems framework involves the identification of objectives, users, inputs and outputs and the calculation process itself and it is supposed to enhance long term learning and higher level thinking skills.

Higher level thinking, or meta cognition, involves more than memory skill or routine applications of factual knowledge - though memory skills are also important. Greenberg (1997) points out that meta cognition involves flexibility in retrieving and applying knowledge in different situations. For students it means using concepts from classroom in professional situations. Meta cognitive skills are known to be different between novices and experts. Experts use more complex processes for problem solving than novices. This enables them to focus their attention on relevant aspects of the problem and match them with the organization of their knowledge base.

Smith (2001) states that in self-regulated learning the learner makes a choice that is intrinsically generated, rather than a reaction to an external requirement. A traditional learning model where the teacher prescribes and the student performs does not support self-regulated learning. The most fundamental thing in self-regulation is the choice to participate in the learning processes. Choosing to attend a class and being actively involved demonstrates that the learner wants to learn. This quest for knowledge is a choice consciously or unconsciously made by the learner. For the learner to self-regulate the method of learning there must be a choice of cognitive learning strategy. Cognitive learning strategies are plans or techniques that the learner uses in order to accomplish the learning objective. A self-regulated learner consciously reflects on what might be the most effective way to master the learning goal and chooses an appropriate strategy to accomplish that goal. The self-regulated learner tends to use strategies that support mastery goals rather than strategies that support performance-oriented goals. A self-regulated learner sets personal learning goals. The researchers call these learning outcomes. In the self-regulated learning model, the learner chooses a learning outcome that leads to mastering the topic.

Smith (2001) defines self-regulatory processes as the learner's goals and monitoring strategies used during the learning process. They are critical because it is the learner's active involvement in the process that distinguishes self-regulated learning. Self-regulated learning is fundamental to lifelong learning.

It is a process in which the learner exercises control over thinking, effect, and behaviour.

A self-regulated learner uses conscious selection and controls critical thinking and learning strategies, and continuously assesses his own learning effectiveness and progress. The self-regulated learning model includes motivation, self-regulatory attributes, self-regulatory processes and choices, which evidence that the learner is actively involved. The learner sets goals to master the material. Mastery goals [15] are learning rather than performance. Progressing toward the goal the learner se lf-evaluates progress and adjusts actions towards goal achievement. Self-monitoring focuses on what one does; self-evaluation focuses on how well one does it relative to the goal. The learner makes adjustments to current cognitive and regulatory strategies in order to align performance with the learning goal. Self-monitoring by the learner is a process in which systematic observations are recorded and used to assess progress toward a goal. Deliberate self-monitoring enhances learning by focusing the learner on specific outcomes and a determination of what actions or cognitive processes are responsible for these outcomes. (Smith 2001.)

Self-regulatory attributes include self-efficacy, self-awareness, and resourcefulness. Self-efficacy refers to belief or lack of belief in personal capabilities to master situations that may include novel, unpredictable, or stressful elements. Belief in one's abilities is a critical influence on motivation. Self-awareness refers to awareness of the outcomes of one's behaviour. Students displaying low levels of accuracy in evaluating their performance are less successful at learning. Accuracy of one's self-awareness influences the capability to self-regulate the learning process. Resourcefulness refers to the ability to control physical surroundings in a way that limits distractions to the learning effort, and to search out and use the references and expertise; the self-regulated learner is more likely to organize and control the physical learning and seek assistance. (Smith 2001.)

Memorising can thus be interpreted as a preliminary step in understanding, which is the educational aim. The constructivist view of learning and memory maintains that people do not receive the meaning of a message. Instead, people construct a meaning by interpreting the message in the light of their own knowledge. This provides a cognitive explanation to understanding. A message is understood when it has been integrated into the learner's existing knowledge structure. Understanding is complete only after a meaning has been generated. The nature of meanings is personal and subjective. Meanings are the components of which the world as we experience it is constructed, but they are also often forgotten, fading into the unconsciousness and perhaps being retrieved into the consciousness again later. (Pihlanto 2003b; Togo 2002.)

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15 Mastery goals focus on knowledge and skills; performance goals focus on the task to complete. A mastery goal, therefore, leads to in-depth understanding and comprehension of the subject, whereas a performance goal leads to understanding just enough to perform a minimum requirement. (Smith 2001.)

Recent inventory studies have sought to measure different kinds of memorisation. In these studies, rote learning has been seen as distinct from the forms of memorisation associated with understanding. It was also revealed by the present data that rote learning was often brought about in a very negative light comparing to memorization techniques that helped in grasping the contents of accounting in the first learning phase as outlined in figure 10. Entwistle's and Entwistle's (2003) study contains students' comments that make clear how memorising and understanding are used at different stages of studying, and also indicates how the meaning of these terms change when used in different situations. There is thus value in distinguishing different forms of memorising and understanding.

FIGURE 10 Memorization and understanding as complementary processes

Schmidt, Sweeney and Wolk (1997) suggest that a person's problem-solving style is associated with certain preferences for certain pedagogical methodologies. The theory tries to understand an individual's style used in problem-solving. It claims that individuals exhibit a preference for one of the two styles of problem-solving. The styles are a continuum from extreme innovators at one end to extreme adopters on another. It is worth of noticing that either style is not seen as preferable to the other, it is only the situation that dictates which style is more appropriate. Similarities or differences between the problem-solving styles of educators and students have potential implications because teachers' cognitive styles affect their teaching approaches and student and teacher interaction. The results of this study evidence that accounting educators are rather adaptive problem-solvers than innovators. The results also indicate that innovative educators have a preference for procedures loose in structure, with aims not easily defined, and without easy methods of assessment. Adaptive educators, on the other hand, showed a preference for procedures containing a tighter structure, more definable aims and more precise method of assessment.

Walters-York (1999) reports that findings concerning variation in novice accounting students' ability to identify and use of analogies to solve problems suggest that differing levels of perceptual differentation ability may influence the ability to identify and transfer learned problem relations. Reliance on surface features implies an inefficient storing of numerous individual data cues in memory. Reliance on structural features implies a highly efficient, holistic clus-

tering of information into relational memory structures. Findings suggest that individual differences in perceptual differentation ability may influence a problem-solver's ability to identify and exploit analogous problem situations by affecting which particular problem features, surface or structural, he is likely to use for judging similarity and potential analogousness.

Marshall (2002) states that studies in problem-solving have revealed that the use of a more principled approach to problem-solving is a typical characteristic of expertise. Experts see and represent a problem in their domain at a deeper and more principled level than novices. Novices have a tendency to represent a problem at a superficial level. The accounting profession has a tradition of emphasizing the importance of accounting principles in both education and practice. However, there seem to be no important differences in the types of principles applied by experts and novices. This, Marshall believes, suggests that the superior performance of experts may be accounted for by their more frequent use of principles rather than by their use of principles not available to novices.

Curtis and Davis (2002) and Davidson (2002) discuss the significance of knowledge structure to accountant expertise. Cognitive knowledge structures play an important role in the processing of new information. [16] Accurate or high quality knowledge structures facilitate the identification of relevant information, the retrieval of applicable knowledge form long-term-memory, and the activation of appropriate problem-solving strategies. High quality knowledge structures also enhance subsequent learning and retention. Structural properties of an individual's conception are important aspects of his knowledge and thus the method used to acquire knowledge is critical to the ability to use the knowledge.

Boldt's (2001) study assessed students' accounting knowledge by using an expertise, or benchmark, knowledge structure that can be compared with students' knowledge structures in financial accounting concepts. The results of this study reveal that the structural approach simultaneously provides information about the concepts or relationships that students do not understand and those they do understand, but the approach provides little information about what students can do with the knowledge and would be used most effectively in conjunction with other assessment procedures.

Kopp and Phillips (2005) suggest that a single structure for organizing accounting topics is not optimal in all problem contexts. Students who learn accounting topics in courses organized by function structure their knowledge differently than students who learn the same topics in courses that integrate across functions. On problems that require in-depth knowledge of a particular functional area, knowledge structure organized by function would be more effective than knowledge structure that integrates across functional areas. The problems

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16 This view is consistent with Piaget's theories of cognitive development theory, which argues that the development of higher-level cognitive skills depends upon the development of knowledge structures that are essential for the processing of information.

that require knowledge from several functional areas would be better analysed by students equipped with across functions integrating structures because the way how accounting topics are integrated within or across functions has effects on students' structure and use of knowledge.

Kealey, Holland and Watson (2005) explored critical thinking. Critical thinking has been defined as reasoned judgment, ability to identify and solve unstructured problems, professional scepticism, ability to distinguish between facts and claims, lack of bias, and also communication skills and curiosity. Since logic is an important part of critical thinking, training in logic has been suggested as one remedy to improve learning outcomes in accounting.

The study by Nelson, Ratliff, Steinhoff and Mitchell (2003) explored the effect of classroom training in formal and informal logic on auditing students' abilities to discern between sound versus fallacious conclusions based on various types of argument forms in audit setting. The study evidenced that training in formal and informal logic helped auditing students avoid errors in critical thinking in real-world settings.

Research indicates that advanced organizing mechanisms increase comprehension. Maletta, Anderson and Angelini (1999) report that experienced individuals possess knowledge structures that help in the categorization and organization of information. This allows the individuals to store a greater amount of information and to retrieve the information more easily from memory. On the other hand, individuals without experience tend to lack organizational knowledge structures that they would need in learning and retention processes. This difference has implications in the educational design. For initial learning, highly structured tasks develop the greater level of learning. If the individual already possesses a very developed organizational knowledge structures, unstructured learning tasks produce higher learning results because they require a greater depth of processing and cognitive effort and thus greater retention and learning. Repetition, in contrast, only ensures that items are processed to the same depth, but memory is not improved beyond the level associated with that depth.

Curtis and Davis (2002) and Kern (2002) have investigated conceptual models. Conceptual models, that can take many forms, are learning aids to help students develop their mental models. To be an effective learning tool a conceptual model must fulfil three criteria: learnability, functionality and usability. A conceptual model is not effective if it is too difficult to learn, does not explain the important aspects of the target system or cannot be easily used. The idea is to encourage educators to move beyond an emphasis on creating technical problem-solvers to help students become disciplined and creative problem-solvers instead. Organization of knowledge is identified as one dimension of the accounting curriculum necessary to achieve this transformation.

Knowledge must be activated when needed. Greenberg (1997) and Duangploy as well as Shelton (2000) talk about the importance of a systems framework. It is supposed to enhance the retrieval of information from memory and the retaining of knowledge longer. The organization of knowledge consists

of a framework into which new knowledge can be incorporated. Providing the students with a knowledge framework is essential because fragmented information is easily forgotten. The systems framework provides the students a structure where the calculation process fits and focuses on the motivation. It encourages the student to look at the solutions as part of the larger process of providing information to users. In teaching the ideas have been brought about by cases, business games and integrated programmes based on core systems courses. The incremental learning leads to better utilization of a learned calculation process at a later point in time and to higher level of thinking skill, i.e. the greater ability to recognize similarities and differences between a new situation and the learned situation.

Almer, Jones and Moeckel (1998) present that cognitive elaboration is any activity that clarifies, supports or specifies information to be learned. Successful elaboration improves learning and performance by motivating the learner, focusing attention on relevant information and facilitating assimilation. The benefits of elaborative activities have been demonstrated in accounting education. Students who generate their own elaboration have better recall of both simple and complex accounting concepts than students studying with instructor-generated elaborations.

Hanson and Phillips (2006) report that analogies can prepare students to think about new situations that share similar concepts or similar relationships among concepts. In other words, they are used when mapping similarities between a known topic (the source) and a new topic (the target). Experimental findings suggest that analogies are effective in helping students to understand accounting topics. However, the same analogy can either enhance or impair comprehension, depending on the extent to which students engage relevant knowledge for appropriately understanding the analogy. The results show that to be truly effective, analogies should explain fully how the structural properties of the target and source topic connect. The source topic must be sufficiently familiar so that students can identify and relate its properties to important structural features of the target.

To sum up, it seems that any theories on meta cognition and knowledge structuring suggest that their meaning is indispensable in complicated acts of learning. There are also many other subcategories like memorizing studies and problem solving studies that can be classified under the same mental function based studies. What is also important for learning is the learner's ability, at least partly, to control these mental functions that can also partly be unconscious thinking patterns. This is usually referred to as self-regulation and can be classified as one aspect of meta cognition. How these mental processes depend on the students personality has not been revealed in an unequivocal way by prior studies but at least one can say that there is a connection between personality and meta cognition and self-regulation.

3.3 Learning approaches and context

The students' approaches to learning literature is heavily characterised by three constructs, the two first introduced in studies by Marton and Säljö: a deep approach, a surface approach and a later addition; a strategic approach. These different approaches do not constitute a characteristic of the student, but are a response to the student's perception of the context where teaching and learning takes place. Consequently a student may adopt a deep approach to learning for one subject but a surface approach for another. The outcomes of a deep approach to learning are more consistent with the goals of higher education. The outcomes of a surface approach to learning are often seen as incompatible with the goals of higher education. Also, deep approaches are related to higher quality outcomes and better grades. The principal contribution is, however, that the emphasis is on the intention of the student. What a student intends to get out of learning determines whether a deep or surface approach will be used. (Beattie et al. 1997; Lucas 2001; Ramburuth & Mladenovic 2004.)

The deep approach to learning is one in which students aim to understand the subject and seek meaning in the matter being studied and relate it to other experiences and ideas. Students express an intrinsic interest in studying. They adopt strategies that allow them to relate ideas to their own experience, distinguish evidence from argument, identify patterns and principles, form hypotheses and relate what they learn to other subjects or to topics within the subject. The learning involves thinking and integration between components and tasks, and working with concepts and ideas. The deep approach is supposed to result from relevance to students' interests, instructor's support and enthusiasm, cooperative learning and the personal teaching efficacy of the lecturer. Thus, it is argued that a deep approach is more likely to result in quality learning outcomes such as a good understanding of the discipline as well as developing higher order skills like the ability to think critically and process data at a high level of generality. (Booth et al. 1999; Lucas 2001; Duff 2004b; Ramburuth & Mladenovic 2004.)

Deep learning is also connected with the earlier mentioned knowledge structures in that the development of higher order thinking skills is dependent on adopting a deep approach to learning and the creation of appropriate knowledge structures. When students engage in deep learning they store knowledge in structures that facilitate application in other contexts. (Byrne & Flood 2004; Lonka et al. 2004.)

The surface approach is connected with memorizing. It aims primarily to memorize or reproduce material with the prime intention to complete task requirements or satisfy assessment demands. Students see the task of learning as externally imposed and they are extrinsically motivated. They adopt strategies that focus on factual acquisition, rote memorization and procedures and treat parts of the subject as separate entities, failing to integrate topics into a coherent whole. Surface approach focuses on facts rather than arguments and is associ-

ated with assessment methods rewarding reproducing information and on situations where students experience a heavy workload. (Booth et al. 1999; Duff 2004a; Lucas 2001; Ramburuth & Mladenovic 2004.)

Earlier studies (Booth et al. 1999; Byrne & Flood 2004; Duff 1999; Duff 2004a; Ramburuth & Mladenovic 2004) on accounting students' approach suggest that accounting students exhibit relatively higher scores on the surface approach. However, on the basis of the student descriptions in the present study, it is possible to see that even if accounting students traditionally have been adopters of surface learning approach, it is not what students consider a good learning approach. The descriptions of good learning experiences highlighted the importance of deep learning and any other elements like knowledge structures and motivation that are connected with deep learning. This implies that even if accounting students were surface learners in certain learning situations, they are aware of the weaknesses of the approach in relation to learning outcomes.

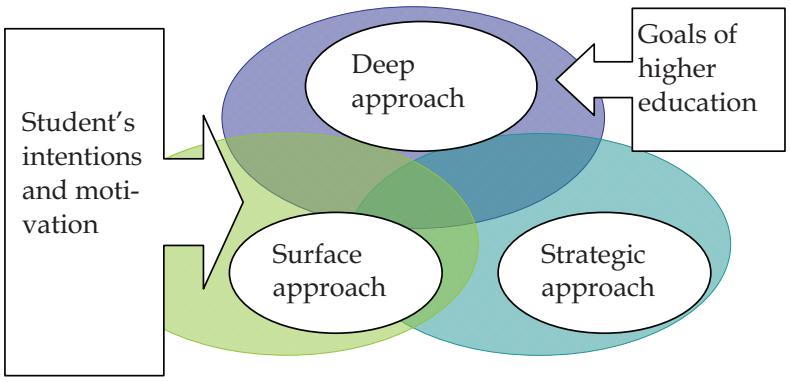

FIGURE 11 Deep, surface and strategic approaches to learning

Entwistle, Ramsden [17] and Biggs [18] introduced a third approach in their learning studies: strategic or achieving approach, where students work hard to achieve good grades and choose their learning strategy to maximize the chances of aca-

17 Later, Ramsden used the same theoretical basis and described two approaches to learning which he identified as what and how. Under how he discussed the ways students organize work; atomistic and holistic approaches. He defined deep learning as occurring when a student focuses on what the task is about, whereas surface learning focuses on the signs. Under the how category, he defined holistic as preserving the structure and atomistic as distorting the structure. (Evans 1998.)

18 John Biggs is an educational psychologist who is known for theories on assessment of the quality of learning outcomes, and the model of constructive alignment for designing teaching and assessment.

demic success by effective study organisation, and analysis of the structure and content of previous examinations to predict questions. However, subsequent studies have typically failed to reproduce the strategic approach as a distinct approach to learning. A more recent work suggests that the strategic approach can be an extrinsic motivation to adopt a deep or surface approach to maximise grades in a particular academic context. (Duff 2004b; Heikkilä & Lonka 2006.) The three different approaches to learning are outlined in figure 11.

Many studies carried out in previous years (Booth et al. 1999; Byrne & Flood 2004; de Lange & Mavondo 2004; Duff 1999; Ramburuth & Mladenovic 2004) on accounting students' learning approach suggest that accounting students rely more on the surface approach in learning and have reproductive conceptions of learning. This implies that they exhibit relatively lower scores on the deep approach, also when compared with students in other disciplines. Consequently, they also fail to gain deep understanding and lack the forms of knowledge, skills and competencies expected by the accounting profession. Students' learning approaches and motivation are related to extrinsic things like the perceived value of the course, future employment prospects and personal development. However, also the intrinsic values have been observed; some students are motivated by the notion of learning and intellectual growth as opposed to an enhanced career and financial future. Higher surface approach scores have also been found to be associated with less successful academic performance and also with lower self-ratings of performance. This finding suggests that students use a learning approach unsuited to higher performance in the subject.

However, both Elias (2005) and Lucas (2001) point out that it is not evident that surface approaches to learning are always necessarily inferior to deep approaches. The learning approach is a function of the discipline and students can adapt it to fit the discipline. The findings of education research have shown that the deep approach is more evident in the arts and social sciences where students show more intrinsic interest in their studies, whereas the examination of evidence and the use of surface approach are more characteristic of scientific disciplines where students are motivated by vocational concerns. These findings are consistent with the assertion that accounting attracts students who tend to adopt a surface approach to learning. The intention to seek meaning or to reproduce the information is seen as a consequence of how students interpret the context of learning. Subjects with algorithmic content, such as the sciences, accountancy and engineering, can be more associated with rote memorization than others. Learning within science, which requires an emphasis on detail and procedure, may require a preliminary stage of rote learning difficult to distinguish from a surface approach.

Jackling (2005) also suggests that a surface approach may be more predominant among accounting students, because accounting tasks build on prior knowledge and algorithms. However, the use of surface approaches, particularly linked with memorisation and rote learning, can be over-simplification. It may be tempting to argue that some low level competencies in many disciplines, accounting included, can be effectively learned with lower level strate-

gies that can be used as part of a deep approach to learning in the progress through stages in development, and students can progress towards a wider use of deep strategies without a corresponding decrease in the use of lower level strategies. Although assessing student learning outcomes is not clear-cut, it is generally agreed that qualitative measures of learning outcome are better indicators of student learning than quantitative measures such as traditional examination performance. Accurate perceptions of the learning context are associated with deep and achieving approaches to learning and thus the quality of learning outcomes. Students perceiving memory as being important in learning accounting also indicate that the assessment tasks require memorisation techniques. This demonstrates how a surface approach to learning in accounting might be a response to the student's perception of the learning tasks rather than a characteristic of the learner, and reveals that memorisation is important for students in different ways. Some students rely on memory exclusively, some students use memorizing as a preliminary step to understanding, while others exercise the use of memory when they perceive that the assessment tasks require this.

The study by Byrne, Flood and Willis (2002) assessed the relationship between the approach to learning and the learning outcome using assessment marks as the measure of learning outcome. In this study, students showed no strong preference for any particular approach, but there was a positive relationship between the deep approach and the total assessment mark, and a positive relationship between the strategic approach and the total assessment mark. The study claims that assessment is a significant driver of student learning because it has a powerful influence on students' approaches to learning which affects the quality of their learning outcomes. The crucial factor is students' perceptions of the demands of the assessment. Students, consciously or subconsciously, vary their attitudes and strategies of learning in line with the assessment system. If a particular assessment is perceived to require just passive acquisition and accurate reproduction of details, students will adopt a surface approach and employ a low level cognitive strategy. When assessment is perceived to require high level cognitive processing to demonstrate a thorough understanding, integration and application of the knowledge, students are more likely to adopt a deep approach. An appropriate assessment is one that is aligned with the criteria set out in the course objectives. Such assessment steers students' attention to what is to be learned, while their performance indicates how well they have learnt it.

The results of Davidson's (2002) study, exploring the relationship between study approach and examination performance, show a significant relationship between performance on complex examination questions and the use of a deep study approach. Complex exam questions refer to questions which require more than responding with memorized facts and procedures. However, no significant relationships appear between the use of a deep approach and performance on less complex questions or between the use of surface study approach and examination results. A surface approach, which normally seems to lead to

unsatisfactory test performance, seems to be, however, effective in situations where it is enough to recall unrelated detail.

Ramburuth and Mladenovic (2004) investigated learning outcomes using the SOLO [19] (Structure of Observed Learning) taxonomy. The study identified students' orientations to learning upon entry into accounting studies, and investigated whether they are related to academic achievement by comparing SOLO scores upon entry into higher education and subsequent academic grades in accounting units. For the surface approach to learning, there is a significant negative correlation with academic grades. However, there is no statistically significant relationship between the overall grade for the accounting units and a deep orientation to learning.

Duff (2004a) states that assessment is one of the most important contextual variables that influences approach to learning. Accounting educators can adopt methods that assess qualities of learning rather than quantities of knowledge. In practise this means that for example multiple choice exam questions or essays marked with pre-set answers will encourage surface approach to learning, because students may try to learn pieces of correct knowledge by using memorization techniques. On the other hand, continually-assessed projects, learning portfolios and essay questions encourage students that demonstrate the quality and integrity of their learning promote active learning and deep approach. Also, co-operative learning that has been widely used in accounting education encourages a deeper approach and improves the quality of learning outcomes.

Studies on the learning context (English et al. 2004; Hall et al. 2004; Lucas 2001) state that approach to learning is affected by perception of the task requirements, which is influenced by students' orientation to studying and the context of learning. While educators cannot influence the orientations to learning, they are able to manipulate the learning context and therefore the quality of learning. Context includes both the nature of the course and the teaching within the course. Interventions to improve student learning have been informed by the literature on meta cognition. This suggests that students can perceive the options associated with the three approaches to learning indicating a level of control sufficient to enable students to change their approach to learning in response to modifications of the external environment. An individual's control of learning processes is related to maturity and experience and positively associated with high quality learning. Factors that could result in students adopting surface approaches to learning in accounting include: excessive workloads; the

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19 SOLO taxonomy developed by Biggs and Collins is based on the study of outcomes, i.e. students' responses to tasks. As students learn, the outcomes reflect similar stages of increasing structural complexity. The stages are identified in five hierarchical categories. Learning outcomes can be evaluated in terms of the level of cognitive complexity or abstraction achieved, ordered in terms of characteristics that include progression from concrete to abstract, increasing organising dimensions and consistency, and the use of relating principles. However, since SOLO has been developed mainly to measure performance on secondary education, few studies explore the relationship between SOLO levels and academic performance. (Ramburuth & Mladenovic 2004.)

nature of assessment tasks; a didactic teaching style; and low staff per student ratios. On the other hand, the structure of the course and lectures; enthusiasm of lecturers and tutors; generation of a personal learning context; provision of student feedback; and the provision of direction to students, are crucial elements affecting students' choice of approaches to learning in accounting.

Tempone and Martin (1999) also refer to contextual importance. They state that the intentions of students when they learn are of prime importance. If students do not see a learning task as a useful one, or if they do not see the potential for development within the exercise, they will approach and engage in the task in a superficial way and the learning outcomes will be limited. Contexts where students believe their workload is manageable; where their contributions are valued; where they are clear about what is expected; where they see assessment tasks matching the requirements of learning activities, and where they have a sense of responsibility are associated with deep approaches and the reverse situations are associated with surface approaches and outcomes.

There is also evidence (Jackling 2005; Lyons 2006) that perceptions of the learning environment are linked to the quality of the learning outcomes. Favourable learning environment includes good teaching, clear goals, appropriate workload, appropriate assessment and emphasis on independence in learning. Deep learning approaches have been associated with positive perceptions of the learning environment and surface learning approaches with heavy workload and the perception that assessment tasks require rote learning of factual material. Institutional habitus, which bears upon the way in which students engage with both the institution and the subject, is of importance. If students feel they do not fit in, it can lead to non-engagement with the institution. This is undesirable because one of the main functions of education is to socialise students into a particular social cultural tradition.

The theory of learning approaches has enjoyed a lot of popularity in learning literature because of its applicability. It seems that approach to learning is connected to learning context. This gives a contextual perspective on learning in addition to more stable traits defined by the personality. The contextual perspective brings this model closed to the teacher and teaching methods explained in next chapter. Also, the ability to vary the approaches depending on situational factors seems to be depending on the person's ability to control mental processes. Thus it depends on the previous mentioned self-regulation and meta cognition.

Combining what has been said in the light of previous literature on accounting and learning, it can be concluded that there seems to be issues that have got much importance by previous studies. They were chosen also because the findings in the present data were such that they could be classified under the categories formed by these key areas. The issues in question are related to the student's personality and career choice, the student's ability to use meta cognitive mental operations and self-regulation and finally, the student's ability and inclination concerning learning approaches in different learning contexts. This way it is possible to construct a framework for the present study as de-

picted in figure 12. The framework thus consists of three key areas in learning. The arrows do not depict causal relationship but they aim at describing the mutual relationship of these elements showing that personality is a rather stable characteristic of a person and that it has some effect on meta cognitive skills and on learning approaches a person is able and inclined to use. Also, the meta cognitive skills partly define the use of learning approaches. The results of the present study are investigated using this framework as a basis for investigations.

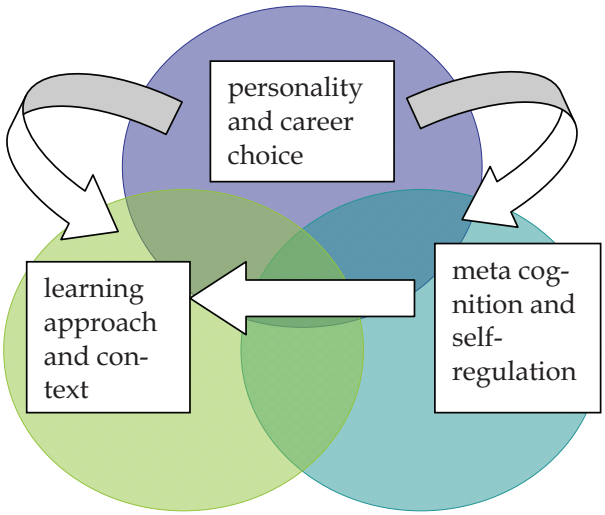

FIGURE 12 Key student characteristics in learning accounting model

4 TEACHER AND TEACHING METHODS AS MEDIATORS IN LEARNING

Many studies in the field of teaching and learning have concentrated on certain concrete aspects of teaching, like strategies or methods used and different kinds of teaching materials. However, taking into account the complexity of the whole learning process, it seems that teaching or teaching methods cannot be considered as an isolated sequence in the series of actions. Rather, teaching can be seen as a part of an integrated system of relationships where changing one aspect necessarily demands changes in other aspects as well. It is often quite difficult to separate the influence of the teacher and the teaching method used. However, this study attempts to describe them both separately, recognizing that they both act as mediators in the learning process. According to Potter and Johnston (2006):

> *"The need to evaluate teaching strategies within higher education settings can be understood in the context of broader forces for education reform; specifically, a recent and gradual movement away from the information transfer mode towards a more student-learning-centred focus. Higher education is being fundamentally reoriented to encourage students to more actively participate in their own learning by constructing their own knowledge and practice through the acquisition and application of new skills and concepts."*

The aim of education is to provide a context in which students can learn. The role of the educator is to strive for quality learning outcomes. Regardless of methodological approach, studies in learning have revealed that students' approaches to learning, within higher education, have an impact on learning outcomes. Usually deep approach is associated with improved learning. It has been suggested that teachers should establish a supportive learning environment to encourage deep learning, which should then in turn make the students achieve higher quality learning outcomes. At the same time, the assessment techniques should be in line with the teaching methods. However, accounting students need to master all three approaches to learning if they are to be successful in education. An effective strategy should have the effect of first, improving both academic performance and progression, and second, providing a means of

achieving higher quality learning outcomes. (de Lange & Mavondo 2004; Duff 2004b; Lord & Robertson 2006.)

The next chapters discuss both the effect of the teacher and the teaching methods in a student's learning process. As the literature on the field of teaching methods is very rich in the number of studies, it is once more worth of pointing out that the studies investigated here only include those that were found the most interesting on the basis of issues brought about the data of the present study.

4.1 Teacher orientation

Leveson (2004) reports two distinct teaching orientations: teacher-centred content oriented transmission and student-centred learning oriented conceptual development and change. This dichotomy is described in figure 13. This model describes the different teaching conceptions arising in the data of the present study very well. The former conception views teaching in the discipline as involving – primarily - the transmission of facts and procedures. Strong regulation or control means that the teacher actually tries to take over cognitive, affective and meta cognitive activities from students. The latter views teaching as a matter of encouraging students to develop their own accounting concepts and possibly to change their world views as a result. This is suggestive of the teaching equivalent of surface and deep learning. In accounting this can be described as either being preoccupied with the technical and procedural aspects of the subject with an emphasis on subject delivery or helping students to explore accounting concepts and to think about their role in relation to the subject.

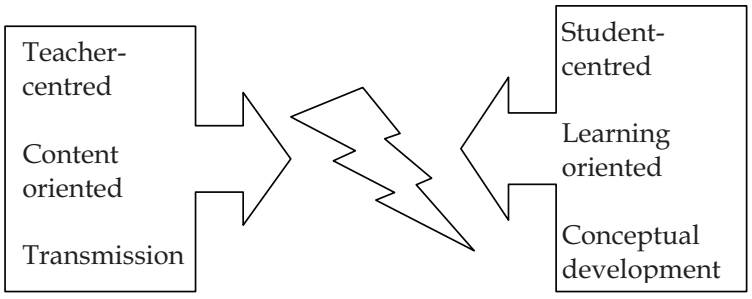

FIGURE 13 Conceptions of teaching

Brown (2006a) states that the quality of experienced teacher influence can be explained by the matching of meta programmes. There are a relatively limited number of studies that have investigated meta programmes in accounting education environment. The main outcomes of these studies claim that accounting majors exhibit, on average, dominant meta programmes similar to accounting educators even if the students are a heterogeneous group and that meta pro-

grammes are important to students' perception of the quality of the relationship between a student and a teacher. Indeed, the match of meta programmes creates synergy. Similarly, the mismatch of meta programmes leads to students viewing the quality of teaching less favourably and they might even be easily from accounting as a discipline. This explains the need for accounting educators being aware of their students' meta programme preferences. [20]

When the influence of the teacher is under scrutiny, it means that we easily end up describing classroom situations or lecture situations, because the role of the teacher has most importance in those situations. Lord and Robertson (2006) state that prior studies comparing lecturing with other teaching methods seem to implicitly classify lecturing as supporting a surface approach though it can be efficient in situations where students are only expected to demonstrate that they have received and retained the information. Other methods, then, are understood to encourage higher order thinking skills. However, teaching styles are never good or bad in any absolute sense, but they are rather appropriate or inappropriate. The results of the study investigating the role of the lecture in accounting student learning show that even at the end of their studies, many students understand learning primarily as acquiring knowledge and reproducing it in response to assessment requirements. The lecturer and tutor is looked for coverage of examinable content, and clear explanation and interpretation of the content.

It is worth of pointing out that student learning is not only, and probably not even mainly, a function of teaching. Students develop knowledge by various means and teaching is simply one of those. The learners' focus is usually on what they try to learn, i.e. the direct object of learning, whereas the teachers' focus should be on both what the students are trying to learn and on the way learners are trying to learn. What is of primary importance for students is how the teacher structures the conditions of learning. Given the links that research has established between teaching, learning and learning outcomes, the quest to promote better learning outcomes is also a quest for better teaching. Deficiencies concerning accounting teaching in particular include an over-reliance on algorithmic problem-solving, poor abstract reasoning skills, lack of generic skills and an inability to transfer academic knowledge to the workplace. Efforts to improve teaching centre often on issues relating to observable aspects like teaching strategies or methods. However, according to studies, effective teaching also includes elements such as checking for understanding, feedback, cooperative learning strategies, cueing and managing transitions effectively, maintaining active participation of students, and ensuring learner accountabil-

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20 Accounting educators exhibit dominant meta programmes in terms of preference for proactive behaviour instead of reactive and for people instead of things. Focus on internal, instead of external, is also highlighted which is to be expected since subjects need to be confident of their own opinions. Detail comparing to general is a dominant feature, which is perhaps not surprising since a lot of accounting work is of a detailed or specific nature. Towards instead of away from is ranked in the top as well. (Brown 2002.)

ity, because they all increase participation in learning. (Leveson 2004; Bowden & Marton 2004; Marton & Tsui 2004; Shafel & Shafel 2005.)

What educators then actually do in reality may be another matter and there appears to be a variety of environmental factors that mediate the approach taken. The findings of prior studies (Adler et al. 2000; Leveson 2004) suggest that the perceived impediments to learner-centred approaches can be grouped under three broad headings: lack of student readiness, inadequate educator support mechanisms, and non-reflective education practices. Contained with these groupings are such factors as inadequate resources for teaching, inadequate time, large class sizes, increased administrative responsibilities, passive and didactic learning preferences of students, and inadequate staff development and incentives in the area of pedagogic innovation. In addition, Fogarty (2008) states that study demands of each instructor tend to cancel out. Thus one instructor's instance for more attention and effort cheats another instructor's similar claims.

Although student learning is not primarily considered a function of teaching, it seems hard to separate learning and teaching of each other, neither it is the purpose of this study. Instead, the influence of the teacher and the teaching methods are considered an integral part of the learning experiences. Given the connections between meta cognition and teaching and learning approaches and context of learning, it seems important to look at this connection more closely using the framework by Leveson.

4.2 Teaching methods

According to a teaching method framework in accounting an instructor chooses teaching methods – and subsequently, a teaching media - based primarily on the type of learning objective. The conditions needed for achieving objectives vary across the types of objectives, and teaching methods vary in the conditions they can create. A single teaching method typically cannot create all the conditions necessary for a given learning objective. (Bonner 1999.) It is also important to view teaching methods in accounting as one aspect of a complex relationship with both generic and situation specific dimensions. Educators may find it impossible to adopt more sophisticated teaching strategies because of the difficulties of conceiving of anything that reaches beyond their own level of conceptualisation. In accounting many researchers have noted the tendency among both staff and students to view the discipline as predominantly technical and procedural. (Leveson 2004.)

Marton (2004, 12) points out that discussions about optimal learning environments have been phrased in terms of pros and cons of different teaching methods. But face-to-face teaching is only one method by which learning is brought about, and decreasing in the importance with the rise of more flexible, more electronically distributed, more open and more learner controlled forms of learning. Regardless of the teaching method or educational arrangement

used, variation must be present in the learning environment for the learning environment being able to prepare the learners to ever changing future.

It is no longer considered sufficient for a new graduate to have knowledge of an academic subject only. Instead, it is increasingly necessary to gain skills which enhance prospects of employment. Learning objectives involving complex skills require teaching methods that promote active learning. On the other hand, learning objectives involving simpler skills can be achieved with more passive teaching methods. Since learners interpret new information on the basis of their existing knowledge, constructivist pedagogy is grounded on students' previous conceptions and beliefs about the topics to be studied. However, because individual experiences differ, students may attribute different meanings to same things. This implies that learning is best organized on the basis of interactive and co-operative forms of studying in which individual interpretations and understandings meet each other. Teaching is not transmitting of knowledge but helping students to actively construct knowledge by assigning tasks that enhance this process. (Bonner 1999; Tynjälä 1999.)

To achieve life-long learning skills, accounting education has been prompted to move away from procedural tasks and the memorising of professional standards to a more conceptual and analytical form of learning. Students are supposed to provide evidence that skills have developed during their higher education experience. Measurement of critical thinking improvement thus requires a focused commitment and effort toward identification of student learning outcomes and applicable assessment measures of outcomes. This requires business curriculum aimed at critical thinking skill development to identify specific skills being addressed, standards applied to each skill, and evidence that reflects attainment of standards. (Braun 2004; Gammie et al. 2002; Hall et al. 2004.)

Kern (2002) says that according to research knowledge, active learning approaches affect discipline specific learning. Active student learning involves learning tasks which embody generic skills and attitude development, as well as the acquisition of a knowledge base, and in which the learners take control and responsibility for their learning. This may not necessarily come at the expense of discipline-specific knowledge. There is also research that indicates that the typical learning styles of accounting students are not suited to the acquisition of generic skills. However, the learning approaches adopted by accounting students may be a key factor influencing the quality of their learning outcomes. The technical and procedural content of accounting lends itself easily to passive teaching techniques that focus on the transference of knowledge. This has left reduced scope to include broad generic skill development within the curriculum despite the fact that the list of generic skills expected of accounting graduates, precludes the adoption of a narrow objectives-based, vocationally-oriented training model. (Boyce et al. 2001.)

The results of the study by van deer Laan, Smith and Spindle (2007) reveal that instructor-formed heterogeneous groups are not a necessary condition for effective co-operative learning when the focus is on individual learning. In con-

trast, allowing self-selected groups may increase the effectiveness of individual learning for higher performing students in some learning contexts. This means that when looking only at improved individual academic performance, the preferred team composition and formation method may not be the same for students having different levels of ability.

There is widespread acceptance (Arquero Montaño et al. 2004; Ballantine & Larres 2004; Feldman & Usoff 2001) that developing students' generic skills or non-technical skills is vital for their success in the accounting career. Generic skills can be arranged in three classifications: communication, group working and problem-solving skills, and more specifically they include skills like communication, written, personal, interpersonal, critical, problem solving, conceptual, judgement, analytical, synthesis, responsibility and organizational skills. At the moment they are viewed as being at least as important as technical knowledge. Generic skills are essential in helping graduates to deal with the complexities of the modern business environment by encouraging not only their self-awareness, but also self-confidence and the ability to learn. Generic skills are also transferable across disciplines. However, the extent of their transferability depends on the context in which they are acquired. This is why they remain, at least to some degree, subject specific.

The results of prior studies (Arquero Montaño et al. 2004; Brightman 2006; Ramsay et al. 2000.) also show that there is a relation between an individual accounting student's personality and teaching method preference. The connection to the personality suggests that extroverts should prefer co-operative learning. Also, sensing types tend to be more participative in decision making, which suggests that they prefer co-operative learning. Feeling types are very aware of other people and their feelings and this implicates that feeling types are more suited to co-operative learning environments where they easily cooperate with others and are more accommodating to others. Preference for co-operative learning is significantly associated with the extroversion and introversion dimension. Co-operative learning techniques have been advocated as one way of providing an environment where accounting students can learn team and interpersonal skills. The components of students working in teams to master academic material; teams made up of different levels of achievers; reward systems that are group oriented rather than individually oriented; positive group interdependence; individual accountability; group processing; social skills and face-to-face interaction are associated with group work. The positive effects also include the development of critical thinking, making information meaningful, increased motivation for learning, and higher student retention rates. Co-operative learning promotes understanding of content through the development of connections and relationships among concepts, and the increases in problem-solving skills and overall academic performance.

Group learning has been researched extensively in general education, and it has also been seen as an important topic in accounting because the globalised, interdependent and complex environment requires high levels of cooperation and makes employers emphasize teamwork. However, there has been little re-

search on the effectiveness of co-operative leaning in higher education or in accounting education specifically. The studies that have been carried out have resulted in conflicting conclusions. Educators have pointed out how group learning improves non-cognitive dimensions such as self-esteem, attitudes towards education, and tolerance and support for other students. Although the general education research contains a lot of study results documenting improved student performance, similar results have mostly eluded researchers in accounting. (Gul & Hutchinson 1997; Lancaster & Strand 2001.)

It is also possible that effects of personality traits may be confounded by other characteristics. Personality interacts with cultural [21] beliefs. For some students, the purpose of group work is to attend to the task itself, to get the task done and to get it done efficiently. Other students may see the purpose of the group as being about advancing individual and collective knowledge. Thus, it is likely that students will adopt either a deep approach or a surface approach to group task by focusing either on the task itself and its requirements, or focusing on learning through the group. Collectivism versus individualism may be perceived as a dimension of culture at both the societal and organisational levels. An individualist is motivated by self-interest and achieving personal goals and is unlikely to contribute to collective action. A collectivist emphasises sharing, cooperation and the prevalence of group goals over personal ones. This means that there is no one way of teaching accounting, but instead instructors should use learning approaches consistent with the students' personality traits and cultural beliefs and identify the personality and cultural characteristics of the students and design teaching approaches that are appropriate in terms of their learning predispositions. (Gul & Hutchinson 1997; Tempone & Martin 1999.)

Breton (1999) states that historically, accounting has been taught as a series of topics, mostly unrelated, and with every detail treated as being important. Acknowledging the impossibility of covering every topic, providing it had ever been desirable to do so; one possible solution is for the student to learn about the existence of different sources of information and how to use them. Then it becomes possible to teach the general structure of the subject and to leave the details to the students to study following their specific needs. The problem-based method gives students the necessary tools to continue their learning process rather than offering them a limited and specific series of information or focusing on the accumulation of knowledge. The method aims to help students to acquire habits that are essential in practice and to develop their autonomy in knowledge acquisition and to determine specific learning objectives.

Problem-based learning is a teaching method that involves students as active, independent learners and problem solvers in team-based collaborative learning. A problem-based learning format makes use of problems [22] to focus

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21 Culture refers to a learned socially transmitted set of behavioural standards and ranges from broad social cultures to individualised organisational cultures. (Gul & Hutchinson 1997.)

22 The problem itself acts as a catalyst to promote the acquisition of new knowledge. Students should not have sufficient prior knowledge to be able to solve the problem

learning. From this, students develop their problem-solving skills whilst searching for and gaining the appropriate knowledge. With problem-based learning, learning is initiated with a complex problem that often requires students to use thinking skills of a higher order. One of the stronger arguments in support of problem-based learning, however, is not the skills it develops in students but rather that it provides a learning experience that is much akin to the way cognitive psychologists suggest people successfully acquire, retain and recall knowledge. The goals of problem-based learning are to help students think critically; analyse, and solve complex real world problems; find, evaluate, and use learning resources; work co-operatively in teams; demonstrate effective communication skills; and use content knowledge and intellectual skills to become continual learners. (Hansen 2006; Milne & McConnell 2001.)

As Milne and McConnell (2002) state, effective teaching focuses on the learner rather than the teacher, and it results in classes that are quite different from what students often experience. While traditional approaches typically use class time to present the subject matter, problem-based classes are structured so that students acquire the subject matter in their own time, while class time is used to work on that material. For effective learning to take place in terms of memory, recall and further application, the learning context needs to provide for: the activation of prior knowledge, the elaboration of knowledge, and the matching of the learning context at the time of learning to that at the time of retrieval. Deeper approaches to learning will be encouraged if the learning context is intrinsically motivating, involves activity on the part of the learner, requires interaction with others, and provides for a well-structured knowledge base. The findings suggest that problem-based learning approaches generate many valuable and positive outcomes in terms of practical reasoning and understandings, student and faculty satisfaction with the teaching approach, the promotion of self-directed and independent learning skills, as well as improved communication skills.

The quest for self-study methods is evident from the institutional point of view. Educators are expected to deliver a quality learning experience to growing numbers of students in an environment of reducing resources, in increased competition and with an increasing number of non-traditional students. This is why higher education providers have sought cost-effective high quality solutions that are not as time and place dependent comparing to traditional teaching models. One solution is the incorporation of flexible delivery and alternative learning models that make economic sense. The hybrid flexible delivery models are teaching models that aim at flexibility and accessibility. Empirical results indicate that when the learning materials are holistic, the student's attainment of knowledge and skills is satisfying. The content and pace of learning is under student control, but subject to deadlines imposed by the instructor,

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right away. The problem precedes the acquisition of knowledge, but it may also follow it as a means to get students to apply their new-found knowledge. (Milne & McConnell 2001.)

who serves as a guide in the learning process. Although students with all learning styles can usually achieve the course objectives, some students may learn the material more efficiently with one type of course material than another. Providing course content in a variety of ways may help students with differing learning styles. (Dowling et al. 2003; Dunbar 2004; Evans 1998; Vamosi et al. 2004.)

Studies (Kovar & Zekany 2001; Marriott et al. 2004; Vamosi et al. 2004) have reported the lack of a relationship between learning style and satisfaction and performance. This indicates that instructors can use a variety of teaching methods to enhance student learning without fear of alienating certain students at least based on their learning style. It also indicates that students are able to adapt their learning practices to compensate for teaching methods that do not agree with their favoured learning style, with little effect on satisfaction or performance. However, socio-emotional aspects of education are important and the prospect of being taught only virtually and the resultant loss of the traditional learning environment are unwanted. Students value classroom, social interaction and the skills they develop in such an educational context. Use of virtual methods to merely making established methods easier would be accepted by the students.

The importance of writing has been evidenced in many studies. Functional linguistics is concerned with the role of language in representing a discipline since the learner accesses subject matter through language. In using language to know, understand and explain a subject, the learner develops the skills of reflecting on learning the subject. Using language to know and understand a subject includes processes of reading, summarising, drafting, and self-testing. When a student explains a subject to others, orally or in writing, the level of understanding is demonstrated. The linguistic framework also explains how the socio-cultural purpose of a piece of writing is embodied in its language and structure. Each discipline, each subject, and each academic has specific ways of ordering and presenting written knowledge. (English et al. 2004.)

A number of studies (Ashbaugh et. al, 2002; Davidson et al. 2000; English et al. 2004; Feldman & Usoff 2001) have linked linguistic performance with intellectual ability and functioning. The quality of a written work is the result of not only the writer's approach to the task, but also the nature of the task itself, as well as the writer's perception of the standard expected. Students who perceive writing task as an ordered arrangement of facts and ideas adopt a surface approach to writing and produce a fragmented writing. Students who perceive writing as a deep search for meaning tend to produce essays that are well argued and supported by evidence. A close match between educational writing experiences and professional writing demands facilitates subsequent recall and application of writing skills and also increases motivation, which is essential for successful learning.

Though most of the studies have addressed the issue of writing from the viewpoint of helping students learn how to write, there is also evidence that writing assignments help in learning accounting. This is called the writing to

learn approach. It is based on the premise that the act of writing engages the student in the learning process. While improved writing skills can be a side benefit, learning accounting is the primary goal. Writing to learn emphasises informal writing geared toward the learning of concepts, critical thinking, synthesis, reformulation of ideas and problem solving. Informal writing has been associated with higher information recall, increased retention of information, more complex thought development and better integrations of ideas. Written assignments lead to higher order analytical thinking and deeper knowledge of underlying concepts because concepts are understood at a deeper cognitive level. (Arquero Montaño et al. 2004; Baird et al. 1998.)

Exercises could be classified under experiental learning. There is a connection between experiental learning and the development of expertise. A well-known learning theory that has been often used to describe expertise development is the experiential learning model by Kolb [23]. Experiental learning, [24] which is defined as a sequence of events that require active involvement by the student at various points with multiple learning objectives, involves different stages that can be described as follows: carrying out an action in a particular instance and seeing the effects of the action; understanding the effects in a particular instance; understanding the general principle under which the particular instance falls; and applying the concept through action in a new circumstance within the range of generalization. Experiential learning involves a continuous learning process grounded in an individual's experiences and transactions with the environment. The model emphasises the role of concrete experiences versus abstract conceptualization, on the one hand, and active experimentation versus reflective observation, on the other. There is a strong emphasis given to meta cognitive and reflective activities. Also, the significance of problem-solving has been emphasized as a tool for pursuing the integration of expert knowledge. Formal knowledge acquired from textbooks and lectures is converted into an expert's informal knowledge by being used to solve problems of understand-

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23 David Kolb is an American educational theorist whose research work focuses on experiental learning, individual and social change, career development, and executive and professional education.

24 Kolb sees learning as a process where knowledge is created through the transformation of experience. This means that students link concrete experience to theoretical understanding through reflection. The process serves as a framework to guide future action and helps students advance from being passive learners to becoming active doers. Kolb's experiential learning theory represents learning as having four modes, or stages: concrete experience (memory); reflective observation (principles); abstract conceptualization (questioning) and active experimentation and testing of ideas (application). Kolb's learning style theory consists of three cognitive elements – style, level (abilities and capacity) and process. The theory states that learning is a continuous, iterative process. Individuals have different methods of transforming experience into learning and they tend to prefer some stages more than others. Learning styles are learned as an individual repeats strategies and tactics found to be successful, with unsuccessful strategies discontinued. The most effective learners are those individuals who can feel comfortable undertaking any stage of the learning cycle. Balance between the different styles allows learners to adopt the learning style most appropriate to a given situation's demands and should lead to more effective learning. (Adler et al. 2000; Duff 1998; Fox & Stevenson 2006; Kovar & Zekany 2001.)

ing. Similarly, formal knowledge is converted into skill by being used to solve problems of procedure. (Marriott 2004; Tynjälä 1999.)

Retention is a function of meaningfulness and relevance. Direct experiential learning provides individuals with a framework or perspective that enhance the retention by making the whole learning process relevant and meaningful. In the opposite situation, if the individual does not have any direct experience and thus does not have a framework, the relevance and meaningfulness are difficult to find in the learning situation. Individuals with direct experience have categorical knowledge structures that assist in subsequent knowledge acquisition and individuals without direct experience lack beneficial structures. The greater the structure and organization of the learning task, the greater the level of initial learning and retention because organizational or categorical information enhances memory and retention. (Maletta et al. 1999.)

Tempone and Martin (2003) state that students move between theory and practice when working on a practical accounting assignment. This also helps them to develop generic skills and develop as life-long learners. Generic skills cannot develop except through the practice of knowledge and skills. Generic skill development can be seen in a hierarchical manner, with lower order skill development being at the simple problem-solving level, and with higher order development encompassing analysis, communication of findings and recommendations to management representing a complexity of outcomes. Students responding at the lower levels address the demands of the assignment. Students at the higher levels address the multiple demands of perceived professional practice while developing and using more generic skills as well as using them at a more complex level. Development of generic skills such as problem-solving, analysis and communication through iteration between theory and practice both during and beyond the assignment gives students some necessary tools with which to continue learning.

Effects of direct work experience have influence on subsequent knowledge acquisition of the student. Theoretical and empirical research in education, cognitive psychology and accounting shows that those students who have direct experience develop knowledge structures that help them assimilate new information into memory in a more efficient way comparing to inexperienced individuals. One reason for this is probably that direct experimental learning facilitates the future processing of related information by giving valuable perspective. Educational psychology research has also evidenced that individuals who have strong learning aptitudes can organize and structure large amounts of information more quickly and efficiently compared to individuals whose learning skills are on a lower level. Individuals with lower learning aptitudes benefit more from direct experiences, because they can utilize the experience better in improving their learning process. Those with high learning aptitudes are already efficient in developing their own structures. (Maletta et al. 1999.)

Tempone and Martin (2003) state that knowledge and skills themselves are developed through their continued practice in real-world situations. So, practice is enhanced through practice and learning in the academy and vice

versa, but both require reflection and reiteration and continued adaptation. Students develop mechanisms or templates to bridge classroom theory and workplace practice. They considered new theories either as a template that could be used in a similar workplace situation or the basis for developing their own, flexible model that could be used in a range of different workplace situations. One way thus reflects a surface approach with a narrow level of awareness that does not go beyond using the information provided in the assignment to address the problem at hand. The other reflects a deep approach with a wider awareness that goes beyond the parameters of the assignment to find meaning by testing theories developed in the classroom in a range of contexts. Students who can directly relate the exercise to a current business experience can envisage the applicability of the exercise to other contexts.

Ballantine and Larres (2004) suggest that work experience also assists the student in making better-informed career choices. Directly relevant practical experience provides the student with a better perspective of the course and with the opportunity to view business issues from an interdisciplinary perspective and thereby develop a more holistic approach to problems and solutions. The literature confirms that students who study a business-related subject are particularly well-placed to benefit from the transfer of knowledge from work to classroom and vice versa.

There are numerous studies on different kinds of teaching methods and the ones introduced in the scope of the present study concentrate on certain of them. The choice was made on the basis of what seemed relevant when investigating the findings of the data in this study. The results of the extant studies on different teaching methods give relatively mixed results and, indeed, it indicates that no teaching method can be judged good or bad in the absolute sense but the choice of the optimal teaching method depends on the context in question and on the student's personal preferences. Also, the general aims of education combined with preferred learning outcomes may define the choice of methods.

4.3 Assessment methods

Behaviourist and constructivist student testing methods differ. Under behaviourist methods, instructor assessment tends to be mainly performed at the end of a learning exercise and focus on documenting the degree to which the correct external reality can be retained from the student memory. The instructor's role is to provide structured learner activities with step-by-step guidelines to achieve instructor-determined learning goals. However, higher-order learning skills are difficult to assess with objective testing methods and, consequently, objective tests are not likely to stimulate higher-order learning, regardless of course objectives. (Ingram & Howard 1998; Smith 2004.)

Moving from the knowledge-transmitting paradigm of learning towards constructivist learning and instruction requires changes in assessment proce-

dures. With constructivist assessment, the emphasis is to evaluate students throughout learning experience, as the steps to the solution are considered to be as important as the final answer itself. Thus, in constructivist learning environments assessment (figure 14) is not a separate examination at the end of the course, but assessment methods are integrated into the learning process. Constructivism includes activities such as students actively accessing each other's work, which means that learning activities need to encourage information reconstruction and integration with previously held concepts. The instructor's role is to function as a facilitator or coach who assists learners to achieve their personally-generated learning goals. The purpose of assessment is not to find out how much information can be remembered but to promote the learning process and qualitative changes in students' knowledge. Assessment methods that emphasize the learning process itself and encourage students to engage in meta cognitive and reflective activities are in harmony with the constructivist view of learning. (Smith 2004; Tynjälä 1999.)

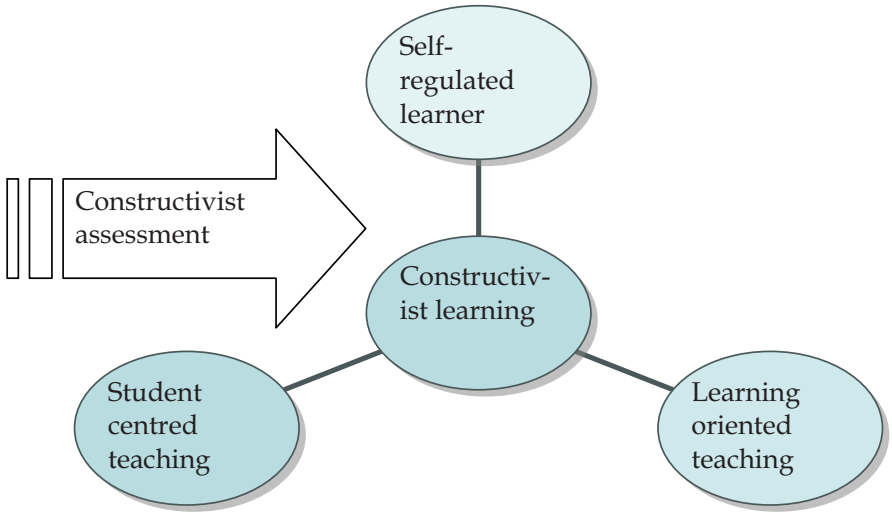

FIGURE 14 Assessment in line with learning and teaching conceptions

Though this study is not focusing on assessment practises as such, acknowledging the importance of assessment in the learning process seems to be essential because assessment is important in the choice of a learning approach, and it is necessary to see the assessment as part of teacher influence though the direct influence of assessment is not so highlighted in learning descriptions. Assessment being in line with other notions concerning learning and teaching creates a streamlined learning process where the elements are not contradictory. Assessment focuses students' effort measures and gives important information on the success of using different learning approaches.

Ammons and Mills (2005) suggest that assessing a particular competency sends a signal to the student that the skill or ability is important. The value of assessing learning is that it challenges educators to articulate the significant outcomes; prompts to design and implement effective strategies to help students develop those competencies or outcomes; and prompts to reflect on the evidence gathered and use those results to improve learning outcomes. Explicitness in defining the desired learning outcomes provides focus for the teaching and learning strategies and for the measurement of their success. The choice of assessment methods will be influenced by the characteristics that matter most to the faculty involved, e.g. cost, convenience, technical quality of the assessment technique and the value the assessment method offers to the learner. By communicating assessment results in the form of feedback to students throughout the studies, students can take more control over their performance on future assignments. By identifying weaknesses and redesigning assignments, instructions, and course content, it is possible to improve the teaching-learning process so that students can better demonstrate skills at the appropriate level.

Koh and Koh (1999) found out that gender, prior accounting knowledge, academic aptitude, mathematics background, previous working experience and age affect the examination results, and that academic aptitude is the most important determinant of performance. The same result is highlighted in a study carried out by Wooten (1998); aptitude is a predictor of performance and what can possibly compensate for lower aptitude are effort and motivation. This finding focuses on the importance of attracting top students to the accounting programme and of using measures of academic aptitude as a primary criterion for admission. The study also showed that those with a stronger mathematics background produced better results. Prior accounting knowledge gave an early advantage, but it was not enough without consistent hard work. Previous working experience is also a determinant of performance. Age has been found to be a determinant of performance but explanations of the age effect tend to be speculative. A study by Elias (2005) reveals that the deep approach to studying is positively correlated with expected course grades, and that demographic factors can also be important determinants of study approach.

A study by Kalbers and Weinstein (1999) states that a student's grade point average and academic achievement score are the most powerful and significant predictors of performance, and student attitudes toward accounting and need for achievement have only moderate explanatory power for course performance. However, the results suggest that there is more to go on for predicting students' success than their prior success. The dominance of grade point average, and to a lesser extent, academic aptitude tests, suggests that it may be difficult to build a predictive model for performance.

The findings of the study by Lane and Porch (2002) suggest that earlier performance and pre-university background explain some of the later performance but the explanatory power is quite week. Gracia and Jenkins (2003) claim that both prior year results and application to studies are positively associated with performance as measured by grade points. Another study by Gracia and

Jenkins (2002) explored undergraduate academic performance through student experience. By adopting a qualitative approach, it attempted to address the deeper understanding of student experience on academic performance. Findings highlight the negative focus of reasoning underlying the choice of study, the impact of affect, the importance of the role of the tutor, the tutor expectations gap, levels of control and personal responsibility for learning, and patterns of participation as possible significant and important factors in understanding academic performance. On the other hand, there is also research (Boyce et al. 2001.) that claims that learning strategies are more important to the determination of learning outcome than the pre-existing level of ability. Ability and level of intelligence are only indirectly related to learning insofar as they limit the learning strategies that people are able to employ.

Hartnett's, Römcke's and Yap's research (2003) reports the outcomes of a study establishing further evidence of the role instruction style in students' performance. It suggests that a more approachable instruction style can improve students' performance. This improved performance is achieved through the instructor's ability to raise students' motivation levels and persistence with learning, despite possible underlying barriers such as lower ability and higher anxiety. In the study, instruction style includes immediacy behaviour, (interaction and the degree of instructor enthusiasm), and structuring behaviour (direction, communication of objectives and the delivery of material in a fashion consistent with achieving goals). The results show that the mere presence of an instructor benefits students' performance, that instruction style can be manipulated and that students' performance is contingent upon the instruction mechanism, a student's anxiety and cognitive ability.

The results concerning the effect of class size on performance when other factors influencing have been eliminated show usually quite mixed results. Hill (1998) reports that the size of the class does not have any significant effect on student performance. Also, it appears to have no effect on the student's interest in accounting, or overall perception of the teacher effectiveness. In spite of the results indicating that students performed equally and perceived the instruction to be of equal quality, the large section of students reported that the class size was too large, which implicates that large class sizes may be more of an expectations issue, both for students and instructors, than a performance issue.

Jackling and Anderson (1998) report that part-time students perform significantly better than full-time students. The importance of motivational factors and employment experience in affecting performance is highlighted. The study by Paisey and Paisey (2004) shows a positive relationship between attendance at classes and subsequent module performance. The more classes a student attends, the better the examination performance is. Attendance at the higher education level has not been widely researched. However, some prior studies evidence that students with high surface approach spend more time on study than those with deeper approaches. This can be because surface learners need the lecturers to define the content of the course. Without intrinsic interest, the only guidance comes from the lecturer.

Christensen, Fogarty and Wallace (2002) state that the concept of self-efficacy is important because successful functioning in any human endeavours requires reasonably accurate efficacy appraisals. Both the accuracy and direction of inaccuracy of self-efficacy are related to academic performance. It is common for individuals to over- or under-estimate their abilities and to suffer consequences from errors of judgment.

A number of studies (Hamilton et al. 2002; Read & et al. 2001; Smith 2004) state that student evaluations are a standard procedure for measuring the effectiveness of the teaching and learning process. Underlying the use of student evaluations is the belief that students have the ability to evaluate their teaching environment even though it is not considered necessary for students to understand various learning theories to be able to assess the teaching activities. Students may have had a higher level of satisfaction in the course as a result of open discussion between the students and their instructor, information shared by the instructor, trust regarding the importance of their opinions about the course and the rapid implementation of suggested changes to the course. Student evaluations are also a tool most used by administrators for evaluating teaching.

Chen and Hoshower (1998) suggest that basically students have strong preferences for the uses of teaching evaluations. Since quality student participation is an essential antecedent of the success of student evaluations, this knowledge of student motivation is important. If students are kept ignorant of the use of teaching evaluations or if teaching evaluations are used for purposes which students do not value or if they see no visible results from their participatory efforts, their input is not meaningful.

Smith's survey (2004) reveals that students' course evaluations are largely used as measures of students' satisfaction. Many of the evaluative categories and statements are actually standard measures of customer satisfaction surveys, not the measurement of student skill development. Course evaluations do not provide the necessary feedback needed for developing a critical thinking based teaching environment. One of the most difficult aspects of evaluating is to reach a consensus about the learning methodology that is considered acceptable – regardless of its behaviourist or constructivist orientation. The teaching practices of constructivism are highly recommended in the accounting literature as a method to develop critical thinking skills in accounting students. Yet, accounting programmes do not necessarily have a feedback system to assess whether such methods are even being used in the classroom.

The issues of reliability, validity and utility of student evaluations of teaching are highly interrelated in practice. Reliability refers to the degree to which student evaluations are stable over time. Validity refers to the degree to which student evaluations are related to objective measures of student achievement. Utility refers to the degree to which student evaluations are useful in performance evaluation. A large quantity of empirical research addresses the validity of student evaluations. Even though there are study results evidencing that student evaluations possess a substantial degree of validity and thereby

utility in faculty performance evaluation, there is also plenty of scepticism remaining, because an observed positive correlation between student evaluations and achievement may be associational in nature rather than causative and that student evaluations include items that require students to make inferences that are beyond their knowledge and experience. (Green et al. 1998; Yunker & Yunker 2000.)

To sum up, assessment and evaluation studies are numerous and characterized by different aims. The meaning of assessment and evaluation cannot be put aside in scrutinizing education because the outcomes, at least partly, depend on the assessment and evaluation method. However, since the present study takes the students' experiences as a starting point, it should be noted that it may decrease the importance of these by highlighting the personal judgements instead.

In all, this chapter has revised three key areas in learning that form the frame of reference for the present study. The first area focuses on student personality and motivational aspects linking to career choice. The second area covers issues concerning mental functions like meta cognition, self-regulation, knowledge structuring and memorization. The third of the key areas is about learning approaches and the context of learning. The studies presented here will serve as basis when the findings of the present study will be discussed in next chapter.

5 EMPIRICAL ANALYSIS

The following chapters describe the parts in the data that map the variation in ways of experiencing and conceptualising good learning in accounting. Exploring these different ways of experiencing aims at reaching a fuller understanding of what the elements of good learning in accounting are. These different ways of experiencing form categories of description which reflect different capabilities for understanding the phenomenon.

The analysis has started with a search for meaning or with a search for variation in meaning then supplemented by a search for structural relationships between these meanings the whole process being highly iterative. A more complex of system of categories of descriptions, i.e. the outcome space, comes at the end of analysis and represents the main results of this study. Indeed, results of any phenomenographic research are the key aspects of the meaning of the phenomenon including both the referential dimension and structural dimension: some people see a phenomenon in less complex ways than others and the responses present a hierarchy of understanding of the phenomenon.

Following the division based on extant studies and on the findings of the data of this study, the grouping of topics has been done as follows. The analysis starts with the conception of learning since it serves as a starting point for interpretations concerning especially the position of student and teacher in the learning process as well as the preferred teaching or learning methods. The analysis concentrating on the traits of students has been divided in personality and career choice, higher order thinking skills (this title was chosen to include all possible higher order thinking skills meta cognition and knowledge structuring included as well as any functions concerning memory and retention), learning styles and approaches and in the end the teacher and the teaching methods. The structure reflects the most highlighted areas in results and the contents of the analysis aim at giving deeper meaning to all above mentioned themes and also to compare the findings with the findings of extant studies.

5.1 Conception of learning in accounting

The task given in the diaries and in the interviews was primarily that students were asked to describe their good learning experiences in accounting context. The purpose was to give space to any kind of answers by keeping the task as open as possible in the beginning. In the learning diaries and interviews students often spontaneously, at this point, also defined what learning in general means to them. In cases the interviewees did not bring the definition of learning about in the course of the interview, they were asked it at some point of time. The variation in descriptions ranged from a mere accumulation of knowledge to more complex and abstract conceptions of learning.

As it is possible to see from the descriptions, the way students experience learning are characterisations focusing on a certain aspect they consider important. For some students, regardless of what kind of wording they choose to express their definition of learning, it can be said that learning represents knowledge and information that accumulates in function of time being spent in the education.

> *Learning is accumulation of new information. (Niina)*
>
> *Learning is about increasing awareness of things. (Sanna)*

In other descriptions there is the element of understanding added in learning definitions, which can be interpreted so that the student is not concentrating on the amount of facts and knowledge only, but also adding some personal processing or input. These descriptions very often introduce the concept of understanding, which in turn easily becomes opposed to the concept of rote learning.

> *Good learning is about understanding, not just rote learning. You understand why you calculate it in a certain way and where everything comes from, not just by heart. (Tuuli)*
>
> *Learning is more about understanding; it is not that you get the calculations correctly. Rather, you understand why there has been a mistake. (Marjut)*
>
> *Learning means that you know things deeply. If you have read and know by heart and you can repeat the whole book but you don't understand – it's not learning. It's memorizing. (Paula)*

The higher levels of learning can be described as constructivist levels because they contain features that are in line with the constructivist learning theory like the elements of applying information, understanding the relationships between practice and theory and relating information to what the person already knows in advance. It seems plausible that any other key conceptions present in a learning process will be influenced by the fact how students understand learning. The learning conception thus has influence on how the roles of the learner and the teacher are seen.

Learning means that you learn new things deeply and can apply in practise if necessary. (Anni)

Learning means that you are able to apply… and use the knowledge in different ways. (Satu)

Learning is acquiring new knowledge and skills and being able to use them. (Pasi)

In a good learning situation theory and practice are combined and you understand why something is calculated a certain way. (Joona)

Learning is about understanding new things. And that you can connect them with what you know already. (Kaisa)

When defining learning in accounting on a general level, the learning definitions as such did not always necessarily reach the higher definition levels, but when describing the outcome of learning accounting at least at some point of time in the future or finally at the end of studies, it was easier for the informants to reach higher and more abstract definition levels. This can be interpreted so that even if the students' present conception of learning lacked sophistication, they were aware of more complex levels of learning and could see them developing in themselves in the course of time spent in higher education – or that they kept that as their ambition while recognizing that they had not yet attained that level.

Learning is realization and getting an experience of understanding. And a feeling that... like that you all suddenly use terms that once were double Dutch to you... I remember when I started here I understood nothing of anything but soon I realized I used the same terms and understood them all. (Paula)

Completing this grade I have learned plenty of new things. It's more about integrity, different standpoints and levels of observation. (Kirsi)

When I had completed accounting courses I finally dared to participate in the board of our housing co-op. Without these studies I wouldn't have had the courage. (Jenni)

As the previous excerpts show, learning can be described on many levels and any individual's conception of learning is likely to have an influence on their perception of the key elements in learning. Basically, learning could be defined as changes in capabilities for experiencing and being aware of the object of learning. In this case the object of learning is accounting.

The data also shows that, for students, learning something new about themselves or recognizing changes happen in the course of the studies was a key aspect of good learning. Also, students, when describing positive and good learning experiences, emphasised their willingness to learn for reasons that had something to do with their own personal development. This can be interpreted so that the upper the students had climbed the learning conceptions pyramid (presented in chapter 1.5), the bigger their level of satisfaction was. Also, as students climbed up the pyramid, their ability to analyse themselves as learners and their ability to recognize the changes had increased.

I learned that I can learn new things. (Jaana)

Earlier I was a performer. Of course I was younger then. But I just wanted good grades. Now I want to understand. (Vilja)

When I have courses I have chosen on my own… it has been very different, I have really learned because I learned for myself and not for the exam. When I know what I want to do, it gives me motivation to learn the things here. And I try to choose as many courses as possible to learn many interesting things, which is not typical for me thinking of my earlier history at school… I haven't been that interested in school. (Satu)

Defining the conception of learning as such was not the only important issue in learning. Also, in good learning experiences it was important for the students to monitor the learning on the relational level; to define the acceptable level of learning as comparing to the level which students felt they should have acquired at that specific point of their studies. The definitions varied as well as the attitude towards the possible deficiency experienced. If the acceptable level of learning was experienced inadequate, it could be a constant source of worries or it could be a fact that just had to be accepted being part of the learning process.

I have heard those people who are already in working life to say how important it would have been to study this and that. Now that I'm here I'm like… nay, I'm not interested in that. Then I will be in exactly the same situation in five years. Young and stupid… (Niina)

My practical training tutor promised and swore that I would be able to do everything needed in an accounting job and I just nodded though I felt I had no clue of anything. (Heidi)

I think this is the point of the studies where we study this much and get a trace of it in the memory. 'Cause we can't really remember it all! That I know I have studied it and one day when I need it I will find it somewhere. But I don't know if it is a purpose... and if I know it all. (Kaisa)

At school we practice and then at work we really learn it. (Pasi)

In the definitions of good learning there were two elements present at the same time: good learning in the absolute sense, i.e., the experience of learning well, and good learning in the relative sense, i.e., the level of learning as comparing to what the learners believed they should have attained at some specific point in their studies or relative to outside expectations. This could be called the professional or expertise level.

The former one can be seen linking to students' conceptions of what learning actually means to them. The latter one is more related to their conceptions of what they suppose learning means on the professional level and to external expectations concerning accounting expertise. This result can also be connected with motivational aspects. Learning in the absolute sense can be seen as having connections with intrinsic motivational aspects whereas learning in the relative sense can be interpreted as having connections with extrinsic motivational aspects.

The data shows that despite good experiences in explicit content learning, there may be huge deficiencies experienced in practical skills learning. Since

there is knowledge that represents different levels of complexity and there are learning conceptions that also represent different levels of complexity, it can be assumed that these two depend on each other. In order to be able to master more complex knowledge students must at the same time develop more complex conceptions of learning.

If the definition of learning is not in line with constructivist conceptions of learning, it may have effect in how students experience learning of accounting and what their learning behaviours are like. If the students had proceeded to upper levels of learning conceptualizing, it seemed to increase their ability to analyse themselves as learners and to see the changes happening in themselves as learners. It can be assumed that this awareness increases the ability of self-regulation in the learning process.

It seems evident that at the point when students are studying accounting, it is easier to master explicit knowledge, but practical knowledge is still on its way to develop. However, the answers show that students had formed a conception of practical knowledge they should attain, but since it represents a higher form of knowledge, probably requiring a more complex level of learning as well, it had not yet developed to its maturity. Self-regulative knowledge seems to be an important mediator in helping students to move from declarative knowledge levels towards practical knowledge levels.

This result can be compared with Sharma's (1997) study results that suggest that accounting students' learning conceptions may offer a reason for them lacking skills needed in accounting profession – and the other way round. Also Lucas (2001) states that the learning approaches are related to the conceptions of learning and perceptions of teaching. Thus, on the basis of these different notions of learning it can be stated that the ultimate aim in learning should be towards the top of the learning pyramid developed by Säljö and refined by Entwistle (presented in chapter 1.5), taking into account that it might be necessary to go through the other steps or some of the other steps as well before this becomes possible. The first three levels describe learning as accumulation of factual information whereas the three upper levels describe learning as a process where students acquire knowledge they can use and apply in the future. The upper levels represent the meta learning level where students are aware of their learning and able to bring appropriate cognitive strategies in the learning situation and monitor their progress towards the established goals. Only the three upper layers of the pyramid represent learning as it is described by the constructivist learning theory.

The discrepancy between absolute and relative learning can be explained by the fact that knowledge manifests itself in many ways in learning situations, and some forms of knowledge are more easily attainable than others. Tynjälä (1999) says that expert knowledge includes formal or declarative knowledge, practical knowledge, and self-regulative knowledge. Such explicit and factual knowledge has traditionally played a major role in education, and as such it constitutes the core of professional competence. Practical knowledge, often called procedural knowledge, manifests itself as skills or knowing-how. While

formal knowledge may be described as universal and explicit, practical knowledge is personal, intuition-like and difficult to be expressed explicitly. Self-regulative knowledge consists of meta-cognitive and reflective skills that individuals use to monitor and evaluate their actions.

5.2 Personality and career choice

Personality was reflected in student descriptions so that some aspects of personality were considered as either improving the learning of accounting or putting obstacles to it. Students described their personality having some connections on their learning but at the same time it can be stated that they did not consider any personality traits as a prerequisite for good learning but rather showed to understand that despite differences in personality, good learning outcomes were possible to reach.

> *I'm a perfectionist. I set the targets and I want to learn. (Vilja)*

> *- I'm a theoretical person and I like facts and I like to calculate. I'm not good in applying. She's different, she applies and explains. I just try to do it in a short way and rely on facts. We are different.*
> *- I… what's the word; I prattle and do things the long way. For me it's not enough to know that things are that way. I want to know why. And why I can't do it the other way. When I get the answer for that, I'm happy. (Timo and Tuuli)*

> *As a person I become very easily enthusiastic and I like new things. But I'm not necessarily that persistent… This is why I need to be able to apply the new knowledge immediately. If I have to wait and wait… I will lose my interest. And the same happens if new things are introduced so slowly or in a complicated way that I won't be able to grasp it immediately. (Paula)*

The same is reflected in the lower level performance descriptions concerning personality. They clearly show that students can be aware of the weaknesses they have in relation to learning in their personality, but at the same time be able to overcome them or at least realize that the trait of personality in question is not a necessary prerequisite for learning. It also means that in good learning even weak aspects of personality can be overcome.

> *I just go to the course and I hope I learn everything I need. (Anni)*

> *I concentrate weakly. My thoughts run away. I need to pull myself together. Sometimes my fingers are snapping and my feet get restless. (Sanna)*

> *I lack concentration and this is the reason I don't go to classes. Or I do go but after the class I feel the class was useless. That I have been dreaming. I need to study for the exam and this way I learn more. (Niina)*

My notion of lawyers has strengthened during my studies. They never end up with clear answers but vague statements. As an accounting student I'm used to exact answers and facts that are basing on the truth. We don't understand things that don't have a clear final. (Katriina)

In student descriptions, the personality is relatively easily manifested in learning situation observations. In learning situations, some students took more active roles than others, while at the same time some students needed their peer students for support in learning. However, both kinds of students showed that they understood their tendency to take certain roles in a group and that they were self-monitoring their own behaviour as well as their tendency to consciously seek matching personality types from other students. Both of these can be interpreted as improving the learning experience.

I have been here two years in the middle of these young people. I have learned, through trial and error, to choose the group I participate. I know already that certain people study here scraping through without any need to study more than that. Then I know those people who really want to learn and I just seek their company. And I'm not saying I'm some kind of swot. (Silja)

- Then, on Sunday, you think whether the week is full. All days Monday, Tuesday, Wednesday and Thursday are full eight hours but there is one half an hours missing on Friday. Then you have all 40 hours collected for the week. After that… If I have understood correctly. Gee, I'm just lecturing here.
- Keep it going.
- After that, I would calculate weekly overtime rates.
- Two and half hours.
- And extras for Sunday.
- So we take it into account.
- Three hours.
- If only I remembered this.
- And did not forget before leaving the classroom. (Piia and Anu)

According to students' experiences in the data, personality had most significance in group work situations with their peer students when they had not been able to choose who they work with. In group situations, the most important aspect the personality defined was the ability to stand other people's different personalities and to adapt oneself in a group situation. However, it is worth of noticing here that student personality was not seen influential in teacher-student relationships. The latter were described as a relatively one-way phenomenon in that it was the teacher's personality that had some impact to a student in a learning situation, but not the other way round. Neither the students showed any need to even try to influence the teacher. With fellow students, the need to seek for personality matching was evident.

I can't go to those kinds of situations (where students argue in group work) because I lose my temper immediately. I become totally incompetent. I can't think reasonably… I just need to stand it and go away and let him think he's right. I don't care. I keep my own opinion. If I could talk others over, I would do it but I can't because I'm so furious. (Satu)

I learned to cope with difficult people when I was working. There was a person like that in my workplace and I learned to get along with him. What you learn at work is to read different kind of people and you learn different ways of doing things with different people. And you learn to challenge other people if they are such that their opinion is the only one. (Vilja)

Ways of doing things are so different. There was a person and we were writing a report for group work. Everyone had written his own share but then the introduction and conclusion had to be written together. I usually write what comes into mind and then I read it through and make corrections if the wordings seem stupid or something. But when that person started the introduction he was like 'no, no, would there be another word for that one… a synonym'. I don't think this word is good. And we had written the first sentence for about ten minutes. I just can't work that way and I said that now I understand how come you spend so much time writing. Because he always said how many hours in how many days he had been doing something. A report that I had written in a quite short time! (Niina)

If there is somebody in the group… Of course we are always told that we must say if there is somebody who is not taking care of his tasks and then we should discuss it and such… But it has such an impact on the group work. I am really irritated 'cause we have got grades on the basis of group work in so many classes. I haven't been able to show my own skills. If I like something and I'd like to put a heavier input in that topic, it feels useless because you feel you end up doing the group work on your own. But as a learning method group work is good, basically, if the group works well. (Sanna)

However, despite the personality driven difficulties in group situations, the aspect of social relations competence brought about the group situations was highlighted in students' descriptions on good learning experiences. The support of peer students, if they were friends, was considered especially important in situations where students faced difficulties in their accounting studies or when solving difficult accounting problems. Support from others was described in terms of increased community spirit and motivation. Peer students were of help because they were in the same situation in life and understood what the student was going through in different phases of learning. Peer students were also described being able of giving help and mental support. In sum, the support of social reference group was quite concrete relating to support needed in mental processes when solving accounting problems, or it was on a more general or abstract level relating to the whole life situation the students were experiencing as accounting students.

We use messenger to do homework together. (Meri)

I like to come to school because I see my friends there. (Niina)

I ask a lot form friends - how they did it - especially in accounting. (Heli)

Solving problems in a group works best for me. If I don't understand something, then somebody else can explain it. Other students are important though you might easily think that accounting is such that you just calculate on your own and you are let being alone. But I don't know. For me it works best if we can think in a group. If there is a problem, we can solve it through group work. (Satu)

I find other students encouraging. I get encouragement for my own work when I see that others learn and I don't want to be the weakest in the group. Not to talk about how great it some-

times feels to realize that I understand something better than others. It also increases my learning. (Paula)

Maybe the most important support in good learning is the support from other students. When I feel depressed and anxious they are the best people to listen to my worries. They are in the same situation as I am. They understand what I'm talking about and what's bothering me. I can't say the same about my family or boyfriend – 'cause they are not in the same situation. If an outsider looks at one assignment, it can look like a very small thing to do, but they don't know what it really takes. (Niina)

As to the present study, it is of importance to notice that in good learning experiences it was not the personality type as such that seemed to be crucial, rather it was the fact whether the student had a notion of his personality and thus an understanding of the implications the personality might have on the learning not matter what the actual personality type was, since no personality type was seen as a prerequisite for good learning. The descriptions of good learning experiences show that accounting students considered that personality had impact on good learning in accounting in an indirect way. It was not personality as such; it was rather that the impact of personality was manifested through the methods and ways of learning the student was able, inclined and willing to use.

For learning purposes, the crucial element in descriptions was the fact whether the student was aware of his personality traits linked with learning and whether he was able to use this information in a beneficial way in his studies. This can be interpreted as a question of knowing oneself as a person, and it means that there is a connection between meta cognition and learning style; the higher level of meta cognition helps in learning accounting because it makes it possible to acquire so called learning to learn skills and being aware of them implies that they are also controllable at least to some extent.

As what comes to the relation of discipline and personality, learning accounting was described to be easier if personality traits were such that the person was ready to work hard and did not give up easily. This feature was connected with motivation in a way that motivation was seen as a consequence of perseverance and motivation was controllable if the person had enough mental power in terms of perseverance.

Studying accounting needs a tough character from a student. (Anni)

I don't like to remain half-finished though I sometimes feel like crying when completing all reports and I feel I can't ever get everything done and I think now I quit. But I have never quit one single course. Not even though every time I get the same anxiousness. Certain persistence - and that you don't have the face to quit – they have helped me to survive the school. (Paula)

If you are such a person that you want to try, that you don't give up even if you don't manage the first time, it motivates you going on. (Vilja)

In the opposite cases, that is if the person is inclined to give up easily when encountering obstacles, learning accounting was seen very difficult, if not impossible. Learning accounting was also described as a process taking quite a lot of

time and students who had chosen accounting studies expressed that they had accepted it as part of accounting studies as well as the fact that accounting needed a lot of effort from the student's part because a sufficient amount of effort was connected with good learning.

> *Students can be discouraged easily. I know many students who dropped the course in the beginning because the pace was so quick and it felt all so impossible… (Marika)*

> *Accounting is very difficult to learn for me. Because of that, my motivation collapses easily. But my personality is such that I want to overcome obstacles, to learn and to get the motivation on the right track. (Sanna)*

> *I don't have that much intelligence. I have perseverance. I work as long as I understand. You need either intelligence or perseverance. Sometimes I feel other people understand a lot quicker. I have sometimes said to my husband that I bet I'm the only person at our school who needs to work this much. (Riina)*

In the diaries and interviews, students, in addition to describing the adequate personality traits as such, also compared the personality traits to what they believed an accounting professional would or should possess. The descriptions of a stereotypical accounting person – whether it was represented by the teacher or by someone they knew from working life context - ranged from negative to positive, but the important aspect here is the fact that there was a reference point that was used when estimating the professional competence that had been developing in the course of studies.

> *If there is a dusty filing person in front of the class, it won't give you any motivation at all. (Satu)*

> *I get cold shivers when I think about work in an accounting firm. It would be all about numbers. My summer job was already that miserable because it was accounts receivable two days a week. I have the image that there is no variation in that kind of work. (Niina)*

> *I could take a work in accounting but I can't do those tasks. If I could, I would have taken courses in accounting from the first year on. Then maybe I could imagine doing that. (Sanna)*

In the comparisons, if students felt a gap between what they considered professional requirements and their own personality, it could be interpreted either as a self-confidence question and the conception they had of an omnipotent accounting professional; or their own personality and an accounting personality conception that is marked with negative personality traits.

> *I don't have the self-confidence needed to work in accounting profession… I don't have trust in myself. That I would remember to do all things needed or that I would get all calculations correctly. (Marjut)*

> *- Marjut is very conscious in everything.*
> *- I feel I'm a bit sloppy though. I don't feel I can become a professional. I make mistakes. (Anni and Marjut)*

Many times I have felt this is like a swamp. That there is no frame. How much should I master different things? Especially in working life now that I listen how clients ask this and that. I wonder if I will ever be in the state where I find the answers immediately. (Sari)

Working in accounts payable was versatile, no days were alike. You have to master many things in order to do the job well. Being educated and civilized is almost as important as accounting skills. (Tea)

The last element in good learning experiences was motivation. Motivation was an issue that was lying somewhere in the background of good learning experience descriptions, though at the same time it was something that was considered as an indispensable prerequisite for learning. However, in spontaneous descriptions, it was not the first issue to become brought about but rather, it was treated as something that is evident by nature, since the choice to study had already been made and this conscious decision inevitably implies that the student has shown motivation.

If learning accounting does not interest you, there is nothing you can do about it. (Niina)

Good learning needs your own motivation. (Sanna)

If you have a clear aim, your motivation is high. (Joona)

I came to study here to get the degree and to update my knowledge. I have two years to go. I need to be motivated to get it done. Without motivation I wouldn't be able to do it. (Vilja)

Motivation was described as having effect especially on how much input will be put to studying outside the formal learning situations. Motivation levels are different for different things and the things that a student placed up in their personal priorities list got more input and effort. This way motivation had an effect on the level of learning outcomes. At the same time as the interviewees expressed the difficulties of accounting studies they also felt that accounting studies offered numerous intellectually inspiring and career wise motivating elements because the applicability of accounting studies was relatively easy to see. This means that accounting as a discipline can offer both intrinsic and extrinsic motivational elements.

Motivation means a lot. If something interests you, you have more endurance. And it doesn't feel any painful doing it, if it's interesting and motivating. But if it's like a dry bun... then you force it and the level of learning is weak. (Paula)

If you are interested in the topic, then you have more motivation to find some additional knowledge on the topic. You understand more about the whole, when you are not left with only what you have learned or heard in the class. If you have motivation, you will find out things on your own. (Vilja)

If I have the topic very much at heart, and when I get new information on the topic, and if it is applied through an exercise, and if I can then process it further like through some extra exercises, then I learn well. (Jaana)

It's very different to study something you are interested in and not to study anything useless. (Anneli)

I'm still drifting around in this interesting field of accounting. (Silja)

I think accounting is important… it's important that when you get a spread sheet in hand, you understand where they come from and what belongs in it and what is possibly missing; to understand it… They are basic things and good to know. (Tuuli)

Accounting courses are hard and demanding but they offer a lot for a student. It's good to realize how you can start applying in practise something you have learned in the class. (Jenni)

My present job is in payroll, I don't really need all these accounting skills. But I feel lucky that I have this motivation to study even if I don't need it all right now. You never know what you are going to need later. I feel I have always benefited of studying a bit extra. (Katriina)

Career aspirations can be interpreted as being one aspect of motivation. If motivation in the traditional sense of the word is generated by intrinsic interest, career aspirations represent the extrinsic reward students are looking for in life. Their role in studying accounting is important because accounting can be seen as a discipline with a high level of applicability in working life. The descriptions of career aspirations varied from vague working life expectations to clearly defined career aspirations. The latter ones had effect especially on courses the students had chosen.

After this school I just hope I could be at work. Only be at work. (Silja)

- One target was… I wanted a day job. Other targets have been developing while I have been studying. I wanted to learn to master all an accountant needs to master. It's a huge aim…
- I also wanted a day job. When I started my studies, I didn't know that I would like to study accounting. (Silja and Riina)

If I know what I want to do in the future, then I want to study those subjects more and concentrate on them. And it's a lot more comfortable. (Sonja)

Everything here is what you want to do and you know it will be useful in the future. (Hanne)

I wanted to become an accountant. (Sari)

I chose payroll accounting because I want a job in personnel management. (Tuuli)

I wanted a job with more challenge. And now I have got it. (Silja)

I find it very difficult… we study a course, then I learn it in theory but I don't understand it at all. Then I go to work at some point, then, at work, I realize that I have studied it in the course. When I finally understand I get interested in it, then I would like to get deep into it and find more about it. Only at that point I get motivated, when I really encounter it. Anything I study here prepares me for work and that I'm good in that job but really… When I start working and face those things, only then feel I succeed, that I have actually studied it at school and only now I understand it. I may know things in theory but if I start doing it I have no idea. Then someone comes and shows me and then I realize that I know it but I just wasn't able to connect the things. Umm, I lost my point… (Vilja)

I know that this school is appreciated and I appreciate it myself a lot. I have got many opportunities through the school, like contacts to business. It motivates me a lot. (Paula)

The impact of personality in learning accounting, according to the data, does not implicate that there is a single combination of personality traits that produce good learning experiences. This result is thus contradicting studies like Lawrence and Taylor (2000), Kovat, Ott and Fisher (2003), Worthington and Higgs (2003) Noël, Michaels and Levas (2003) and Bealing, Baker and Russo (2006), who suggest that both accountants and accounting students have distinct personality preferences. Also, the data indicates that personality has effect on what students usually call a learning style. This has also been revealed by studies like Nikolai and Wolk (1997) and Gul and Hutchinson (1997) who both state that personality will determine a student's preferred learning style. However, the Jungian model can facilitate the interpretations in certain situations where personality seems to play an important role because the components of personality types as they become manifested in the data can be interpreted having practical implications in different kinds of learning situations.

This has also been revealed in earlier studies. Nikolai and Wolk (1997) resume that extrovert students prefer working in groups, taking and discussing while introverts prefer working alone, verbal reasoning and reading. They also favour written tests, ideas, relationships, concepts and rules unlike extroverts who favour oral tests, practical application, specific facts and examples. Majority of students prefer sensing over intuition. They prefer uncomplicated tasks requiring them to be careful, thorough and proceed in a step-by-step manner. They favour objective choice tests, based on memory of facts and details. Intuiting students prefer complex tasks calling for quickness of insight and understanding of interrelationships, timed essay tests or cases based on theory and grasping of concepts and possibilities, and learning something new all the time. A majority of students also prefer thinking over feeling. They are objective, logical, well-organized, sceptical, and critical and they prefer lectures as teaching method. Feeling students are subjective and prefer learning through personal relationships and group work. Majority of students prefer judging over perceiving. They like closure and structured problems, and they are decisive and work in a steady and orderly manner unlike perceiving students who like flexibility, informal and unstructured problems and managing emerging problems using innovative solutions. These students are curious and open to new ideas.

Though there are studies concerning the matching of personality types between the students and faculty (Nikolai & Wolk 1997; Wheeler 2001) it seems – on the basis of the data of the present study – more important to pay attention to the matching of personality types of students among themselves than students and teachers. For the achievement of good learning experiences it seems to be critical to be able to seek support from peer students whose personality type corresponds with the student in question. Indeed, Gul and Hutchinson (1997) also indicate the same kind of result in their study; personality traits on extroversion and introversion influence the attitudes towards collectivism and individualism, though it must be admitted at the same time that results are still quite mixed.

Prior research also shows that accounting students exhibit relatively homogenous personality preferences. Type similarity is seen as positively related to process but negatively related to outcome, which makes homogenous accounting groups feel good performance level despite of weak outcome level. Changes in the capabilities of students and their personality preferences should, however, become more diverse in the course of education process and this implies that the changes in preferences are one possible indicator of changes in abilities. (Kovar et al. 2003.) This means that good performance level in student experiences does not, however, automatically guarantee good outcome in terms of learning results, and thus this should not be interpreted so that group homogeneity necessarily is or can be an educational aim. The homogenous personality preferences may also be interpreted so that certain disciplines attract certain personality types and thus make certain personality types strive for those disciplines.

The importance of social relations is evident in the descriptions. There has been a quest for utilization of the subjectivity, feelings and intuition, i.e. those aspects of personality that are not typical to accounting students, among accounting professionals because the softer interpersonal skills are becoming increasingly important in addition to the traditional accounting skills. Extant research has recognized competence gaps between business skills and leadership and negotiation skills in analyses conducted in the light of competence theories. The same phenomenon is prevalent in modern society in general; socio-cultural, adjustment, innovative and emotional-moral competencies are becoming ever more important. Competencies [25] can develop and one aspect in the education is the shaping of accountant's competencies. (Järvenpää 2001.) This is possible in education if we know what learning and teaching strategies are felt increasing the critical competencies and in the light of this study, any group based methods could be seen as creating a context for the development of socio-cultural competences.

The descriptions show that the capability of regulating effort measures as well as the ability to estimate the effort needed is crucial in good learning experiences. Prior research linking cognitive psychology and accounting has also noted the importance of effort measures when analysing how students learn, and the need to include effort with learning. The cognitive load theory is based on the assumption that learners have limited processing capacity and the proper allocation of cognitive resources is critical to learning. Mental effort is considered as the total amount of controlled cognitive processing that a subject is engaged in. (Halabi et al. 2005.)

In addition to effort measures, the literature also presents the conception of self-efficacy that, on the basis of the data of the present study, can also be

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25 Productive competencies are related with technical skills and knowledge and they are still highly necessary for the job performance. Normative competencies deal with adjustment. Motivation related competencies refer to the degree or commitment. Emotional-moral competencies mean increasing usage of subjectivity. Socio-cultural competencies have become overly important lately together with innovative competencies. (Järvenpää 2001.)

seen as linking to effort measures. Christensen et al. (2002) state that students who have unrealistic expectations, especially overly optimistic ones, have difficulty aligning efforts with desired performance levels and thus they perform more poorly. On the other hand, students with a better sense of self-efficacy make better use of cognitive strategies and self-regulatory practices. Better students tend to be pessimistic, which leads to more study time and greater improvement in actual outcomes. Poorer students tend to be optimistic, which leads to inadequate self-regulatory activities and worse performance. Accounting students' ability to assess their course standing is associated with their success. The results of the study show that the direction of inaccuracy in understanding current course standing is an essential element of success due to the self-regulation.

The question of expertise is important as one aspect of personality in learning. Expertise includes several attributes like advanced problem-solving processes, a great amount of knowledge, advanced organization of knowledge, an ability to use knowledge effectively, creative ability, which involves creating new knowledge on the basis of knowledge that one already has, automatized actions, and practical ability. The attributes vary over time and space and they also differ from one domain to another. (Tynjälä 1999.) In the development of expertise, knowledge and beliefs are assumed to gradually become procedualized and become integrated with expert knowledge (Lonka et al. 2004).

As it was the case with learning conception related descriptions, the same seems to apply in personality descriptions. On the absolute level, students may experience that they have learned accounting well and that their personality is well suited to accounting discipline. However, in comparison with what they believe an accounting professional should have learned or what an accounting professional would be like as a person, they often described that they could not possibly fulfil all the requirements because the ideal accounting professional was described almost as being beyond any student's reach. This means that in relation to accounting contents as such the students learning experiences can be very good while, at the same time, in relation to experienced professional standards, the experience of students can be described - if not bad – at least such that there is a discrepancy between the learning experience and professional reference point.

As many studies (Braun et al. 2001; Byrne & Willis 2005; Tan & Laswad 2006; Danziger & Eden 2006) evidence, it is possible that accounting practise may start seeing as less attractive to students who have chosen to study accounting when they get more familiar with the profession. The present study thus found two different reasons for this; the gloomy image of accounting as in above mentioned studies but also the lack of self-confidence caused by the reality shock in relation to expected professional standards – as has also been evidenced by many prior studies (Danziger & Eden 2006; Marriot & Marriot 2003; Worthington & Higgs 2003). The issue on the lack of self-confidence is a finding that has not been revealed by prior studies.

Motivational aspects brought about by the data of the present study are thus both intrinsic and extrinsic. Motivation has a clear connection to effort measures. Students' preconceptions of accounting and their perceptions of the relevance of accounting define what constitutes learning accounting for them. This can, at least partly, be explained by self-regulation, which was important already in choosing the suitable learning approach. Self-regulation is also a motivation question because the core of self-regulated learning is self-motivation. In contrast to learners who remain passive or reactive recipients of instruction determined by an outside authority, the self-motivated learner has an intrinsic goal. (Smith 2001.) Many extant studies (de Lange's & Mavondo's 2004; Lucas 2001; Paver & Gammie 2005; Tan & Laswad 2006) claim that both students' learning approaches and motivation are related to extrinsic things like the perceived value of the course, future employment prospects and personal development, but also the intrinsic values have been observed; some students are motivated by the notion of learning and intellectual growth as opposed to an enhanced career and financial future.

In sum, personality is important in good learning experiences in that it defines what methods and ways of learning the student is able, inclined and willing to use and being aware of them was the key element in good learning no matter what the actual methods or ways were. Students often used the word learning style to express all above mentioned things. Being aware of methods and ways of learning requires a sufficient level of meta cognition. This way it is possible to see the interplay between personality, meta cognition and learning style.

On the basis of the data, personality affects the students' roles especially in group learning situations that were considered both important because of their capacity to improve socio-cultural competencies and to offer mental support, and at the same time very demanding because of the difficulties experienced to be brought about by different personality types. Thus it means that the Jungian extroversion and introversion traits were most emphasized as traits of personality while other traits in the Jungian model did not, on the findings of the present data, seem any major role in good learning experiences. The ability to control effort measures in studying is highlighted in the descriptions of most important personality traits connected with learning accounting and despite the level of satisfaction about the personality as such there might be a discrepancy between what students actually consider as a suitable accounting personality in the professional sense.

On the basis of what has been evidenced in this study, motivation was created both intrinsically and extrinsically. Students like accounting as such because they are enchanted by the nature of accounting as a discipline or because they see good career opportunities offered via accounting studies. Motivation is seen as the first prerequisite for good learning, but not as the most decisive element in good learning. Rather, making the choice of studying accounting is considered as an expression of motivation and a necessary condition for good learning, but there are other elements that are at least as important. Moti-

vation is connected with the student's personality so that it has effect on the career choice and it also has an impact in effort measures the student is ready to take in order to learn accounting and in order to learn more than is actually required by the curriculum.

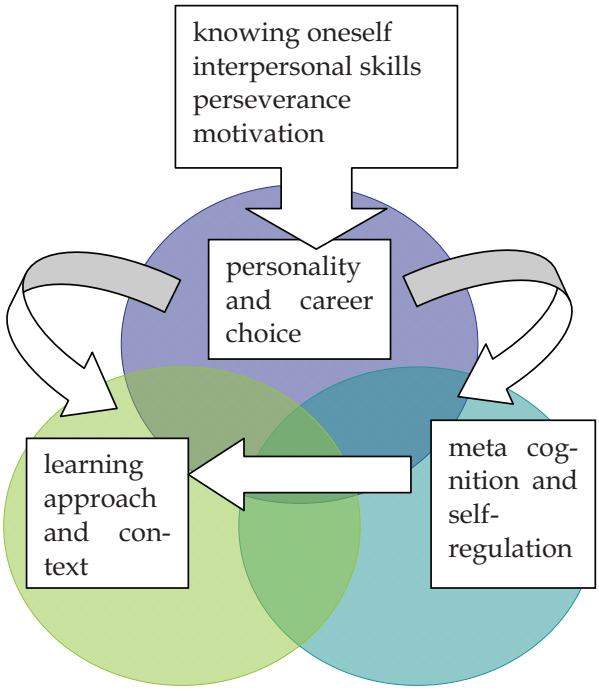

FIGURE 15 Key personality characteristics in learning accounting model

To sum up, when good learning experiences are deplored, it is the student who can be placed in the focus. The key elements in the student are personality, higher order thinking skills and learning approaches. Of these constructs personality can be seen to influence both the learning approaches and the ability to use higher order thinking skills, which also has an influence on learning approach. On the basis of the data, there are certain aspects in personality that are essential in good learning experiences in accounting as depicted in figure 13. Knowing oneself as a person is important no matter what the actual personality is like. The present study did not reveal any predominant accounting personality but it was rather the ability to match the personality with other elements in learning that counts. What seems to be relevant in personality is perseverance and the ability to work with other people in a way that enhances learning out-

comes because other people were considered the source of support in studies. Personality was connected with motivation and career aspirations and these two became compared with accounting professional standards.

5.3 Higher order thinking skills

In the experiences of good learning student descriptions highlighted certain mental qualities and thinking skills that anybody would need in order to be able to study accounting and to be good in learning accounting. These qualities were usually described with conceptions like logical and critical thinking skills. They can be seen as representing quite simple and concrete conceptions concerning the mental qualities requirements in good learning of accounting.

> *- I think things too difficult way.*
> *- She's creative.*
> *- Logical and simple thinking is better. (Tuuli and Timo)*

> *- During the first week, Tuesday, Wednesday and Friday, he puts in seven and a half hours. And then…*
> *- 37.5 hours in all. We can't take it from there. To get 40 hours full.*
> *- We can look it from here. How much is it over 40? We can do it this way. I just don't know whether I can follow this logic.*
> *- Let's do it one week at once. (Janne and Jaakko)*

> *Sometimes you need crooked thinking. Things are this way, but this way, but this way… at the end of last 'this way' you feel that if you are asked anything your brain is about to explode. (Vilja)*

> *Logical thinking skills are important, as well as the ability to escape... I mean, I personally, if there is no clear cause and effect relation, I find it very difficult. I should understand why. Why it goes like this. And I have huge difficulties get over it. I would always need reasons. I should have more reliance on... on... that everything is not like one plus one equals two. (Tuuli)*

> *If you do accounting tasks and get the answer, you need to think whether it could possibly be this much… (Marjut)*

Another feature in the descriptions were the concrete methods that can be seen as reflecting the use of any higher order thinking skills in order to improve the quality of learning. These could, of course, be also interpreted as studying techniques but since their purpose seems to be mainly the improvement of mental processes, they will be discussed here. The techniques usually cover areas like processing the material, drawing, using colours, writing lists, writing notes, using formulas or doing things is a certain order like starting from easy parts and proceeding towards more difficult ones.

> *When reading the book, I underlined, wrote, highlighted… in order to get it through my own thoughts. (Sari)*

When I did the exercises it was like a spider's web. I draw lines from here and there and my pages were full of writing. (Silja)

If I have written something as a list, I can see it and I remember the spot in my notes. I use pens of different colours and such... But I can't remember what it actually was. Then I proceed on and on and usually I remember it by the end of the exam. I remember one item and then I can remember them all. (Paula)

I write down what relates to what and then I think about it and then I see it. (Satu)

When I read the book… even if I had teacher's notes, I couldn't study them. I wrote down the titles and main points. Then I started to study my own notes in order to understand the whole… I always had to understand the whole first, then key points, and then something that belonged under them. (Niina)

If there is a formula, I need to think of it, and once I understand, then it goes on smoothly. (Timo)

In accounting, reading comprehension is crucial… and understanding what is really asked. (Paula)

I like exams where you have basic questions first and then the harder ones, so that there will be deviance - and enough challenge for the intellectuals. (Maarit)

Another important thinking skill needed in accounting on the basis of the data could be identified as structuring the knowledge in more manageable parts so that the whole picture of the issue in question is transmitted at the same time while some parts of the whole are under discussion. In the data of the study, this was connected with the ability to get some structure to course contents in situations where the contents came about as separate entities and also to the whole accounting curriculum where it was not always easy to understand how separate courses were linking together. Accounting students seemed to recon advantages brought about by the design of individual course contents and also by the design of the whole curriculum. If the structure is visible all the time so that the whole can be observed at the same time as the smaller topics or details are under scrutiny, it improves learning experiences notably. The idea of seeing the big picture on a constant basis was emphasized.

It's important to see the whole picture. (Paula)

Some courses have been a whole. In some other courses, when I have studied for the exam, I have really struggled to get the whole picture. I would like there to be some kind of outline. Like that there are five different parts and they are divided this way. And each time we would start a new part, we would repeat where we actually are. So that you would understand what you need to master and at what point… and how the small parts belong together. (Sanna)

Inside the course, if the teacher teaches one thing here, another thing there, and then we go somewhere else, I can't understand if they are not in a logical order. Or, if there is a list of contents given before the course and it lists the topics covered and there are smaller titles. Even if the teaching goes here and there, then I can see the whole picture. (Hanne)

At this point I would need one bigger whole where we have it all. That we would start from the budget, then take care of financial accounting, and then do the analysis of financial statements. That we would see the full circle. (Silja)

Teacher teaches something, and then he says that there is another thing connected with this one - that we will go through next class. I'm like great… And then we go through this one thing and it's a little bit incomplete because we don't have time to go through it until next class. And then next class, we study the other thing. I feel they should come twice. The first thing… and then the second thing so that we can understand the first thing. I guess there is no solution for this because it's impossible to teach things twice for cost effectiveness reasons. (Niina)

Topics overlap and it would be good to learn them all at once but, on the other hand, I have noticed that some courses have been very easy because I have had to find out on my own something I have needed in another course. When you have explored it and then return to it in another course, you recognize it and you feel really good to realize that you already know it and you don't have to work that hard any more. (Tea)

It's good to be able to compartmentalize things since there are a lot of calculations. That you can compartmentalize them as one topic... Just compartmentalize correctly instead of thinking that you have thousands of different calculations and how you can possible remember them all. (Paula)

Learning accounting in an effective way was also described simply in terms of good memory and the use of memory rules or memory techniques that helped especially in mastering and retrieving data. The need for this can, at least partly, be explained by the nature of accounting as a rule-based discipline. The different learning approaches, deep learning versus surface learning, can also partly explain the questions concerning memory. However, at this point it becomes tempting to suggest that the need for excessive memorization may be a sign of overly use of surface approach to learning. Repetition and revision were techniques used to cover the experienced deficiencies in memorizing ability and practical or experimental study methods were seen as an important measure in transferring memorizing into understanding. This can be seen in line with the view that method used to acquire knowledge is critical to the usability of knowledge.

I don't need much repetition. I remember well. If I read something once, I remember how it goes. (Paula)

Revision and repeating… We do it and it helps us remembering. (Tuuli)

Learning bookkeeping is hard, I can't even decide on what account to post. (Niina)

It comes occasionally. Now I understand! Then… now I don't. It's in my head and then it disappears. (Sonja)

I have such a bad memory that I need many repetitions. I learn things by heart, in accounting, and when I see an exercise, I know how to calculate even if I don't have a clue of the whole picture. I don't learn reading books, I memorize small things. (Sanna)

But many times I have been in the exam hoping to pass because I am extremely bad in revising for exams. I am a browser. I go through things, I look at the pictures, the titles and when I

find something I think sounds like a topic that might be an exam question, then I read a bit of it. I am very bad in reading a lot. (Anni)

I do the same things as in the class in order to brush up my skills and not to forget. If I don't do it for a while, my skills get rusty. (Joona)

If someone just explains theoretically and does not show practical examples, we won't learn that way. We just remember something about it but to truly understand, we need to see some practise; example or exercises. (Timo)

In sum, higher level thinking skills which can roughly be divided into meta cognition and knowledge structure are based on the notions the person has about thinking, learning and learning related things. Also, the role of memorization seems to be important in the sense that a meaningful memorization can be assumed to lead to understanding. What leads to enhanced learning process in accounting and makes a person to develop expert level skills in accounting can be examined through meta cognition and knowledge structures. Meta cognition is connected to motivation and motivation can be arisen by enhancing meta cognition. Since meta cognition refers to the ability of being aware of mental processes present in learning, they affect the self-regulation of any other element and are thus elementary prerequisites in good learning.

The importance of meta cognition has been introduced in the results of many studies like Brown (2002; 2003; 2006a) and Greenberg (1997) that suggest that meta programmes are a model of describing personality and behavioural preferences and thus they can be seen linking to personality. Some meta programmes are more dominant and they have impact on accounting student's educational experiences and on the efficiency students can use when retrieving and applying knowledge. This also becomes evident in the light of the present data. Greenberg (1997) says that the importance of higher level thinking skills in professional practice has led educators in areas that are outside the scope of accounting and the emphasis of teaching factual information has gradually shifted to teaching the skills under the ideas of lifelong learning skills. The two interrelated aspects of teaching higher level thinking skills are the organization of knowledge and the elaboration or practice during learning.

Why some students learn better than others seems at least partly to be a question of the student's conception of learning in general and higher order thinking skills and meta learning skills. On the more general level, the existence of any higher order thinking skills and the ability to find concrete methods that helped in understanding and in mastering the contents was highlighted in descriptions. Higher order thinking seems to act as a prerequisite for learning in accounting and mastering the extensive contents of accounting courses. The need of higher order thinking skills was described in terms of different kinds of techniques or tools the students had used in order to learn well and to be able to control the learning process in a way that it became more efficient. This is not surprising since these kinds of activities are usually unconscious and thus become manifested only through some concrete examples or in the way people describe something. The methods related to the use of higher order thinking

skills were something the students usually used on their own and their use refers to a certain extent of self-regulation the students were able to add to the learning process.

On the most abstract level, it seems that the success of any learner's learning attempts depends on the ability to control thinking processes and on the mastery of memory. The importance of self-regulation has been brought about by the study by Smith (2001) where he state that self-regulatory processes are critical in learning because they evidence that the learner is actively involved in the learning process and they also improve the belief in one's abilities (an issue also brought about by the present data), which is one important motivational factor.

To be able to act as a self-regulated learner, the learner needs to be aware of meta programmes and knowledge structures to be able to control them in a favourable way and towards the learning goals in the course of the learning process. In education, the conception of meta cognition has been used to encompass beliefs and knowledge about learning, as well as monitoring, regulating, and reflecting on, learning. The term self-regulation overlaps with meta cognition that will be handled in next chapter, referring to students monitoring and regulating their learning. Since meta cognitions operate at an unconscious level, but are revealed for instance by the choices made in the use of language, it can be assumed that phenomenographic data can reveal such meta programmes and knowledge structures that are effective in the accounting context.

The efficiency of knowledge structuring is a memorising and retrieving question and also very much an expertise question. Prior research (Curtis & Davis 2002; Maletta et al. 1999; Boldt 2001) evidences that the critical difference between experts and novices seems to be the long-term memory structure. Cognitive knowledge structures [26] play an important role in the processing of new information. Empirical studies show that accurate or high quality knowledge structures facilitate the identification of relevant information, the retrieval of applicable knowledge, and the activation of appropriate problem-solving strategies. Experience results in the formation of knowledge structures that help the categorization of information. Experts have pre-existing mental structures and when they process new information the structures facilitate the organization or synthesis of the new information. Conversely, the inexperienced individuals lack categorization structures and this leads to unorganized memory locations and ineffective storage and access of information. Development of expert knowledge structure approximates a sequence of stages in which the acquisition of lower forms of knowledge serves as a foundation and prerequisite to higher forms. Declarative knowledge, which is largely verbal information or facts, is most relevant at early stages of knowledge acquisition. Procedural knowledge, which is construed as sequences of actions resulting in specific out-

[26] This view is consistent with Piaget's theories of cognitive development, which argues that the development of higher-level cognitive skills depends upon the development of knowledge structures that are essential for the processing of information.

comes, is next step in knowledge acquisition. Over time, the acquisition of declarative and procedural knowledge is accompanied by the organizing of associations and relationships among all knowledge components within long-term memory and this provides the basis for measuring knowledge structure and the means of distinguishing expert and novice performance.

The importance of knowledge structures is highlighted in other studies as well (Curtis & Davis 2002; Davidson 2002; Kopp & Phillips 2005). High quality knowledge structures enhance learning and retention and there is experimental evidence that shows that the structure of knowledge in memory influences how the knowledge is used in a problem solving situation. When people encounter problems that match their knowledge structure, they can more easily retrieve relevant knowledge from memory and incorporate it into the problem representation and analyses. When knowledge structure does not match the structure of the problem, students are less likely to use relevant knowledge that they possess.

The ability to think critically was revealed by the data. Prior studies (Kealey et al. 2005; Nelson et al. 2003) have also raised the importance of critical and logical thinking skills in accounting context. Critical thinking skills like interpretation, analysis, evaluation, inference, presenting arguments, reflection, and dispositions have been identified as an objective of accounting education as such. Studies claim that there is strong evidence that critical thinking is necessary for performance in upper-level accounting and that high failure rates in accounting introductory courses suggest that success in principles of accounting may already require quite a sophisticated level of reasoning.

The importance of the ability to memorise and do it in a meaningful way when learning accounting was emphasised in the descriptions of the present data. Also, the issue of memorising was connected with the issue of repetition in such a way that repetition is a path to meaningful memorisation. Earlier studies in accounting education suggest that the focus in teaching should be on developing analytical and conceptual thinking instead of memorising rapidly expanding professional standards because higher-order cognitive skills are needed in increasingly complex [27] professional business situations. The development of analytical and conceptual thinking requires a conceptual form of

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27 There is no well-accepted definition of task complexity either in psychology or accounting. Studying higher order cognitive skills is not easy because they are not measurable directly. Usually, they must be measured using an indirect measure such as observing the ability to work with complex problems. This requires that the researcher must be able to assess the relative complexity of problems by considering the type of reasoning or cognitive skill required for their solution. Problems that require different problem-solving skills and abilities are considered complex comparing with problems that require responding with memorized facts and methods that are considered having low complexity. Any problem involving only definitions, memorizing facts, formats, or concepts, classifications, or the use of algorithms, is classified as low complexity, and any problem involving proportional, combinatorial, probabilistic, hypothetico-deductive, or correlational reasoning is classified as highly complex. (Davidson 2002.)

learning - far away from simple memorization of facts and procedures. (Davidson 2002.)

Recent research (Byrne & Flood 2004; Entwistle & Entwistle 2003; Lucas 2001) indicates that memorizing may be more complex than first assumed. The existence of two contrasting ways of learning, memorization and understanding, seems to be evident. Many research lines have sometimes placed implicit value judgements on understanding and memorising suggesting that memorising is an inferior process. Different educational contexts define learning according to different conventions. For Western societies it is typical to consider repetition and memorization as the antithesis of seeking understanding. However, a particular problem in relation to the learning was reported by Asian students. They appeared to be over-reliant on memorisation, and so might have been expected to do badly in their studies in Western universities. However, this was not the case. Their good academic performance in Western universities led to a series of investigations into the paradox of the Asian learner, which found that many Asian students combine memorisation with attempts to understand in ways where they tend to see memorisation and understanding taking place in conjunction with understanding, making it possible to memorise with much less effort. In Asian context memorization and understanding are not considered as opposites, but it is believed that meaningful memorization contributes to understanding.

To sum up, the master and control of any higher order thinking skills improves the learning in accounting. This is referred to as meta cognition or self-regulation, which means the ability to control mental processes needed in learning. These concepts are partly overlapping. The key qualities are described in figure 16. Especially logical and critical thinking skills were highlighted in the data. To get some structure to the studies and to see the whole picture, students described many concrete technical methods they used and the amount of revision that was needed to master the contents. These can be referred to as knowledge structuring. Finally, also the themes concerning memory and understanding became raised as a theme. All these higher order thinking skills can be seen as being the most highlighted factor that separates novices and experts in accounting.

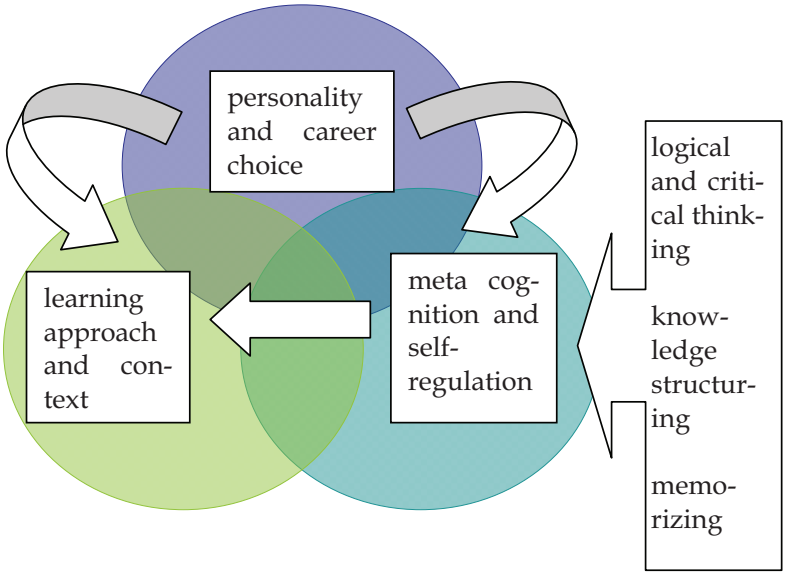

FIGURE 16 Key meta cognition and self-regulation characteristics in learning accounting model

5.4 Learning styles and approaches

According to student descriptions, the learning style and learning approach were highlighted aspects of student himself in the learning process. Their role was seen very important – even more important than the role of previously mentioned personality or the role of any higher order thinking skills. Learning style is defined as the composite of characteristic cognitive, affective and psychological factors that serves as a relatively stable indicator of how an individual interacts with and responds to the learning environment (Duff 1998). When describing good learning experiences in accounting, the descriptions were connected with the fact of knowing students' individual learning styles, and also knowing the styles they were not able or inclined to use. Being aware of learning styles was seen as a basic prerequisite for good learning experiences and any self-regulatory activities were aligned according to the learning styles.

I learn better by doing in practice, better than learning from a book. (Meri)

I learn well when I calculate on my own. So that I have heard of those things first, of course. But when I then do the exercises and think, then I learn best. (Marika)

I look at the slides and I remember well what I hear and what the teacher says. I can pick up the essential that way. I learn more by hearing. (Kaisa)

I visualize. I need to put things on paper. Then I calculate. Then in the exam, I can restore it all. (Timo)

I think I know how I learn best. I try to prepare that way. I know that if I need to study three books, I can read them but I won't remember anything of them. I need to write or think of it somehow else in practise. (Joona)

Starting is very difficult. At ten o'clock I think I should start because the due date is next day. When I must write it I get it done and I haven't, I think I haven't got a lower grade than four. If I had got a bad of the earlier reports because I started to write them previous night, I would have started earlier, but now that I have noticed I get good grades when I write them the last minute, I don't feel like putting any more input. (Vilja)

Even if I had all the time in the world, I will do it the last minute. I need stress and pressure. Also group pressure is good. I would be ashamed to be the one who never shows up or who doesn't do her own share. I need pressure. That it has to be done and then it becomes done... No flexible deadlines for me... (Paula)

Some of the descriptions concentrated on difficulties in learning but they can nonetheless be interpreted belonging to the same category as the previous example. They also relate to learning styles and emphasize the need of knowing the learning style in order to achieve good learning outcomes and to overcome obstacles in learning.

I have a partial photographic memory. I remember on what page, I remember what kind of text it is, I remember where it is, but I can't remember it. I just know where I can find it in the book. It's very irritating in exams. I know I read it but it just won't come into my head. (Vilja)

In the books I can remember a picture but I have no idea what the text was about. I know the answer would be there. (Kaisa)

I started to study but it was all about words, learning different terms by heart. I kept on studying but nothing stayed in my mind. I was desperate. (Kirsi)

It can also be seen on the basis of descriptions that the awareness on the personal learning the learning style had been evolving throughout the studies. This gives some dynamism to the learning style that usually is considered quite a permanent characteristic of a person comparing to, e.g. learning approaches that are usually considered more situation specific.

I felt that other students grasped it immediately. I had to struggle between listening and watching. Then I thought that I'll get it when I read it and concentrate on the text and exercises. (Marjut)

First year I tried to learn… because I came from working life and learning was a bit different than earlier when I had studied… I did a lot more on my own, but I still would have needed someone to teach me how I should study, how I learn. (Riina)

I think I know how I learn best to get information, a skill that has improved a lot here. (Paula)

I learned my own style. (Katriina)

Being able to learn something deeply seems to have close links with good learning. Though students are not usually familiar with the education research terminology, the word deeply was often central in the actual utterances of the descriptions of good learning experiences. Also, learning deeply seems to be in connection with the time and effort used and thus linked with the motivational aspects.

I had to spend a lot of time for exercises because I tried to understand them deeply. Preparing for the exam was only revision… I needed time to absorb. (Niina)

My learning is such that if I want to learn something difficult I need a lot of time for studying, reading and thinking and doing the exercises. (Sanna)

I took the course already a year ago in spring, but I didn't take the exam, I didn't have much time to study, I didn't do the assignments. I participated in every class but I didn't really feel deeply that I had learned something. Then I took it again. I wanted to learn. (Silja)

I understood immediately that even if the teaching as such felt understandable at the point when the teacher was going through the material, I would have needed more time to learn them deeply. (Anita)

Another feature emerging in the data was the ability to analyse what was the essential learning target and selecting material according to this. The selected material was then studied and learned deeply. This seems to be crucial in accounting – probably due to extensive course contents. Students who experienced they had been able to develop good learning practises and knew how they learned best also expressed that they actually did less to learn more and that they used selection when choosing what to concentrate on. Instead of revising everything for exams they were able to concentrate on the main points or to try intuitively figure out what the main points would include in order to learn the important things deeply while the rest was learned on surface level only. This was meant to diminish the amount of stress before exams and also diminish the feeling of not being able to perform. There was also concrete evidence in the form of grades that the technique of selection actually produced better grades.

I'd rather learn less but well. (Satu)

I have learned to read browsing. I have managed to study the right things that way. (Riina)

I'm such a person that I would like to do everything very well. In some extensive accounting courses I have had to quit this principle because the number of assignments has been so big that I just haven't had enough time to get deeply into them. (Kirsi)

First I wanted to know everything from everything but I soon realized it was not possible. What is interesting, you can go deep in it. (Paula)

What has helped me a lot in learning is that if I want to learn something, I will find it out no matter what comes and I can let go other things that I don't consider that important. (Kirsi)

I started to read and it felt like splitting hairs. I just tried to remember all terms by heart. I felt desperate studying but nothing staying in my head. There was not much time left. I used a method I had used earlier. I wrote lists of difficult things and I wrote my own notes. I concentrated on that. I felt that I only knew a small amount of all information given but I used it and extended it with my own thoughts. I did well in the exam. (Katriina)

Finding books is hard but I got them for night loans. I also studied professional magazines and found something in the net. I printed out all material. (Jaana)

I have some kind of image of what I'm going to do when I start working and it defines what I think I will need, and those things are such that I give more input. Other things I just classify as 'good to know' and I won't go deep in them. (Vilja)

Accounting as a learning context partly defines the processes of learning. Learning accounting was considered being different from learning some other topics in that learning accounting was described in terms of accounting, as a subject, being laborious, hard and time consuming. This was highlighted especially by the fact that usually accounting topics represented something that was totally new to the student, which actually made learning in the constructivist sense very hard, because there was very little prior knowledge on which to build new learned elements.

As a whole, if you think of the learning process in accounting… it's quite laborious. (Marjut)

In accounting you have a lot of precise knowledge to be remembered. All acts and degrees... (Heli)

- Sometimes, in courses, I understand things only when I study for the exam.
- Sometimes I have understood only when I have taken the next course. (Satu and Kaisa)

It is important to have the basic knowledge first. A foundation. Then you need to apply the knowledge. If it happens so that the basics are week, like I have in bookkeeping, because I was so busy then, now I find it very difficult to return to those topics because the foundation is missing. I should redo it all from the start. To revise. (Sonja)

On the other hand, this was also seen as reinforcing the experience of actually learning something. This finding is in line with the students' conceptions of learning; on the personal level the learning effect is very positive, but in relation to professional requirements it causes additional stress. The issue of heavy workload in accounting curricula seems to be an inherent feature of accounting as a discipline because of the incremental nature of accounting and because of the course contents being too extensive as such and also comparing to the time period they were running. Some of the workload was generated by students themselves if they felt that to be truly competent to enter working life they had to choose all possible accounting studies and to perform on a high level in every

one of them. This is also connected with the earlier mentioned conception of accounting professional used as a reference point when evaluating learning outcomes.

> *Mainly accounting courses contain things that you don't know in advance. This is one of the reasons why it is possible to get a lot of positive learning experiences in accounting. (Maarit)*

> *Accounting is incremental. I felt that course after course things started to link together. In the beginning I was only reading… debits and credits… even if I had worked in accounting earlier. Despite of it I sometimes really realized something new. (Marika)*

> *The course contents seem to be all so abundant that we are always in a hurry. (Jenni)*

> *The autumn was very heavy because I took all accounting courses that were offered. (Anneli)*

> *I'm afraid how I can remember financial accounting. I still have one year and a half left and I have completed all financial accounting courses. How can I possibly remember it when I start working? However, I didn't dare to leave some of them until next year because then I could have forgotten the things. I don't know which way it would be better… (Vilja)*

As to the outcomes and performance level, student descriptions sometimes defined the good learning with the help of evaluation or measurement by grades or exam performance, but at the same time, the conception of good learning contained the feature of high level of non-instrumentality. Descriptions emphasized the fact that grades were not the most ultimate aim in studies, but rather they helped in estimating the level of learning. In descriptions, the distinction between grades and learning was clear cut. Grades were not seen as necessarily reflecting learning, because learning could have been experienced being on a satisfactory level even if grades were poor or it was possible to experience a poor learning level even if the grade had been good. In optimal situations good learning and grades were in line.

> *I need to remind myself that I'm here for my own learning, not for evaluation. If I have an aim to get good grades, but I don't necessarily learn those things… (Vilja)*

> *If I now think what I could really, right now, start calculating… It's obscure, the follow-up courses of accounting. I wouldn't be able to do those things now. At the time I managed to go them through somehow but then… other courses like basics of accounting and taxation, them I remember. At least most of the contents, because I really learned it, not just by heart for the exam. (Marjut)*

> *I think I learn because I get good grades but the biggest learning happens in classes. And if I skip one class I always feel that there is something very important. I really go to all classes. Maybe I am motivated because I want to learn for a job and not for mere grades. The grades are not what I think when I get prepared for the exam. Passing is the aim. I have been told many times nobody checks your grades. (Sari)*

> *The most important check point in learning after the course is the feeling after the exam. After each accounting exam it is possible to try to figure out what your grade might be. I have guessed it most of the time. (Jenni)*

The teacher promised to grade the presentations next week. I waited for my grade mingled with fear because we had been discussing about my analysis and I had a feeling that my opinions had irritated the teacher. I was surprised I got a good grade. (Katriina)

I had an excelled grade but I don't know if I learned it. (Anni)

Prior research claims that the connection between the conceptions of learning and approaches to learning is sufficiently strong to predict the quality of the learning outcomes directly from the students' conceptions of learning. Students with less developed conceptions of learning are supposed to achieve only a superficial level of understanding. Contrary, students with sophisticated conceptions gain a thorough understanding of the study material. Student approaches to learning are influenced by the educational environment such as assessment methods, curricula, teaching methods and atmosphere. There are also effects deriving from disciplinary differences. (Byrne & Flood 2004; Sharma 1997.) This notion makes the learning approach conception very dynamic because it implies that learning approaches are mouldable in the learning process. It should also be noted that the appropriate learning approach use (usually the deep approach) is a feature that is typically associated with the aims of higher education.

The existing learning style preferences of students represent the strategies they will tend to adopt in the absence of specific strategies designed to encourage other strategies (Boyce et al. 2001). A learning style can be seen as a composite of characteristic cognitive, effective and physiological factors. Prior studies (Duff 1997; Duff 2004a; English et al. 2004; Marriott 2002.) also state that a learning style resembles a student's personality typology, which serves as a relatively stable indicator of how an individual interacts with, and responds to the learning environment. A learning style indicates a person's preferred way of learning. Students do not learn in the same way and a number of different learning style preferences exist which can change according to experience. This means that a student's learning style preference may change over time over their period in higher education. However, the determinants of an individual's learning style are personal and, therefore, likely to be relatively stable over a period of time even though approaches to learning are dependent on situational factors, such as course structure, methods of assessment and teaching styles and approaches.

Learning the learning style can thus be described as knowing oneself as a person, but there is more in learning than that. The dichotomy of bad learning and good learning, which are not stable characteristics of a student but rather situational and contextual phenomena, could be described in terms of surface learning and deep learning. It appeared in descriptions and especially in situations where students were able to define and analyse the problems in their learning approach; problems were associated on learning on a superficial level without understanding (and they could be described in terms of rote learning), which made studying accounting hard and ineffective. Students who had managed to change their learning approach had also evidenced their performance

improving. This means that meta cognition is related to learning styles and approaches in that meta cognition is needed for the student being aware of such things than learning styles and approaches and to be able to change them or control them in the desired direction.

The importance to learn deeply becomes evident by interpreting the data. This also refers to an intrinsic interest in studying and adoption of effective learning strategies, which in turn are more likely to result in quality learning outcomes. The importance of the deep approach to learning has been introduced in many prior studies (Booth, et al. 1999; Duff 2004b; Ramburuth & Mladenovic 2004; Byrne & Flood 2004; Lucas 2001; Lonka et al. 2004) on learning. However, the first four of the previously mentioned studies also state that there is a tendency among accounting students to rely on surface approach but this feature was not evidenced by the present data – one possible explanation being of course that the questions concentrated on good learning experiences. Also, it is worth of mentioning that the third learning approach, i.e. the strategic one, which has been revealed by studies like Duff (2004b) and Heikkilä and Lonka (2006) was not found in this study.

The deficits of surface learning comparing to deep learning have been revealed by prior studies (Hall et al. 2004). A surface approach to learning tends to result in a lack of engagement with the subject, the accumulation of unrelated pieces of information for assessment purposes, and temporary learning outcomes, and thus students are unlikely to experience high-quality learning outcomes, or develop appropriate skills and competencies. A deep approach to learning, on the other hand, is characterised by a personal commitment to learning and an interest in the subject and thus it is more likely to result in better retention and transfer of knowledge and may lead to quality learning outcomes, such as a good understanding of the discipline and critical analytical and conceptual thinking skills. It should be noted that also this study brought about the result that the introduction of group activities is associated with an increase in students' deep approach to learning and a decrease in students' surface approach to learning.

The selection of material can also, at least partly, be explained by motivational aspects. The essential difference between a surface approach and a deep approach is in the student's motives for studying. A student cannot simultaneously adopt a surface motive and a deep motive. In contrast, a surface strategy and a deep strategy are not incompatible. A student adopting a deep strategy will use memorisation and reproduction and seek further connections and relationships to prior knowledge, whereas a student adopting a surface strategy relies on memorisation and reproduction only. (Hall et al. 2004.) This means that selection just gives a better focus on studies directing a student's attention to those things that are important and deserve deep strategy whereas for other things, a surface strategy is enough. If students do not see a learning task as a useful one, or if they do not see the potential for development within the exercise, they will approach and engage in the task in a superficial way. If they can see no real point in tackling assignments and learning in groups, for instance,

successful experiences are unlikely to follow, no matter how hard educators work (Tempone & Martin 1999).

In addition to motivation, it seems that deep approach is significant just because according to students' experiences it produces better learning outcomes. This positive relationship between a deep approach and study success has been very well demonstrated in prior studies. Marton and Säljö showed that the deep approach was associated with qualitatively better learning outcomes. Later quantitative studies (Byrne et al. 2002; Ramburuth & Mladenovic 2004) have confirmed this finding. Heikkilä and Lonka (2006) state that students' approaches to learning are connected to other aspects of students' learning, such as conceptions of learning, regulation of learning and motivational orientations. Combinations of these variables have been referred to as study orientations or learning styles. A differing number of orientations have been introduced, of which two main orientations, meaning and reproducing, are commonly used in educational research. A meaning orientation typically includes a combination of self-regulated learning and the deep approach to learning and has been shown to be related to good study success. However, as Elias (2005) and Lucas (2001) point out, surface approach as such is not necessarily inferior to deep approach, but it may be just more suitable and economic in certain situations especially when learning within science which contains algorithmic content.

The prior learning context studies (English et al. 2004.; Hall et al. 2004; Lucas 2001; Tempone & Martin 1999; Jackling 2005; Lyons 2006) emphasize that the approach adopted is affected by a student's perception of the task requirement and the context of learning. Thus study approach question is also very much a teaching approach question and as such not entirely a student's quality. Also, research (Jackling 2005) has suggested that the use of surface approaches can be effective in certain situations. This is evident on the basis of the present study data as well. Sometimes surface level learning is enough and students considered it important to be able to choose the appropriate approach in relation to external limits – though in good learning descriptions they usually described experiences that could be categorized under deep approach.

Accounting as a discipline may have impact in the adoption of deep and surface learning approach. In the recent literature, the idea of the deep approach as a functional disposition for learning has actually been sometimes questioned because studies have shown that students who are work-life-oriented proceed faster in their studies than students who are primarily interested in studying. It may even be possible that students who study in order to search for meaning for life may become so fond of studying that they are not motivated to graduate. Perhaps deep approach should be seen as a necessary, but not a sufficient, condition for productive studying. Strategic, systematic or collaborative-constructivist orientation to learning may be the extra ingredient in studying that helps deep-oriented students to proceed toward graduation. The deep approach may be re-evaluated in the new learning environments. The classic deep approach to learning may prove too restricted and it is possible

that in the future we are going to have finer distinctions among different kinds of deep approaches, which are more or less individualistic in focus because different learning environments vary in terms of what is the most successful approach. (Lonka et al. 2004.)

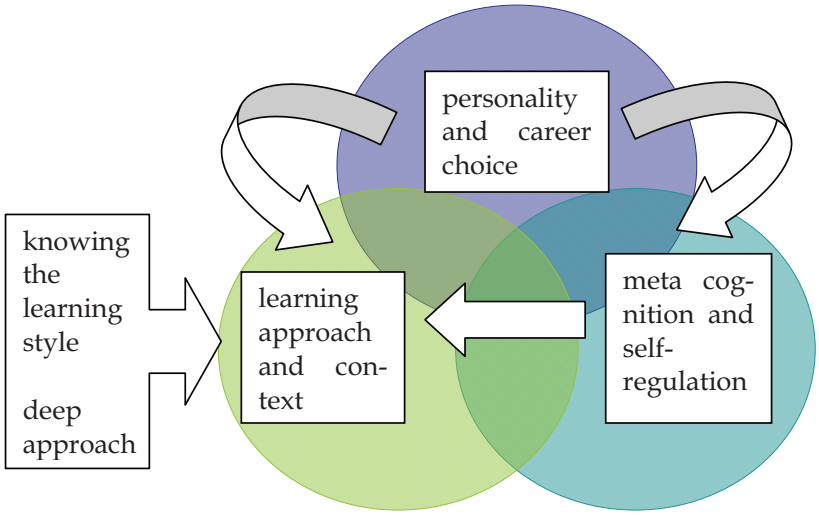

FIGURE 17 Key learning approach characteristics in learning accounting model

It can be interpreted on the basis of the data that the influence of grades was left very external and inefficient from learning perspective in student descriptions and it could be assumed that in good learning experiences, the importance of self-regulation instead of teacher evaluations is more critical. Student learning takes place in a context that affects both the nature of learning and its outcomes. Learners draw on knowledge and beliefs in self-regulated learning to construct an interpretation of a task's properties and requirements. On the basis of the interpretation, they set goals, which are approached by applying tactics and strategies. Learners monitor the process in order to generate internal feedback. If external feedback is provided, it may confirm, add to, or conflict with the learner's interpretation. (Lonka et al. 2004.) As to the effect of assessment, many studies (Davidson 2002; Ramburuth & Mladenovic 2004; Duff 2004a) have evidenced that assessment can be considered the most important contextual vari-

able influencing the approach to learning. Thus, the importance of assessment was not that highlighted in the present study.

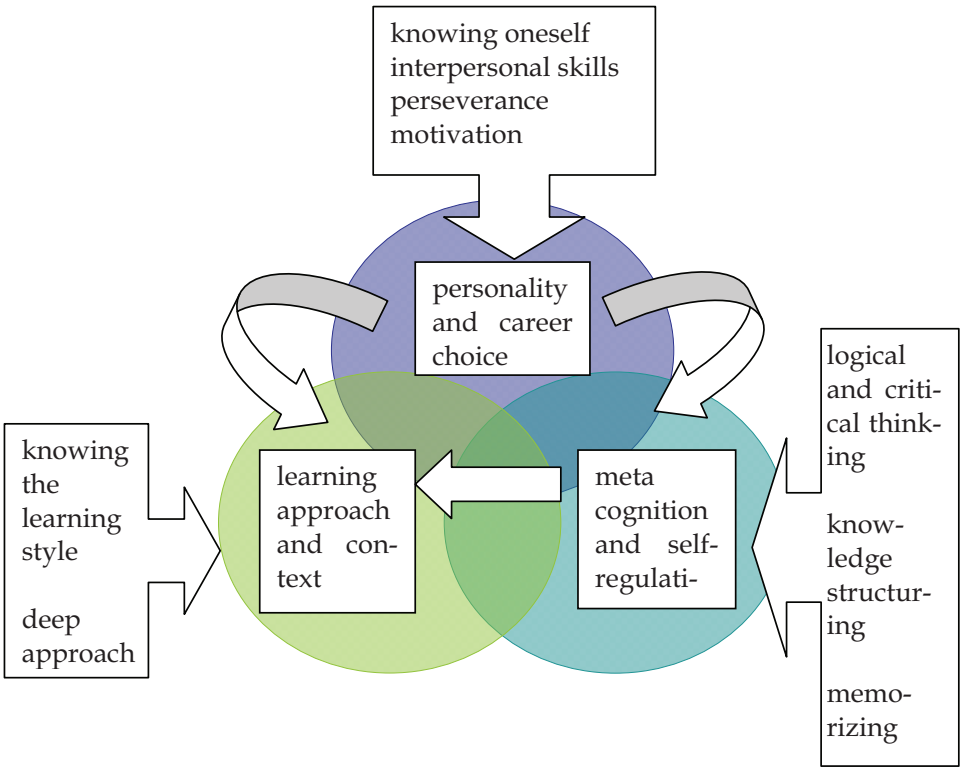

FIGURE 18 Key student characteristics in learning accounting model completed

Personality is an important determinant of learning style and learning styles and approaches were seen as key student qualities in good learning if students were aware of them and were able to regulate their actions in the direction of stronger learning styles and deeper learning approaches (figure 17). The use of adequate learning style and a mix of suitable learning approaches as well as the ability to control the last mentioned and monitor the results increased the level of satisfaction in experienced learning outcomes. The nature of accounting as a discipline had certain impact on what personality traits were considered valuable and what learning approaches seemed to work best. As a context, accounting was described as laborious, hard and time consuming and setting the learning reference point to expertise level still strengthened the pressure caused by the nature of accounting as a discipline. However, assessment or evaluation could either strengthen the experience of learning or then be in contradiction with it.

To sum up all the elements of good learning concerning the student, the frame of reference can be completed as in figure 18. The most important characteristics concerning personality and career choice are the student's self-knowledge, interpersonal skills, perseverance and motivation that is linked with career aspirations. As to meta cognitive skills, the ability to think logically and critically, the ability to knowledge structuring in order to master the contents and create a whole picture and memorizing skills were the most emphasized elements. Finally, the awareness of the personal learning style and the ability to strive towards deep learning were essential elements in good learning.

The following chapters describe two important aspects of good learning experiences in accounting besides the student himself and his personal qualities. If the student is in the centre of successful learning experience, it can be said that the influence of the teacher and the influence of teaching methods complemented with self-study methods act as important mediators between the student and the learning experience. On the basis of data it seems that certain qualities in the teacher and certain methods are of importance in high-quality learning experiences in the accounting context.

5.5 Teacher

The influence of the teacher in learning accounting was emphasized in student experiences. The descriptions reflect the variation in conceptions concerning teaching in the same way as there was variation in the conceptions of learning. Some students conceptualized good learning as transmission of knowledge from the teacher's part and mainly the quality of this transmission was a question of the teacher's ability to do things that helped in transmission. Some students expressed the relationship between a student and a teacher using utterances linked with co-operation and some brought about more varied descriptions of deep interaction in learning situations between the student and the teacher.

> *A teacher should teach so that even a monkey could learn. (Jenni)*

> *If the teacher is well suited in the profession and devoted, he will find the ways to make the most thick-headed student learn. A teacher like that can speak about the topic so that everybody will understand. (Maarit)*

> *Co-operation between the teacher and the student should have the same aim, that the knowledge that the teacher distributes gets absorbed in students' heads. (Anneli)*

> *Learning is co-operation between the teacher and the student. You can blame both if it doesn't work. (Kaisa)*

> *A teacher should make students part of the class and to interact. No monologues. (Satu)*

- You have an intuition, like a telepathic connection to the teachers. You know what they might ask in exams.
- I always checked the aim of the course first. Then I thought that if I was a teacher, I would ask something in the exam that corresponds with the targets.
- Remember, I called you and you told me what I should study for the exam. And then it was in the exam! (Sari and Silja)

In the descriptions students expected the teacher to be able to teach in such a way that every student would learn. This was considered to be dependent on the teacher's ability to think what is good for the students. In addition to the teaching as such the teacher's professional competence connected with the pedagogical skills like the ability and persistence in explaining accounting issues in classroom situations was connected with this issue. A good teacher was described as person who knows a lot about the topic and is able to explain it in such a manner that students understand. It can be said that, in a way, the teacher becomes a representative of the whole accounting discipline.

Quite often I think whether the teacher knows anything about what he says. (Satu)

I took a course where we were in a computing lab and calculated. It really disturbed me to realize that the teacher explained the things incorrectly. Then he said that no, no, it's not like this and made a correction. He had been explaining a long time and only when a student asked he realized that he had calculated it all wrong. I found the course very laborious. If something is explained and I think it this way and then I should all suddenly change it – it's the same as if I had originally learned something incorrectly on my own and when I realize I have learned it wrong, it's very difficult for me to remember it and I need to concentrate a lot that it's not the way I thought it was. I learned nothing there. (Niina)

I estimate teachers on the basis of whether they can teach, whether I understand their teaching. (Anni)

A teacher should keep explaining at least 10 times if students don't get it otherwise. (Maarit)

The teacher gives meaning and reason for the subject. (Marjut)

The teacher makes the classes interesting. If the classes are not interesting, you don't want to sit there and then the whole topic gets connected with the teacher and you don't find it interesting. (Sanna)

Being able to regulate the amount of explanations and to take into account students' different cognitive capabilities were felt important, because it is possible to explain too much. If the whole class time was used to lecturing and explaining, the burden became too heavy and finally students felt they were not really learning, i.e. on the deep learning level. Also, it was important that the class time was used to go through the tasks and material so that the teacher was in lead and concretely helped student to develop their own understanding of accounting issues. This was seen as enhancing deep learning and also creating possibilities to reciprocal learning situation where students could - by asking questions - ensure they had deeply learned or understood something. The fact that the teacher repeated and revised was highlighted and appreciated a lot; the students did not automatically ask teachers to repeat and they actually consid-

ered it being part of the teacher's professionalism that the teacher was able to detect the need for revision in the class situation. This can be interpreted as enhancing memorization and understanding of the contents.

> *He explains things so thoroughly, so calmly and so clearly that all students learn if they just want to. (Riina)*

> *If I compare when I learn and when I do not learn, it's very much about the teacher's professionalism. How clear he is and whether he's talking the same language, the language that I understand. (Paula)*

> *His teaching methods are different than other teachers' teaching methods. He presents the topic using humour and examples… like here is a pizza and I share it in five slices. Examples are very simple. Even the most stupid student understands. (Maarit)*

> *I like it if the teacher says in the beginning that we go through these things. Or if there is a book, you can see the topics beforehand. It doesn't come as a surprise all suddenly that now we study this. (Hanne)*

> *It is possible to learn many difficult things if the teacher explains it again with an example or something. (Jenni)*

> *We looked very closely what the balance sheet items mean. I had never really thought of them. I had just mechanically balanced the accounts off. Without really understanding what they mean. (Riina)*

> *It was a final course and it kind of combined everything we had learned earlier. I finally started to understand all financial statements, balance sheet especially. (Jaana)*

The teacher's personality was transmitting in learning through the teaching style, which was mentioned of being able to improve the learning results and to increase the motivation of students even if the topic was not considered that interesting. Students expressed they wanted to see the teacher's enthusiasm and they wanted to see that teacher wanted them to learn. Enthusiasm was described in terms of concrete effects that were interpreted as having a connection with the importance of student learning to the teacher. The teacher's ability to perform in front of the students and to concentrate on the students was considered as a remedy for better learning.

> *I get the first impression quickly and then I decide if I like that person or not. Then I hear a story about him from somebody else and I get very upset because it is just the opposite comparing to my first impression and then I start thinking. I study the teacher when he talks in the class and if he says something that is not connected with the topic - I think those kinds of things. But basically I don't concentrate on that, on what teachers are like. (Anni)*

> *At the moment I'm studying something where the teacher's personality is anything but intriguing, but you can easily see how professional he is and how clearly he can express himself and I don't think his personality has any effect on my learning. But if the personality is combined with lack of knowledge and expression, then the teacher's personality affects learning. (Sanna)*

> *Everybody of us has got the same conception about a certain teacher's personality. (Niina)*

A teacher's personality is transmitted through the classes. (Tea)

A teacher's enthusiasm is contagious, it makes learning easier. (Maarit)

Some teachers are so vivacious, expressive and enthusiastic that they make students get interested in the topic. Of those kinds of teachers you can see how important it is for them that students learn. (Maarit)

Using effects is desirable. Everybody has experience of teachers whose monotonous speech will make the listener flag and loose interest – if not sleeping. (Maarit)

Many accounting things are boring to learn… in a way. This is why the personality of the teacher has a heavy impact. If it's very boring, explaining and explaining, you get tired of listening. Other teachers tell a joke every now and then and it makes you wake up. Then you get power to learn the next topic. In a way, some teachers are just so boring that half an hour feels a very long time. Humour helps. (Kaisa)

Using computers is actually bad, the teachers get lazy. Umm, maybe, I don't know. (Tuuli)

It's different whether the teacher is standing behind the computer or whether he moves around and contacts the students by asking or something. (Niina)

The impact of different teaching styles did not come as a surprise for students; on the contrary, they were able to understand that each teacher teaches using his personal style, which might or might not be suitable for a given student. To improve learning students were seeking for alignment of styles, i.e. courses that were taught by teachers whose teaching styles were known being suitable for their own learning style and personality. This knowledge had been acquired through personal experience in the course of the studies.

Teaching style is revealed in the course of time. In the beginning you don't see what kind of a person the teacher is, but when you follow the class for a couple of times you realize what the style is like. (Paula)

Since teachers are different, I sometimes find myself choosing courses on the basis of the teacher. That I realize that there is a certain teacher and I like his teaching style. (Jenni)

I choose a course on the basis of who is teaching them, it has an effect definitely. (Satu)

A topic can be interesting but if I know that it is that teacher, I don't take it. (Joona)

There are many teachers whose courses are such that I feel I must take them and then there are teachers whose course I avoid consciously. (Silja)

The question of responsibility is very important in defining what the teacher's role in the learning process is. The responsibility the teacher was ready to take was appreciated in student experiences. Whether the teacher was monitoring all the time that students were really learning was regarded important. Indifference was experienced as an antithesis for learning. Also, if the teacher showed that he cared about the student's learning, it increased the students' motivation. A demanding teacher was felt to increase a student's input and effort measures because in the opposite case, students could feel that their input goes for noth-

ing and that their efforts are not valued. This can be interpreted as a discrepancy between the learning targets and the assessment.

> *For learning it is very positive if the teacher follows the student learning in real time. (Maarit)*

> *Week after week he came to the class saying that 'It seems to me you didn't quite get it – again'. And then he explained it all over again from a different view point so that if you wanted to learn, you learned it. There was no other choice. (Sari)*

> *We realized that if it was very silent in the classroom, it meant that nobody understood anything. If people were talking quietly to each other, it meant that they had understood something… at least that much that they could comment it somehow. The teacher sometimes said that 'you are a bit too quiet - did you understand anything?' (Riina)*

> *This teacher has always prepared a paper hand-out for each class on the main points. Then there is also an exercise or two. Somehow it helps in understanding. You get a paper, you underline, you write down… It's a lot more effective. (Silja)*

> *It's good if the teacher is present and asks a little about the possible problems. In group situations I find it especially nice that the teacher contacts me and wants to find out how I am doing and if I am proceeding in studies. I want the teacher to be one step ahead and to notice if my learning is going in the wrong track. (Paula)*

> *Teachers should be helpful and responsible. If the teaching proceeds too quickly or if the students don't have a head screwed on the right way, it's a point where you need to turn to the teacher. (Jenni)*

> *He always asks whether everybody gets it right. He goes like 'Did you get this answer? And you?' and if not, then he goes them through. He really goes them through. Although… I'm not sure if it's a method suitable for higher education. I don't know if his methods are such that they are more in use in junior high or senior high. (Sari)*

What was considered important was the possibility to ask for advice when needed. This seemed to be very much depending on the teachers' personality; how ready they were to give help to individual students and how they addressed to them in speech. If students felt at ease when they needed to ask the teacher for help, they would do it, but in the opposite case they rather went for another teacher (even if he was not the course tutor) or to their peer student. This can all be interpreted also with the help of the above mentioned immediacy behaviour.

> *It really helps learning if teachers are ready to answer the questions concerning the topics of the course. (Anneli)*

> *I never took basics of accounting because I had a degree from business college where I had taken an equivalent course. I think the curriculum there is not the same, that there are some differences. Me and other business college graduates had problems in something. I don't remember where. Then we asked him if he could give us some advice and he was like no… Cause it's part of the basics. Then we asked another teacher who also teaches the same course if we should really know this and he said no because it's part of the follow-up course. Finally he ended up teaching it to us just in addition to the regular class. I don't know if it's his personality or his teaching style but I get it when he teaches. (Kaisa)*

Some teachers are like… 'I have explained it this way and if you don't understand, go and find out. I can't explain it anyhow else'. But I would really like to understand and try some other point of view. (Sanna)

The teacher really spoiled it all at the end of the class by saying that after we have returned the assignments he can shake off the whole course. We all felt very negative about him. (Kirsi)

Feedback was an issue that was raised in student descriptions. Only numerical feedback was judged imperfect, personal written information and comments were considered better because students were mainly worried about the possibility of learning erroneously or getting wrong information. A quick feedback on assignments and exams was mentioned to be highly motivating and it helped in keeping up the interest in the topic studied. If the students had erroneous conceptions, they felt safer when they were corrected and adjusted immediately. This created the feeling of being closer to study requirements on a continuous basis, and also gave a feeling of achievement and personal development. On the other hand, if students got the feedback proofing that they had learned something – the way they supposed the teacher had intended them to learn it – they felt the true joy of learning and achieving a target.

I keep repeating the same mistakes in accounting. I have the same mistakes in all assignments I have returned. (Kaisa)

If there have been many returned assignments in accounting and you never get to know anything about them, you do another assignment and make the same mistakes because you haven't even got the first one back. (Anni)

I gave my work to my husband and asked him to read it and comment it. I wanted to know if it had any sense. I guess I shouldn't have done it. I got so many suggestions for improvement. (Kirsi)

Last year there was a budgeting exercise. We got to choose the grade in advance by choosing the exercise. Of course we wanted to aim at the highest grade. But then we got it wrong and he only said that take the easier one. Then we just skipped the more difficult one without ever actually knowing what went wrong in it. (Jenni)

As to assessment, the method of assessment was not recognized as having much effect on learning as such, but it was rather recognized as having effect on student input during the course. Exam performance was very much seen as a teaching quality question. Assessment was mentioned to have an effect on the learning approach. If assessment revealed that the learning outcome was poor, then learning approach was changed. Sometimes assessment, an exam situation, revealed that students had thought they knew the contents but in an exam situation they realized they were not able to apply what they had learned. This was considered a wrong learning approach question.

Basically grades do not count but they motivate. If I get a good grade it sheers me up. (Paula)

Bad grades make me upset. I think too much of the grades. (Marjut)

In accounting courses it may be that if there was no numerical grade I might not be that eager to take the books before the exam if there wasn't a grade… thought it is not that important. Gee, I'm giving myself away… If I think of it, the grade has some meaning. (Vilja)

Doing well makes learning meaningful. When you understand, you find the true joy in learning and feel that you have learned something, got something. (Paula)

I would like to have an explanation in words on what the assessment consists of. (Anneli)

I'd like to see teachers crosscheck their exams, even occasionally, so that everybody would be treated equally. (Jenni)

It's reflected in my grade who has been teaching and what course. (Marika)

I was studying financial accounting. We had three exams. Two first exams…I had an excellent grade, the third one I failed. I don't know what happened then before the final exam. (Meri)

The excerpts above reflect different levels of conceptualising teaching and the teacher's position in the learning process. The different conceptions of teaching can be examined from the same viewpoint as the different conceptions of learning were examined in chapter 1.5. Indeed, it is not easy to explore teaching and learning separately since they are often both present in the same process. The model Leveson (2004) uses to describe different teaching orientations is applicable also when the findings of the present study are explored. For some students learning happens in a teacher-centered, content oriented context where teaching is seen as primarily transmission of information. For others learning is a student-centered process where learning and conceptual development are in the core of the process.

Marriott (2004) says that education helps students to achieve self-actualization. Intrinsic motivation for learning may not arise until basic needs have been satisfied. The teacher is a facilitator, helping the student to experience the real pleasure to be derived from discovery. Thus, this view emphasizes student-centred education based on active discovery, rather than on the passive accumulation of knowledge. The primary aim of education is learning to learn. Learning takes place more rapidly when a student sees the learning environment as relevant to the achievement and much learning is acquired through doing.

Teachers who were able to explain accounting topics in a clear and simple manner were considered effective from learning point of view. This can partly be interpreted as a matching meta programmes question; teacher's explanations and problem solving style corresponded easily with the students' styles, though it is evident that there are many styles present in any teaching situation. Brown (2006a) states that the quality of teacher influence can be explained by meta programmes' match. The ability to structure learning conditions can be put under the same phenomenon. The teacher's ability to structure learning conditions has been brought about by Leveson (2004), Bowden and Marton (2004), Marton and Tsui (2004) and Shafel and Shafel (2004).

The preference for clear explanations has been brought about in a study by Leveson (2004) which present the issue partly as a question linking to personality and to higher order thinking skills. The latter ones in this data showed students' search for structure and logic. Prior studies note that profiles of accounting students reveal their preference to structure, rules, logic, step-by-step explanations and deductive rather than inductive reasoning. Teaching a subject such as accounting with strong practical focus necessitates covering the factual and technical aspects of the discipline, although this does not preclude dealing with the discipline at an abstract and relational level as well.

The effect of teaching style has been recognized in prior literature. Hartnett's, Römcke's and Yap's research (2003) results emphasize the importance of instruction style in relation to student performance and motivation. The same can be stated on the basis of the data of the present study. Also, the importance of interaction and enthusiasm (immediacy behaviour) and direction and communication (structuring behaviour) that were highlighted in Hartnett's, Römcke's and Yap's research, can be seen emerging from this study's data as well. As to studies of teachers' personality types (Kovar et al. 2003; Nikolai & Wolk 1997), the results suggest that the majority of accounting educators seems to represent sensing, thinking and judging types. The majority also has preference for introversion. The lack of diversity in personality preferences may inhibit the ability of faculty to attract students with preferences that are different from their own, impact their ability to teach students to use skills that are not their strength and also, teachers' preferences for certain pedagogical methodologies are associated with their own problem solving style.

The conception of responsibility seems to be crucial to define the quality of learning. This was also arisen in Lord's and Robetson's (2006) study. Seeing the lecturer being responsible for learning leads to reproductive learning approaches and the other way round; seeing the student responsible increases the use of deep learning approaches and enhances learning outcomes.

Assessment seems to be a driver of student learning in many ways. It has an influence on students' approaches to learning which affects the quality of their learning outcomes. Extant studies (Byrne et al. 2002; Davidson 2002) claim that students' perceptions of the demands of the assessment have an influence on their attitudes and strategies of learning because they choose them in line with the assessment system. Deep learning strategies are utilized if the assessment system is such that it requires deep learning approach. As it became evident on the basis of the data of the present study that students associate good learning with deep learning, assessment seem to be a crucial factor of steering the study approach and thus student's experiences of learning. Marriott (2004) points out that intrinsic rewards are important and the absence of extrinsic rewards means that the students need continuous knowledge of their progress in the form of feedback. The method of assessment is also crucial. The data indicates the need of continuous assessment.

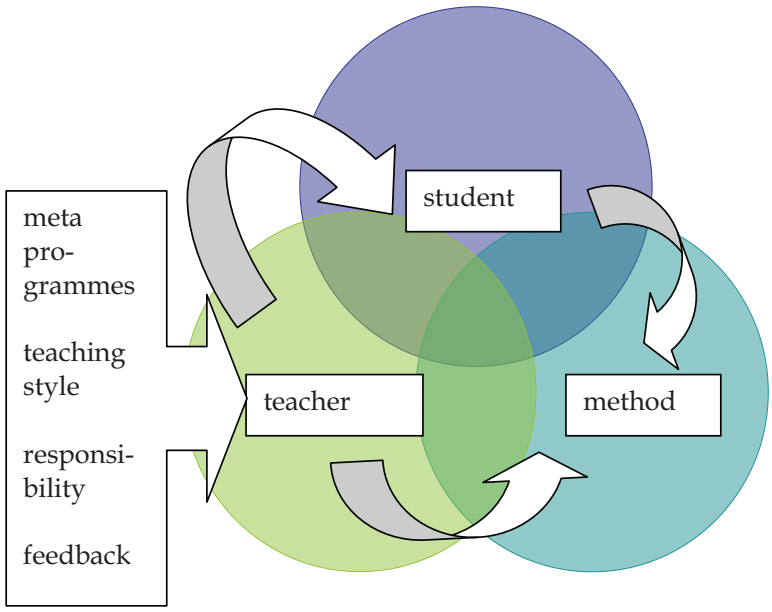

FIGURE 19 Key teacher characteristics in learning accounting model

In sum, the conception of teaching and the role of the teaching in learning can be described in the same way as the conception of learning was described in chapter 3. The teacher is an important mediator in the learning process and there are certain qualities in the teacher specifically that are in a key position as can be seen in figure 19. These include, concretely, the ability to understand what is good for the student, professional competence, ability to regulate the amount of explanations, ability to take into account students' different cognitive capabilities, ability to detect the need of repetition and revision, teaching style, enthusiasm, ability to perform, responsibility, concern, approachability and continuous feedback. On more general terms, it means that it is important for the teacher to be able to support those higher order thinking skills and those learning approaches that are suited for quality learning. The arrows in figure 19 describe the influence of different elements on each other. The teacher has an influence on the student and the teacher also decides the method of learning, but the method can also be partly defined by the student.

5.6 Teaching methods

In students' diaries and interviews good learning was often described as a use of a certain teaching or learning method. Some teaching methods were raised in the descriptions because of their ability to produce better learning experiences and outcomes. However, if the teaching method, usually seen as a teacher's choice, was not enough or suited, there were other methods available in self-studying that students described as auxiliary or as methods that they used to 'really' learn.

At one end there were students who thought that what they called traditional study methods – showing that they had acquired some experience in many kinds of teaching methods - were the best. By traditional they meant something that did not require so much their own activity or independent studying though at the same time they were willing to admit that independent studying actually is effective from learning perspective. But they felt that since the teachers are professionals their task is primarily to distribute knowledge and act as a supporter in the learning process close to the students. This can be interpreted so that even if student centred teaching methods are used; it does not imply that the teacher's significance as a presenter of accounting contents would be minor. On the contrary, it could even be interpreted that in these descriptions the teacher is an important professional model for the student.

> *In accounting teaching methods cannot be too modern. Doing is important and you need the teacher's support. (Anneli)*

> *Knowledge is supposed to be distributed! All the information teachers can distribute is not found in the books. (Maarit)*

> *Traditional teaching style is the best! Self-studying is effective but it feels that in order to succeed in studies you should be an expert in all the fields. Since there are professional teachers at school why couldn't they distribute the knowledge? At school we are learning the basics and only later practise will teach us better. (Maarit)*

At the other end there were students who showed reliance on their own ability to process and did not want the teacher to take control over it. This issue can be linked with the conception of teaching as well as with the different conceptions of. If the conception of learning is based on knowledge transmission, it may support the use of teacher-centred methods. On the other hand, if the things to be learned are simple enough so that they can be learned effectively by mere knowledge distribution, then the methods based on distribution can actually be the most effective.

> *If the teaching method is such that we go through the topic, then exercises, then the answers, very quickly, answers are somewhere, look at them, if at that point you don't understand why you didn't understand, there is the right answer, but why is it right. And you don't have time to ask and you can't ask because you haven't understood what you didn't understand. (Heli)*

Some teachers trust that students can understand things on their own. You realize that some teachers talk very little in the class. They just say a couple of things on topics handled and then they let students find out and then at the end we talk it over. They just act as an advisor. Of some you can say they like talking a lot and giving information. But they won't let students talk in the class. (Meri)

According to the data, group work was considered a good learning method because it offers an occasion to learn from other students and provides a supportive atmosphere in learning. In group learning situations, talking to others and discussing different ways of comprehending accounting problems seemed to help understanding them, as well as negotiating a common interpretation. However, group work was appreciated especially for its by-products. Students expressed that in working life and in accounting career they most probably need to work in a team and they recognized they learned how to take responsibility and, on the other hand, they learned how to regulate themselves and their effort measures. The ability to get along with different kind of personalities was seen important and practising this was very easy to realize in groups that had been designed by the course tutor.

In lectures there will be only more questions rising in my mind. In small groups when we calculate and ask the teacher and get the answer… then I get insights. (Paula)

When I tried to complete the assignment alone, I couldn't manage. Then I tried it with a pair and all suddenly we finished it excellently. I think there is a clear-cut difference whether you work in a group or alone. Or either, you need to have very good basics to manage on your own. (Tuuli)

I think group work has been the best way to learn. When we have been sitting together and asking how other people understand it. I remember those nights when we were sitting on school corridors and completing a group work. And the janitor came to ask what we were doing there. Ha-ha. (Silja)

If there is somebody that you usually work quite a lot with. It helps a lot. That you can ask someone. Or do together. (Anneli)

I learned well when there was some theory and then practise. Also, I learned well in group situations where I had a chance to ask others whether they have had the same kind of problems or whether they get stuck with the same kind of problems I do. (Sonja)

I ask a lot of questions from other people in the group. Like how they have understood it, then I search in the net, or take a book, or just ask the teacher. (Hanne)

There have been many methods in use, I remember especially well a learning situation that was organized in the form of a meeting – I think it was about budgeting - and everybody had a different role to play in that meeting. I think it worked very well and I noticed many people remembered it afterwards, because they had to play some role and use the material from that point of view. And it was easy to understand the whole that way. (Marika)

- Ok, week number two.
- I thought I invented a great method of writing this down. But it turned out to be erroneous.
- Don't throw it away yet…
- What was the final result concerning Sunday?
- Sunday, you have extra hours… two hours. Then weekly overtime…

- There are one and half extra hours.
- Oh yes.
- Ok, so first one hour and a half. Then two and half.
- One hour and a half there.
- I'll erase this. I have a better system here beneath.
- One hour and a half for weekly overtime rates and one hour and a half for Sunday rates.
- Yes. So they all appear at the same time. (Mikko and Sonja)

On the basis of the data, the effectiveness of group work can be interpreted basing very much on the communication and collective problem-solving. As to learning accounting contents as such, the usefulness of group work was not so evident. Group work could slower learning if the student himself knew the topic very well and thus saw other students as mainly a hindrance to learning. In opposite cases, other students could be considered a resource. On the other hand, if a student who knew the topic needed to explain it to others, it was felt to increase deep learning. However, there was one meta cognitive disadvantage often noted when talking about group work. Students expressed that they got no holistic picture on the topic in group work because they divided the labour and, as it comes to the whole, they just read the whole report but did not really see what was behind it. Only the part they had prepared themselves became familiar but the synthesis was missing.

I like to calculate with a friend. In a group it is difficult.(Timo)

You can't do things like bookkeeping in a group. (Joona)

- It always happens in group work that there is a small section for each member. It doesn't happen in real life that all together would write it – and it can't work that way. Or maybe it can in pairs or among three people in a good team.
- You end up knowing nothing. You read your report but you actually have no idea of those let's say two other parts of the report. You just know your own. It's familiar. You have studied it many times, many different texts. You have written and rewritten and such. You have explored. You know about it. And then there comes the rest of the presentation – of which you have absolutely no idea.
- I must confess I don't even read common reports. Really, I don't. If it has many pages I don't read it, I'm not interested in it. All the same what others have done.
- It usually becomes my responsibility because I'm very strict with the punctuation. I get very anxious if something is missing. I need to read it. I don't dare to return it if I haven't read it. This is why I read them. But if some time somebody else has taken care of it, I haven't read it either.
- It may be that you just read it but you aren't really thinking what is said in it.
- Yeah, and even if I read it I wouldn't really remember it. (Niina and Sanna)

Being left without a group was considered emotionally difficult and students would like to see someone being responsible for checking that this does not happen. This is true especially with students whose personality traits are more introvert. Active teacher role in the formation of groups was seen of importance because it is an essential element of learning that a student feels being part of a group. There was a lot of anxiety expressed in group work descriptions because of other people – whether they do their own share or not. On the other hand, there was also a lot of anxiety involved in working alone because then there is

nobody to tell what to do and no external time pressure. Or, when there is a difficult phase at work when working alone, there is no one to give positive encouragement. In group work students felt they are responsible for someone else also and not just for themselves. This could be expressed more broadly that any co-operative learning methods were seen as a safety-net in cases students faced difficulties in their studies.

> *For learning it is essential to feel that you belong to the group; that you are not left alone. (Maarit)*

> *The teacher should see that each student finds his way to some of the groups. (Jenni)*

> *You may get a feeling that you just can't do it. That you just let it go. But things should go very wrong that you would actually have the courage to tell your friends that you are not able to take care of your share of the group work. You can't do it. But if you are on your own and feel you can't finish a course, well, you can just skip it. No one else will suffer, just me. (Paula)*

> *You learn how to cope with the stress. Like if somebody hasn't done his share, are you going to stress and what you are going to do. Whether you just don't care or whether you do it yourself. It helps you to prepare to working life but what comes to learning… that you would learn the substance… it is not so useful. (Niina)*

The experiences on problem based learning were good for its good learning results and very much for the same reasons as group work or any other co-operative learning method – with the exception that in problem based learning students did not seem to suffer so much from deficiencies in content learning. In problem based learning students expressed that they learned to behave in the same manner as in corresponding real-life situations. The method also seemed to be able to create intrinsic motivation to study more because the amount of studying was not controlled by the teacher but by the student himself. Uneasiness was not created by the fact that the learning method might be new, or that it was a difficult method because the tasks were not clearly defined in advance, but by the fact that some essential information concerning the contents might be missing or erroneous. Also, if the method was new, the students might have felt that it was not easy to work in a group or present own ideas, but afterwards they admitted that presenting in front of the group was actually a very good exercise in accounting. If the use of problem based learning had been too extensive, students felt there was no time to absorb and deep learn but all energy had to be used to writing reports. Also, the need to get feedback of reports was clear. Extensive and personal feedback was mentioned to improve learning outcome.

> *I think PBL is good, not in everything but sometimes when it's not used in abundance. (Tuuli)*

> *I think preparing PBL material has been good because I actually got excited about the material and really started to read those things… And then my reports got quite heavy, ha-ha. But I realized I didn't have to read for the exam because I had already studied then. In a way I had*

to study but then I realized I had done it because I wanted. When I wrote the report I got the things organized. (Sari)

I would like to see more PBL at the end of the studies because when you have to write it, it actually measures whether the student has really learned. Not just the numbers. (Anni)

Problem based learning works very well but if you have not prepared in advance, it won't work. We just try to think, among students, what's right and what's wrong. The teacher should be more involved and he should tell what's right and what's wrong. (Jenni)

Lectures are the worst method of learning. I learn best by doing. I have liked PBL because when there are more people, especially when we analyse or think up ideas, there are so many viewpoints and you may realize that you have not even thought of them on your own. That all those things are related to the topic. It gives a more varied conception. On the other hand, there is always too little time to tell about the ideas and you learn little of what others have done, you only learn what you have done yourself. PBL is good in bringing up ideas but not so good in synthesis. (Paula)

The data reveals that self-study methods were valued as an effective method of learning, especially in cases where teaching methods had not suited or when the life situation was such that it was not possible to participate in the teaching at school. Some students treated the use of self-study methods as a learning style question - their learning style being such that it was easier for them to learn on their own. The possibility to work from home at flexible hours was regarded as improving learning experiences.

I learn well on my own. Better than in the class. (Joona)

I need the get the basics at school, at home I learn deeply. (Satu)

You learn better on your own. Then you don't look your friend's answer or a model answer. (Sanna)

I studied a couple of courses at home. I participated only a few contact classes. I had good grades in both courses. Not a bad result. (Kirsi)

I like it when I have room for my own thoughts. It's not necessary to go all material through root and branch... Rather, I'd like to get an exercise to be worked on for next class. And then when everybody has done the same we could bring ideas for next class. Everybody has their own insights and then you get a broader picture. (Paula)

I was so tired and the teacher's calming and monotonous tone didn't help at all. I had to leave in the middle of the class and go sleeping. Next morning other students told me they had gone through the cash flow statement and I really regretted having left because it was just the topic I had been looking forward to. Once again I had to start studying on my own. (Katriina)

Self-studying gives freedom; you can study when it suits you best. (Silja)

Students expressed that the contents in accounting were often so extensive that it was not possible to study everything using self-study of virtual study methods totally, but these methods were mentioned as an important auxiliary. Self-study methods supported other teaching methods used at the same time. Lecturing and demonstrations alone were not really helpful because students felt

they could not remember the things afterwards, especially if it was not about something they would have needed every day or every week. If the material was found somewhere else later, they felt a lot more secure knowing that it was possible to get back to the material at some point.

> *Accounting is not my strongest subject. I can't take virtual studies because I need so much support. (Meri)*
>
> *Some accounting courses are so heavy you couldn't study them virtually but many times the virtual material has been so good you can accomplish a course even if you don't participate in all the contact classes. (Jenni)*
>
> *If something is not clear, I check it in the book or in the net. (Sonja)*
>
> *I take advantage of my own networks. I ask experts how they solve problems in their work or if I have a source material like a professional magazine, I look it up from there… these kinds of things. (Kirsi)*

The need to write both in the class and at home in order to improve learning results was typical for good learning descriptions. In class situations, writing was described as an aid used to help in concentration and in linking speech and understanding and learning, though there were also opposite cases where writing was totally destroying the ability to concentrate on the speech. Writing was described especially as a method that helped students to organize their own thoughts and memorize things. It was mainly used to improve mental processes like meta cognition and structuring of knowledge. What becomes evident from the descriptions is that writing was important as a process as such, not because of the outcome, i.e. the actual notes, because the notes could have been available somewhere else. What made writing crucial was its ability to transfer the learnable material through the student's own mental processes.

> *I personally do it, because I get carried away if I don't constantly concentrate on what is being talked about. I take notes in every class just because I want to keep up. (Paula)*
>
> *I have noticed that if I don't write, I draw and when I draw, I loose myself so totally that I don't remember anything of what has been talked about. Writing keeps me in touch with the topic. Even if I never read my notes afterwards, because the same things can be found online, I still write in order to absorb something in the class. (Anni)*
>
> *I have tried to only listen, just listen and not watch out of the window or draw, not even take the pencil. But then I realize I do something on my own. I just cannot only listen. Won't happen. (Satu)*
>
> *I learn well when I have paper and a pencil in front of me. I do homework quite seldom but I learn in the class. (Kaisa)*
>
> *I concentrate too much on writing and then I miss the speech. At the end of the sentence I realize I have no idea of what we were talking about. This is why I just try to listen and listen and keep awake. (Sanna)*
>
> *I needed to write down everything in order to understand. And then I read my own notes. This proved out to be a laborious way to learn. (Katriina)*

I always wrote. And then I thought that I would have the teacher's notes but because I hadn't done them myself they didn't help. (Sari)

When writing gets to the point where it happens quickly and easily I feel I learn a lot. (Silja)

If there are difficult parts, I need to do more. Then I write more. I have huge piles of notebooks. I write my notes from books. Actually, I almost write those books afresh but... but... then I learn. And if something stays well in my head, then that part I can pass more quickly. (Riina)

I know it's better for me to write during lectures because I know that otherwise I won't remember anything. Then I often read my notes at the same time I check the e-learning system material. I check my notes and I write things that are not in the e-learning system – plus that I write those things that are readable there like titles. But I don't write all those things projected but just something that explains me the topic more or an example. (Vilja)

In accounting, exercises are very important in learning because the nature of accounting as a discipline is such that learning - to a considerable extent - happens by doing the exercises in practise. The descriptions of learning state that doing the exercises in the class and getting the teacher or peer support at the same time was essential for learning in the first phase when the new material was introduced because class time offered a better possibility to concentrate on exercises in a deep way. Using the class time to mere lecturing was considered a waste of valuable resources, especially because the class time was too long for listening only.

Doing is important. Calculation and doing. Doing a lot. (Hanne)

Doing it yourself…that students are challenged to do as much as they can on their own. And then going it all through together. I don't know whether it would help to create some kind of pressure like making the students do it on board in front of everybody. That you should be forced to do your best. Like with younger students. Ha-ha. (Silja)

I like it when we do a couple of calculations together and then I can continue on my own. I need an example. (Heli)

Examples are good if we go them through so that there is a question, one by one, on some smaller part of it. That you don't get all answers at once. Students need time to think as well. (Joona)

If there are exercises in the class, we calculate them and then we check them. I like it. (Henri)

Exercises should be explained in the class with the teacher. Accounting teachers often just go them through very quickly by showing the correct answer only, but they don't treat the topic deeply enough. (Anneli)

First you listen very carefully. Then you watch out of the window. Then you realize you were supposed to listen. Then you watch out of the window again. Listening to somebody speaking, you may be able to do it for a while if the teacher keeps it interesting. But if you do the exercises, it is there where the learning happens. Especially because when you have the paper and pen you cannot watch out of the window. You don't wonder around. It won't happen. You think of the topic and you learn it. (Niina)

However, exercises were also described as an effective self-study method that was easily connected with motivation. Exercises where students knew in advance the correct answer but needed to struggle towards it on their own were experienced to teach a lot because it would have been psychologically very difficult for the student to leave the task to the teacher until the student had found the way to end up with the same answer. Thinking of the process in a way where the focus is put on how to arrive in the answer rather than the answer itself was considered very effective.

> *I sometimes stayed here at school for a couple of hours after the classes. When I really concentrated on the exercises and when I thought about those things, I learned. (Paula)*

> *When I started to do it, then I got some insights and it started to proceed quicker. When I had done a couple of months first and then, when I started to do longer periods at once, I realized I finally remembered it and I just went on clicking. Then I suddenly realized that oh, I finished that month already. (Maiju)*

> *I started with a direct cash flow and did it twice but I couldn't get it right... The second version – I tried an indirect one but couldn't get anything out of it either. Then I studied all the regulations on direct cash flow once again and finally got it matching. I got so excited I draw up the indirect one as well. When I got it done I did the direct one for the company I work for. It was not simple but I thought it was good for me learning it because it challenged me to really get down to it. I can't think a better way to learn it. (Kirsi)*

> *Now that I think of it afterwards, the way how I could have understood how theory and practise are linked together would have been a pile of receipts. Had I been given it in accounting basics and the whole thing would have started by manual organizing of receipts, I think I would have learned it better… I would have wanted to learn the logics for organizing the receipts, then the entries, then the printouts of monthly reports and finally the financial statements and all notifications. (Kirsi)*

The meaning of own working life related experience and learning by doing were effective in learning accounting. Students expressed it was useful to work while studying because they encountered the things they had studied immediately at work or they could even actively search for those things they had studied at workplaces. When learning broader concepts like analysis skills, students felt it easier if it happened in a context they knew like the company they worked for. Being able to evaluate own tasks and routines from a new point of angle improved learning. In the diaries or interviews of older students, the issue of life-long learning was emphasized. The conception of life-long learning embedded in the student's learning strategies produced good learning results, because the students learned better when they had acquired some practical experience on accounting and could thus use their own experience and background while studying. Especially if they could ask questions relating to their own practical cases enhanced learning outcomes. Students who based their studies on prior work experience could often see extended study contents more easily and accept that there were different standpoints to accounting.

> *Never have I been in the exam without preparation. Maybe I hope, mostly, that I learn something but I have noticed I learn it only when I do it in real life. (Anita)*

I have learned to interpret financial statements but I didn't learn it at school, I learned it working for the student's union. (Kaisa)

I had done something at work. I didn't know in theory what I was doing. I knew what I was doing in practise but I didn't know any words for them. In a way, I knew what I was doing but I didn't necessarily always understand what I was doing. Here I have recognized that this is this and it has been very easy to learn. But my motivation comes from the fact that I did this and that five years after senior high. (Vilja)

In the analysis course we had to analyse the financial situation of our own company. I got a totally different point of view to this task because I was analysing a company I knew – comparing to an unknown company. It is very hard to do a deep analysis for an unknown company whose operations are not familiar. It has been very interesting to evaluate your own company and re-evaluate your own routines. (Kirsi)

I have experienced that I learn well when I have some background, like my work experience… that the things we learn are such that I have experienced them on the personal level. In a way, I have the ground and now I just add the finishing touch. That I get the explanations from the teacher, I have all the documents and combining them all I learn well. (Jaana)

Payroll was discussed on a general level but yet… there were many things I didn't know. And I had done that kind of job for many years. My real-life experience had been quite narrow after all and concentrated very much on using the programmes. (Katriina)

I was put in the middle of a chaos and I just tried to figure out. I didn't admit to anybody that I wasn't quite sure what I was doing. I just took the common sense and books in use. And I managed, even without bad mistakes. During the first years I often had dreams on accounting problems but when I woke up in the morning I knew how they were supposed to be solved. (Heidi)

Practical training was described as an important experience in learning the same way as previously mentioned general work experience. However, the descriptions of practical training differed from general work experience descriptions in that the gap between real life requirements and studies was more highlighted in practical training descriptions. One possible explanation for this could be that practical training was probably more professionally oriented and the reference point was more in accounting professional skills than in general work experience where the requirements did not necessarily exist at all. Even if students had studied all possible courses in accounting the application of accounting theoretical knowledge into practice in a professional setting was harder than expected. On one hand, practical training was experienced as improving learning a lot, on the other hand, it also revealed gaps students felt they had – not to talk about the fact how hard the actual accounting work proved to be. This is actually the same phenomenon that could be seen in the definitions of learning where learning in the relative sense, i.e. comparing to professional standards, was depicted as insufficient even if the learning level in the absolute sense of the word was experienced as quite good.

Now that I'm doing my practical training I have noticed how much I have to learn. This has been a hard winter. (Silja)

I had studied accounting theory quite extensively. I had taken all optional studies in accounting and any studies that have a link with accounting. Despite this, or because of this, putting the theory and practise together was a shock. (Heidi)

I did my practical training last summer in accounts receivable. It was boring. But I learned there - during those ten weeks - more about accounting than I had learned, umm, when did I start business college, umm, 2001, during those seven years. (Joona)

Before the practical training I so called studied, but without knowing how things relate, and this is why my learning was so superficial. (Anita)

Now that I am at work, I feel that studies are somewhere in the background. Even if I use the knowledge all the time. I should start my project work but I can't get it started. I can't even open a book. I'm totally exhausted. (Jaana)

Accounting is not so black and white, not even for those who have been practising it for a long time. In a way, this made me more confident; to realize that even those who have a longer experience are not always aware of every single detail you can encounter in this job. (Tea)

Working for an accounting firm is challenging. On the other hand, I still think that this work is not hard. When I was in practical training, I often wondered if I understood things this well or if I just was not given any real challenging work. 'Cause I thought that I had learned what I had been taught. (Pasi)

The descriptions of teaching methods seem to reflect what students consider as their learning goals. If the goals are very content-oriented and if higher education institutions are cramming their programmes with technical content at the expense of broader and more general aims, many students conceive learning as reproducing rather than as making sense. In these cases it is possible that students believe teachers are responsible for the learning since teachers select the content, present it and test whether it has been acquired, rather than the learners being responsible for their own learning. (Milne & McConnell 2001.) On the opposite cases, students are encouraged to achieve life-long learning skills. It can be seen from the descriptions that quite many methods were discussed in the data. This implies that a single teaching method cannot alone crate conditions for good learning. This result has been found in a study by Bonner (1999). Some accounting learning studies (Braun 2004; Gammie et al. 2002; Hall et al. 2004) state that accounting should move away from procedural tasks and memorising. This becomes evident also in the present data. The methods that seem to work best are the ones that develop skills.

The importance of group work was evident on the basis of the data. Though there are extant studies on group work (Laan et al. 2007; Gul & Hutchinson 1997; Lancaster & Strand 2001), they have not got the same result. As to problem-based learning, the pros have been evidenced by Hansen (2006) and Milne and McDonnell (2001). The results of this study also highlight the efficacy of problem-based learning in accounting. On the basis of the present data, there can be some gaps between the different learning goals, i.e. generic skills and discipline specific skills, and their acquisition level when group work methods are in use. The strength of problem based learning can be interpreted in being both in group work and in its ability to present contents as a coherent whole. It

has been evidenced that active student engagement has impact on the development of lifelong learning attributes and deep learning experiences among students. Teaching methods that put student in the focus of learning – like group work or problem based learning - were highlighted in student descriptions, though in some occasions a teacher-centered transmission method was considered the most effective.

A common denominator for effective methods producing good learning experiences is the co-operation between the students. Co-operation can also be seen as increasing the social aspect of learning, which in the light of student experiences is very important in learning accounting in addition to the content aspect. However, teaching methods alone do not define the success of learning process because they are complemented with efficient self-study methods. This result is thus in line with Kern's (2002) result stating that active student learning tasks do not necessarily come at the expense of discipline-specific knowledge. The importance of generic skills has also been brought about in studies by Arquero Montaño, Jiménez and Joyce (2004), Ballantine and Larres (2004) and Feldman and Usoff (2001).

The connections between linguistic ability and learning accounting were found in the present data. The meaning of writing and linguistic performance in general has been found by studies (English et al. 2004; Ashbaugh et al. 2002; Davidson et al. 2000; Feldman & Usoff 2001) and more precicely in the field of accounting by Arquero Montaño (2004) and Baird (1998). They all recognize that language is used to know and understand a subject, accounting included, and to achieve a deep approach in learning.

The importance of exercises – and of examples provided by the teacher to some extent - in learning is one of the core elements in successful study method descriptions of students. This can be explained by the nature of accounting as a discipline requiring the development of skills on the practical level and having a highly vocational focus. The meaning of exercises has become evident in prior studies of Marriott (2004) and Tempone and Martin (2003).

There is a lot of learning happening outside the scope of teaching or teaching methods. Students learn on their own to add to the teaching because it may simply suit their learning style or life situation better. The nature of accounting as a discipline emphasises the need to practise by doing concrete exercises but meta cognition was also improved by writing. Self-studying was connected with deep learning, the formal teaching may be an introduction to the topic, but the deep learning often happens by adding the self-study methods to the learning process. Learning by doing, whether it happened in a normal job or in a practical training period, were both important ingredients in addition to formal education, because they connected the learned items in real life, though sometimes in a manner that produced an occupational reality shock. However, even in those cases the learning outcomes were good, only the attitudinal effects can be negative due to exposure to professional requirements. The importance of self-studying or self-learning has been evidenced also by Dowling, Godfrey and

Gyles (2003), Dunbar (2004), Evans (1998) and Vamosi, Pierce and Slotkin (2004).

The gap felt between skills and requirements can be interpreted as occupational reality shock. The prior research (Byrne & Willis 2005; Danziger & Eden 2006; Marriott & Marriott 2003; Tan & Laswad 2006; Worthington & Higgs 2003) suggests that when students proceed in their studies, their perception of accounting may change – even in a less favourable direction since they get more information about the career than they had at the stage when they chose their line of study. An exposure to the profession can have an adverse effect making the students turn away from the profession because workplaces may present a glossy image and promising unlimited career potential in recruiting situation, which then later turns out to be unrealistic. Although students studying the subject have a less negative image of accounting, they still hold a traditional view of the profession and of the work itself.

Martin and Wilkerson (2006) also describe the negative effects of internships. They suggest that by strengthening the professional and business context of accounting students, an internship experience fosters a more active and independent learning and problem solving perspective in the students. The stronger the business and professional background possessed by students, the more confident and motivated they will be to take an active, independent role in their education. However, the internship experiences enhance student knowledge and skills but do little to improve motivation. Thus student post-internship performance may be affected positively by the knowledge effects but negatively by the attitude effects, resulting in an ambiguous overall effect. Internships are experienced more career-enhancing than performance-enhancing by the students even though they have been evidenced to do little to strengthen their desire for a career in accounting. This implies that it is not advisable to expect post-internship performance to unequivocally improve as a result of an internship and that any improvement in performance is more likely to be associated with knowledge effects than attitude effects.

To sum up, what is true concerning the conceptions of learning and the position of both the student and the teacher in the learning process are also, at least partly, reflected in what students consider the best teaching methods (figure 20). The methods usually mentioned were group work and problem based learning and also the extensive use of exercises. On the other hand, students were able to include additional methods that they used on their own to improve the quality of learning. The impact of work experience and practical training were important in learning accounting. In all, both the teacher and the teaching methods act as important mediators in good learning while the student is in the focus of the learning process. As to the teacher, it is important what the teacher does in learning situations. The teaching methods chosen by the teacher can be complemented by effective self-study methods chosen either by the student or by the teacher in order to improve learning outcomes.

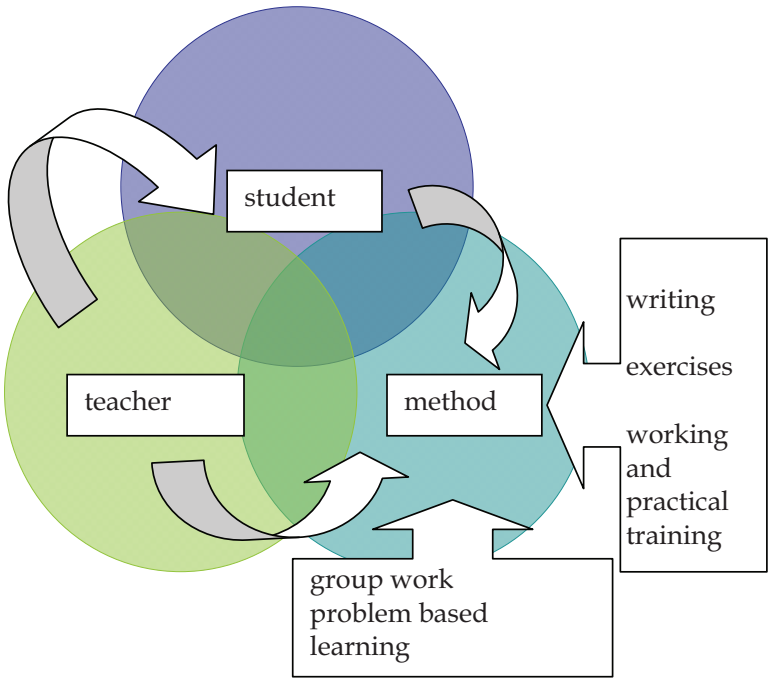

FIGURE 20 Key method characteristics learning in accounting model

6 DISCUSSION

Success in studies and good learning outcomes are of primary importance to students, teachers and the educational institutions because failures create both financial and emotional burdens for the students and resource and performance implications for the education institutions. This motivated the present study to concentrate on exploring good learning. The context of learning in this study was the discipline of accounting. It was assumed that good learning experiences would improve the outcomes and performance.

It can be seen that many of the results of studies on the factors affecting student learning or performance are, indeed, conflicting. A reason for this could be that it can be difficult to define what learning, outcome or performance actually are and how they are interlinked, how they depend on the context and what their key elements are. What also seems problematic is the fact that performance in accounting has often been studied in the light of examination performance or grades, which can, of course, give valuable insights but is not sufficient in the light of current learning theories. This is why the purpose of this study was to explore learning through the experiences of students. It was assumed that what finally counts as good learning in accounting is the way how students experience it. In order to reveal this kind of first-hand knowledge of the subject under investigation, a phenomenographic research method was chosen. The phenomenographic method has been especially developed for researching learning and it is considered highly practical in exploring learning in higher education context.

Since conceptions of the phenomenon under scrutiny are very important in a phenomenographic study, the conceptions of learning in the accounting context were first defined for the present study. This was seen important because there is a connection between the conceptions of learning and certain key issues that were raised when the experiences of good learning were mapped. The learning conceptions ranged from the very bottom level conceptions concerning increase and memorization of knowledge to more complex level conceptions concerning acquisition and abstraction and also to higher level concep-

tions including interpretation and personal change levels. The three last mentioned can be considered being relevant in the constructivist learning view. If learning is defined as abstraction, interpretation and changing as a person, as it is in constructivist categories, then it inevitably has some implications on how we define the learner and how we see learner positioning in the learning process. Constructivist learning theories assume that a learner cannot be a passive recipient of information, but rather an active and participative partner in the learning process; someone who consciously takes well-grounded decisions concerning his own learning process.

However, it was not only learning in the absolute sense of the phenomenon that was seen important in the light of the data. In addition, learning on the relative level, i.e. in comparison with what we could call the expert or professional level, was an important part of the learning descriptions. The results of this study suggest that there could be a discrepancy between these two learning experiences. It is possible that personal learning experiences as such are good, but this does not yet necessarily guarantee that the students would judge themselves as being on the required level of expertise needed, for example, for working life purposes.

Since the aim of accounting education is to produce future employees for a variety of accounting tasks, educators need to be able to improve the learning experiences also from the professional point of view. This is especially important because the standing of educational institutions with regard to society and business life has experienced a change towards a much less isolated position; educational institutions are expected to produce prospective work force for expert tasks, such as accounting in this case, and educational institutions' whole existence depends on their ability to fulfil this task given to them. It is thus possible to conclude that learning in the absolute sense is a necessary condition for good learning experiences but it is not a sufficient condition. In addition, good learning experiences with regard to the professional expert level are also needed.

The purpose of this study was to illuminate what is included in the conception of good learning. The results of the study suggest what the core elements in learning accounting in higher education context are, as well as what the relationships between these elements are, in order to understand what kind of learning process in accounting produces good learning outcomes according to the students' own experiences. Learning accounting is seen as a dynamic model where some of the key attributes are controllable by those parties that are involved in the learning process. This is why it was considered necessary to be aware of them.

What is presented here concerns only learning of accounting. Learning in general is seen as highly contextual and it is assumed that disciplines differ from each other as far as the key elements in the learning process are concerned. The purpose of the synthesis of this study is to increase the understanding of the crucial components in learning accounting and the relationships between

them, link the findings with relevant theory and also give some concrete suggestions for improved learning and teaching experiences.

6.1 Main results

The frame of reference and the starting point for the present study were taken from extant research work in the field of learning accounting. On the basis of the prior literature, the material in the data was divided in three main categories of description in the learning accounting outcome space. These elements, their contents and their relations are depicted in figure 21. In the centre of good learning experiences is the student himself. What is surprising is that the student's role was crucial even in the descriptions of those students whose learning conception was based on transmitting and reproduction rather than on constructivist learning categories.

The role of the teacher and the role of different methods used both in teaching and in independent learning can, on the other hand, be seen as mediators between the student and the experience of learning. These three key elements are discussed more in detail in the analysis that follows. At this point, however, it needs to be pointed out that if the conception of learning was based on the non-constructivist categories of learning, it had an effect on how the role of these mediator elements was seen in the learning model, i.e. the questions of responsibility, teacher's role, preferred teaching methods, etc.

Moreover, at this point it is also needs to be underlined that there were certain relationships found between the different elements. This is actually a typical feature for a phenomenographic study outcome space. With regard to the teacher, it became evident that the influence of the teacher in relation to the student was significant, but this was not the case the other way round; the influence from students to the teacher was not seen of great importance and the respondents did not produce any evidence that they even considered it desirable. However, the relationships among students themselves played a more important role in learning accounting.

What makes the position of the teacher interesting is that the meaning of the teacher in the teaching process was highlighted though students did not see themselves having possibilities to influence it. The most efficient teaching methods were seen to be the ones that heavily rely on a co-operational setting where one could easily imagine that the role of the teacher is less highlighted than in other, perhaps more teacher-centred methods. Rather than being controversial, this may be a typical feature of accounting as a discipline. Even though from the learning point of view the ability of self-study and the support of peer students are very important in the learning process itself, it may be that from the content point of view the role of the teacher is essential, because accounting is very much seen as including a great deal of factual content and technical substance and in need of numerous explanations meant to help understanding. It is also possible to think that since there is a heavy vocational

orientation present in accounting studies and since the learning in relation to professional requirements was also considered very important by the respondents of this study, the need to have a professional model in developing cognitive processes is highlighted, and in the learning situation, the teacher can be seen as acting as a professional model.

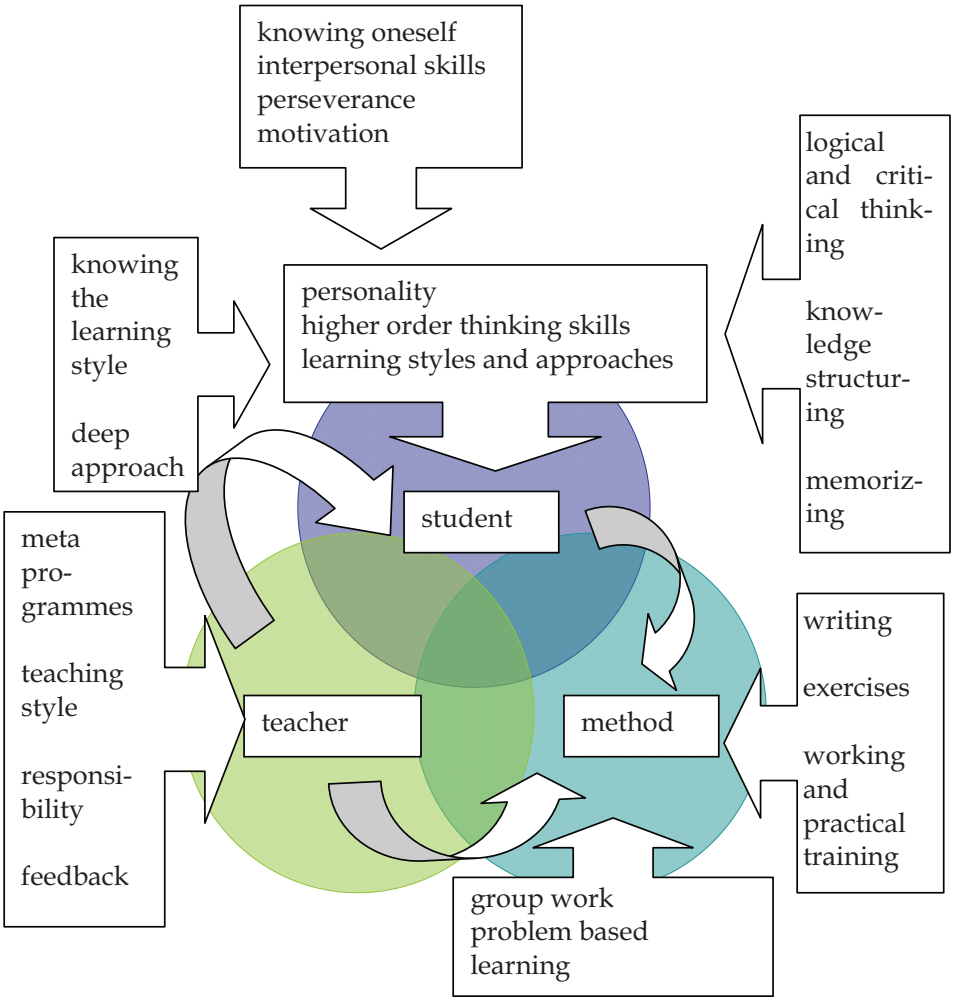

FIGURE 21 Learning in accounting model

The teacher was also seen as a key actor for choosing the methods of study in formal learning situations. However, if the methods chosen by the teacher were not the most adequate ones as in relation to the student's learning style or approach that he was able or inclined to utilize, or if they were not considered suf-

ficient for good learning, the students introduced the concept of self-learning, which in this setting meant all other kinds of methods that the students used on their own to learn better. The notion of self-study methods here does not mean that they would be methods controlled by the student only. It is obvious that some of those methods were actually boosted by the educational institution and the teacher since it is evident that it is not possible for the whole content to be taught at school – neither is it even desirable to do so. Self-study here merely refers to the fact that the teacher was not in lead when those methods of learning were used. The use of self-study methods was connected to the student's self-knowledge; how he saw himself as a person, what his learning style was and how he approached learning.

Since the student seems to be the core element of successful learning in accounting, it is interesting to see what qualities in the student specifically improve the learning experiences in accounting. According to the data, if the student personality contains certain features, it makes the learning of accounting easier and, thus, produces better experiences. Many prior studies on accounting students exhibit that accounting students usually represent the sensing-thinking-judging types of the Jungian typology, which then has implications on learning. However, the results of this study did not emphasize any personality type according to the typology as such but the data suggests that knowing oneself is a necessary condition for good learning in accounting because it makes the meta cognition and self-regulatory actions possible. The features of extroversion and introversion had some influence on good learning experiences because group work as a method was considered important for good learning and extroversion and introversion are personality traits that define how a person is adapted in group situations.

However, it is possible to conclude that in this data that it was not the personality or the type of personality as such that was of importance, it was rather the influence that the personality had on the learning styles of the students. Learning styles as such cannot be judged as good or bad but they can, of course, be appropriate or inappropriate in any given learning situation. Whether the student had found the appropriate learning style was in turn a question concerning the ability to use higher order thinking skills and to be aware of the whole learning process on the level of meta-learning. Learning styles were thus seen as influencing the learning approaches that the student was able or inclined to adopt in different learning situations. To a minor extent, personality was also seen as influencing the choice of accounting studies in the first place, since accounting as a discipline was seen as something requiring certain qualities of personality.

The influence of personality on learning styles is a key element in good learning because personality types seem to define learning preferences and the types of learning experiences which best lend themselves to students' performance. This has influence on the learning method choice because it is possible, despite natural personality driven preferences, to develop and elaborate the tools of learning by increasing the variety in the methods and classroom strate-

gies used in teaching accounting. This way, personal preferences can be modified in the learning situation – at least to some extent - since they are not considered stable characteristics of a person but rather a continuum of tools a person is able or inclined to use.

Personality is an important aspect that influences how a student can adapt to group situations. This aspect is not surprising if we look at it in the light of the preferred teaching methods in the good learning of accounting. According to the present study, these methods were such that required co-operation and collaboration with other students. This could be interpreted so that personality traits should be aligned with the teaching and learning methods that were experienced as being most effective.

The ability to work in a group or with peer students was emphasized not only from a methodology point of view but also from a personality perspective, because the support from peer students was seen very important in learning accounting. The results reveal that those students who were able to co-operate with other students were also able to obtain the support needed in good learning processes. This is thus very much in line with the constructivist conception of learning because constructivist methods require students to negotiate from many divergent perspectives and with the view that good learning includes not only the learning of substance matters but also the learning of generic skills.

In addition to group or team skills, perseverance was seen important since it was seen typical for accounting as a subject that it makes students easily discouraged when encountering obstacles in learning. Thus, perseverance and self-efficacy as well as the ability to co-operate in order to find support can be seen as basic prerequisites that guarantee that the student is not discouraged in the beginning of accounting studies or in the course of the studies when it turns out that learning accounting may be cognitively demanding.

As to the students, the last core element in the outcome space is motivation, which was partly seen as depending on the personality of the student. However, motivation is rather seen as a prerequisite, and in a learning process its role is rather to define how much effort is invested in the different aspect of learning, especially outside formal teaching situations. Supposing that students had chosen accounting because of their motivation, it was also evident that accounting was experienced being motivating. Accounting offers intellectual challenges and accounting skills are directly applicable to working life. Motivational factors are thus both intrinsic and extrinsic. Motivation is experienced being in connection with career aspirations, which are one reason for choosing accounting studies.

In addition, personality was described not only with absolute qualities, but it was also compared to a general conception of an accounting personality, which refers to the fact that expertise is considered to be dependent on certain personality traits. The gap experienced between the personality traits the person possesses and the requirements of expertise they supposed accounting demanding was, therefore, quite obvious. This is not surprising because, as stated above, there was also some discrepancy between learning as such, i.e. in abso-

lute terms, and learning in relation to the expertise skills needed in professional life. The same discrepancy is thus reflected in personality traits. Since most of the skills associated with expertise could actually be classified as higher order thinking skills, they will be discussed next.

The importance of higher order thinking skills was emphasized in good learning of accounting. Higher order thinking skills were experienced to partly define the student's ability to recognise and analyse the learning style that best suited for learning accounting. Learning style then influenced what learning approaches the student was able to use in any given learning situation. Learning approach should be understood as a more a situation specific phenomenon comparing to the learning style that is usually a more permanent quality in the student. The higher order thinking skills that were highlighted were critical and logical thinking – qualities that have also been recognized as key elements of accounting expertise by prior research. Those skills were experienced as helping in mastering the often extensive and detailed contents of accounting studies and in constituting some structure to these contents. Because the higher order thinking skills are abstract by nature, it was also seen important that the student is able to control them. This is called self-regulation. The descriptions of higher order thinking skills often manifested as descriptions of some concrete methods that the students used in order to be able to regulate their own learning processes and mental processes.

Recently, researchers have increasingly emphasized the importance of self-regulation or, more broadly, the role of meta-cognition in learning, since this perspective includes not only cognitive but also motivational, affective and contextual factors. Meta-cognition makes it possible for the student to understand his own mental processes in learning and also to improve them consciously with the intention to learn better, and this is efficient in many ways. Self-regulated learning means that a student who is regulating his own learning is able to set task-related, reasonable goals, take responsibility for his learning, to use a variety of cognitive and meta-cognitive strategies and to maintain motivation. These students are able to vary their strategies and monitor their strategy use and modify their strategies if the learning task demands change. Self-regulated learning also has other important aspects, which are more motivational or affective in nature, such as the students' management and control of their effort. (Heikkilä & Lonka 2006.)

Another important aspect in addition to meta-cognition and self-regulation are knowledge structuring skills. The importance of knowledge structures seems to be notable because accounting contents are usually quite extensive and, at the same time, at least from a student point of view, they can also seem very fragmented. Seeing the whole picture of accounting instead of fragmented and unrelated pieces of information was highlighted in the descriptions. Hence, in order to be able to master contents that are extensive and fragmented at the same time while they also represent knowledge that is incremental, structuring is an important tool. If meta-cognition is one measure of

expertise, then knowledge structuring is also an important feature reflecting experience and can be classified under meta cognitive functions.

Another crucial element in higher order thinking skills was described as simple memorizing skills. However, memorizing here should not be interpreted as mere memorization of facts or rote learning but rather as a step towards deeper understanding of accounting or meaningful memorizing. Thus, the efficient use and control of memory helps in learning and retaining the contents of the learned material. This is how these two abilities, knowledge structuring and memorising, are linked together.

Despite the importance of personality as a prerequisite for accounting studies and the importance of higher order thinking skills as an element in learning, the most highlighted characteristic in students was their learning style and consequently also their learning approach because the latter can be interpreted depending on the previous one to some extent. Of these two, the learning style is usually a more stable characteristic of a student whereas the learning approach is something that follows from the style and can be used variably depending on contextual factors and on the effort that the student is able or willing to put in the learning situation. Whether the student is aware of the learning style and, thus, able to choose a suitable learning approach or control the actions taken for better learning is determined as being dependent on the above mentioned higher order thinking skills.

The relevance of learning styles is evident. The outcome of a course period in higher education is not just the knowledge obtained and the skills developed, but also the capability for independent self-regulated life-long learning. For an accounting student, in order to be able to develop personal competencies, it is essential to understand the learning styles and approach preferences even though the relationship between personality, intelligence, cognitive style and achievement is not clear cut. Despite all the challenges, accounting educators have traditionally been keen adopters of cognitive learning styles and supporters of the related research in order to improve educational effectiveness, to identify differences within student groups, and to predict career choice or major choice. (Duff 2004a; Marriott 2002.)

The results of the present study suggest that – as was already mentioned when the significance of personality was discussed – the importance of knowing one's learning style is crucial. Knowing the learning style is a prerequisite of good learning experiences because any self-regulatory activities are aligned with the learning style, and knowing the learning style can be interpreted as knowing oneself as a person, which represents the highest level of the constructivist learning conceptions.

As to learning approaches, good learning was described in a way that can be interpreted as deep learning as opposed to surface learning, although this does not mean that there would be any implicit value judgement between deep and surface learning. The theory of deep and surface learning seems very applicable in the interpretations concerning experiences of good learning. Many accounting topics are such that they rather require a deep learning approach in

order to produce good learning results and experiences. The ability to use different kinds of approaches is thus crucial in learning accounting and also in the higher education context in general. Deep learning also relates to self- regulation, whereas external regulation is more likely to be accompanied by the surface approach. This requires that the student is able to exercise selection of material and to decide which of the contents are such that they need the deep learning approach and which are such that only being aware of them or knowing them on the surface level is sufficient.

The ability to use different learning approaches is essential because of the accounting context. Accounting is considered different from other disciplines because of its heavy workload, and because the learning processes in accounting tend to be time consuming. This is partly because accounting contents do not automatically represent something that the students would be familiar with in the light of their normal life experiences, and thus learning accounting in the constructivist way is actually quite difficult in the absence of prior experience and conceptions. On the other hand, despite all the labour, in the learning of accounting it is possible to generate the experiences of true learning, because the contents genuinely represent something new to the learners.

The question of outcome assessment is connected with learning approach descriptions and the main result in the present study was that assessment as such had very little value for students in estimating their level of learning. This result differs very much of the findings of previous studies which typically emphasize the meaning of assessment. The experience of learning was of more value than assessment, and assessment could, of course, confirm the conception of learning the student experienced, but as such it had little value, and, moreover, it did not represent an important motivational aim for the students. This fortifies the impact of self-regulation in good learning experiences.

Since learning and teaching are very much connected, it is evident that - even though the learner is in the centre of the learning process - the influence of the teacher in the process is significant. On the basis of student experiences, the teacher could be described as an important mediator between the student and learning.

The descriptions concerning the conception of teaching vary in the same way as do the conceptions of learning. For some students teaching represents pure knowledge transmission, for others it is rather a more complex interplay in the process of constructing meaning. This can be described with the dichotomy provided by the teaching orientations model. Moreover, in exactly the same way as the students evaluate their own learning of the professional content in both absolute and relative terms, they also evaluate the teacher. It is not only the teaching as such that counts but it is also the experienced professional and pedagogic competence of the teacher that influence on the experienced teaching quality. The teacher is seen as a representative of the whole accounting discipline and also as a professional model.

The ability to explain accounting matters in an understandable way was an important issue in the descriptions. Explanations that are experienced un-

derstandable can be interpreted as a matching meta-programme question, which, in turn, can be seen enhancing deep learning. Another important issue is the teacher's ability to detect the need for repetition and revision, which can be interpreted as the teacher's pedagogical competence. Explanations can be interpreted as increasing memorizing and understanding in a meaningful way. The need for explanations is also a question related to accounting students' personal features; the match of higher order thinking skills creates synergy in a learning situation.

The student's personality traits have an impact on learning through their impact on higher order thinking skills and learning styles and approaches. As to the teacher's personality traits, they are not essential in learning as such but they can be important with regard to the teaching style, which can be considered one aspect of personality. Teaching style is essential because it has an impact on the outcomes of learning and motivation. The teacher's enthusiasm is a motivation and interest increasing feature and the teacher's teaching style is a feature improving learning. The latter one is considered so important that students are consciously seeking for the matching of styles so that they choose courses taught by those teachers whose styles they consider suitable and avoid those they consider not suitable for their own learning style. This can be seen, once again a meta programmes match question, and also as one aspect of self-regulation in learning.

The responsibility and helpfulness of the teacher seemed to play a notable role in the descriptions even though, at the same time, the students expressed that the key element in learning was the student and that the most preferred study methods were those that can be classified as student centred methods. In these descriptions, the co-operational aspect with the teacher in the learning situation was emphasized. This could be interpreted so that the teacher's role is to act as a facilitator and to monitor the learning on a continuous basis so that the students can be assured that their learning is going to what they consider the right direction. This role puts the teacher in a constructivist learning setting where the teacher presents problems in meaningful contexts and facilitates and ensures that the learners themselves attend to inconsistencies and errors in their mental representations.

The last topic in the teacher's role was feedback and evaluation. As it already has become evident when examining the question of motivation, good learning in accounting is not a question of mere grades, and the same issue is reflected in the issue of feedback and evaluation. Feedback is considered crucial for learning and it is used as a guideline to judge whether learning attains the study requirements. This means that qualitative assessment instead of quantitative evaluation is experienced to be associated with good learning. On the other hand, exam performance does not have an effect on learning as such, it rather has an effect on the effort measures the student is ready to take and on the learning approach the student decides to use in a given situation. Many prior studies have estimated assessment to be a remarkable driver in student learning, but in this study, assessment was seen as playing a minor role in good

learning experiences and in good learning experiences its role was mainly to fortify the experience the student had with regard to the achievement of learning targets.

In addition to the teacher, the importance of different kinds of teaching methods as mediators between the student and learning was raised by the respondents. As can be interpreted, certain teaching methods are considered more effective in producing better learning results in accounting than some others. However, it can be interpreted on the basis of the data that this is very much a question concerning the conception of learning. If the learning conception is on the lower levels of the learning pyramid, it means that the conception of teaching is also very teacher-centred, and this leads to a situation where students favour something they call traditional teaching methods. Traditional teaching methods can be interpreted as methods based on knowledge transmission and the teacher's position in the core of the learning process instead of the student. On the other hand, it may also be possible that at least some accounting topics are such that it is relevant to teach them in this way, which implies that the students are able to mix different approaches to learning in a meaningful and effective way.

At the same time, despite what was said about the so-called traditional methods, any group work methods were experienced as being very good because they produce many desirable by-products and they are also effective in simulating real-life like working situations. The same was expressed in the student personality descriptions where co-operational skills were considered helpful in good learning. This can be interpreted so that the students understand that working life requirements are more than just accounting-based knowledge and skills because in a group work situations it is also possible to learn self-regulation and socio-cultural competencies.

However, the descriptions also implied that the teacher's role in designing group work situations was very important so that the good effects of group work would materialize in a learning situation. It should be noted, however, at this point that as to the learning of the actual accounting content, working in groups was not always considered the best learning method. Moreover, it can be stated that the present study does not reinforce the results of some prior studies claiming that accounting students would be likely to resent classroom strategies like group work that aim at facilitating deep processing and the development of generic skills.

Problem-based learning was considered to increase learning results because it was regarded as resembling very much actual working life situations, i.e. for the same reasons why group methods were considered good. What made problem based learning differ from group work in the descriptions was the fact that since problem-based learning represents a more structured method of learning than the more loosely structured group work, it was experienced as being more difficult in the beginning. However, it was also experienced more effective with regard to learning the accounting content because the deep learning elements are typical for problem based learning. It can thus be stated that

problem-based learning is capable of developing generic skills in such a way that discipline-related skills are not compromised.

Since teaching methods are seen as the teacher's choice, the students also expressed that they used a variety of self-study methods that could complement the teaching methods, especially in cases where the teaching methods were experienced insufficient, or not suitable to the student's personal learning style, or not quite suited to the student or to the student's personal life situation. Self-study methods are important for those students whose personal learning styles are such that they find it is easier for them to learn on their own comparing to formal teaching situations or group situations. Virtual methods especially were seen as a good addition to the learning method variety because of their flexibility, but as the major method in learning accounting they were not seen efficient because of the need for teacher support.

The importance of writing as a self-study method was remarkable according to the results of the present study. Writing was experienced as a method that concretely helps concentrating on the class room situations and it was especially helpful in all kinds of meta-cognitive and knowledge structuring activities. In this study, the importance of writing was interpreted through the theory of functional linguistics which explains the importance of writing in understanding, explaining and reflecting accounting content. There is thus a connection between writing and the use of language in general and higher order thinking skills.

The importance of exercises in learning accounting was not a surprising result due to the nature of accounting tasks in general because accounting tasks are such that they lend themselves easily to exercise material reflecting real accounting tasks performed in working life. Exercises were mentioned not only as a self-study method but also as a method that is more effective if there is also peer support or teacher guidance available as there is in classroom situations. This is seen as enhancing the level of deep learning and motivation. In addition, any other methods that can be classified as experimental are of importance in accounting. This result is in line with the constructivist view of learning which requires students to learn and reconstruct their understanding as they explore real-life problems.

Work experience in general was seen as improving the motivation and increasing the awareness of the applicability of the skills learned at school because it gives the accounting skills relevance and a concrete real life reference point. If the students were employed during their studies, they expressed being able to use the learned skills to evaluate their tasks and performance in working life and work experience made it easier for them to understand accounting from many different standpoints. Work experience also reinforces the relevance of generic skills acquired during formal education.

However, what is interesting is that at the same time practical training was estimated differently from general work experience. Practical training that is organized as a part of the studies and curriculum produces quite different experiences because the reference point is then in the skills an accounting profes-

sional would or should have. Therefore, the students expressed an anxiety concerning the level of their learning, although, at the same time, they were able to see their learning enhancing the effects of practical training. Comparing to general work experience, practical training differs in that it tends to produce something that could be called a reality shock that was not present in the experiences relating to general work experience. This result is in line with the conceptions of learning that could be good on the absolute level but week in comparison with the professional requirements, i.e. in relation to outside measurements.

To sum up, when good learning experiences were investigated, the actual utterances were numerous, but with the help of grouping the material and reducing the number of categories up to the point where no reductions were possible, it became possible to introduce a concise model for good learning. This chapter has described the different elements crucial in good learning in accounting. As to the student, the most important features are connected with personality, higher order thinking skills and learning styles and approaches. What is crucial in the teacher are matching meta programmes, teaching style, responsibility and feedback. Of teaching methods, the most effective ones are group work and problem based learning complemented by writing, exercises, general working experience and practical training.

6.2 Theoretical contributions

> *"Accounting educators can draw on the general education literature, but to inform the development of accounting education programmes (whether at undergraduate, postgraduate or professional levels) education research needs to be undertaken within the disciplinary context of accounting. (…) Scholars exploring the importance of differences across academic areas have found that, because knowledge within fields is defined differently, basic epistemological assumptions implicit within teaching practices differ. Educators structure their time and their teaching differently, and strive for different outcomes. The impact of disciplinary differences on students' learning has received insufficient attention." (Wilson et al. 2008.)*

Learning in accounting is a research area that has been studied extensively outside Finland though, at the same time, there have been quests for more studies in the field. The present study used as a starting point the results of studies on learning accounting and especially those ones that had used the same kinds of methods. This study adds to the research carried out in the discipline of accounting and aims at saying something relevant concerning how accounting is learned best from the students' viewpoint. The emphasis is on student experiences, not on measurements of outcomes, and the purpose of the study was to illustrate the conception of good learning

Many of the elements in the learning accounting model have already been revealed by prior studies. As presented in chapters 2 and 3, there are many research lines on the influence of learning approaches, reasoning skills, personality and outcome and assessment. The novelty of the present model is in the holistic viewpoint taken, the choice and the mix of the elements and, also, in a

closer description of what the elements actually contain. All this in a context that has not been explored by previous research, and more importantly, by using a method that has been considered very applicable in the higher education context but that has not been used in abundance earlier. This also means that many key elements of learning discovered by other studies were not discussed here at all as they were not considered relevant because they were not raised by the data of the present study. As examples of themes that were left out from the scope of this study were topics like the students' socio-economic background, age, prior education or knowledge and intelligence.

The elements in the learning of accounting model constructed in the discussion of the present study were found by using a systematic and well-designed method, phenomenography. As Lord and Robertson pointed out in 2006 and Paisey and Paisey in 2004, the method has not been used many times for accounting education studies. This study increases the small number of accounting education phenomenographic studies and connects the results of the study with the extant literature and relevant theories on learning accounting. The model produced is comprehensive despite the fact that the same phenomena in the original data were perceived differently by different students. Thus the final form of the outcome space is as reduced as possible. As a result, the closer interpretations of the elements revealed something about learning accounting that can be considered to add to the extant studies. The same applies to the relations between the different elements. What is also interesting is the choice of the key elements that were revealed by the present data.

In the light of the results, it can be stated that the importance of the student in the learning process is not a surprise, nor are the key elements of the student, i.e. personality, higher order thinking skills, learning styles, approaches and motivation, since they have all been revealed by the extant studies cited in the course of the present research as well. The importance of students' learning conceptions was a key element in Sharma's (1997) study and the results of this study also suggest that there is a connection between the students learning conceptions and good learning experiences. However, in Sharma's study, the students' learning approaches were not surface nor were they deep. In this study, when describing good learning experiences, the student's descriptions were in line with the qualities of deep learning approaches. Where Sharma reports a fear of failure being a central experience, the present study highlights the fear of not being qualified by professional standards whereas the school standards did not play such an important role. The format approach revealed by Lucas' (2001) study was not raised by the results of this study. This can, of course, be explained by the fact that this study concentrated only on the experiences of good learning. What is new in this model is the heavy emphasis of learning styles and the very active search for deep learning from the students' part since accounting students in prior studies have often been described as being rather surface learners than deep learners. On the other hand, the minor effect of motivation in good learning experiences makes the results of this study

differ from those study results that have emphasized the importance of motivational factors.

As to the position of the teacher, it can be considered quite surprising that the teacher had a heavy influence on the student in a very one-way manner, when, at the same time, the most efficient teaching methods according to the student experiences were all very student-centred. The results were explained by Leveson's (2004) model on approaches to teaching in accounting, since the results of this study seem to fit well to Leveson's model. It is though worth pointing out that the results of the present study suggest that even if student-centred teaching methods were considered best, the importance of the teacher (as a facilitator or professional model) was still very important. This means that student-centeredness does not make the position of the teacher less important, but on the contrary, emphasizes it. It can be considered a typical feature for accounting as a discipline; the teacher is an important professional model. A striking feature in the present setting was also the high level of non-instrumentality in learning as far as assessment and grades were concerned. The experience of learning is what really counts at the end, and true satisfaction is not produced by extrinsic measures.

It can be stated that the teaching methods that were experienced to be the most effective were such that required a high level of co-operation. This is not what many prior studies on accounting and learning have suggested, especially in the light of accounting students' common personality features. The question of teaching methods was not, after all, so crucial to learning because the results revealed that the students were able to compensate for the deficiencies of the methods by resorting to a variety of self-study methods. All these self-study methods are known by prior literature but their importance and active use in learning accounting by the students themselves was highlighted in the results of the present study. The same kind of idea is actually revealed by Lord and Robertson's (2006) study, where they explain the differences between students' preferred teaching methods being dependent on the students' approaches to learning. Since this study concentrated on good learning experiences only, it seems quite natural that versatile use of different kind of methods was considered best.

Finally, what becomes evident in the light of the results of the present study is the fact that there seems to be a gap between the actual learning experiences on the personal and absolute level. This means that the students felt they had reached the educational aims in a satisfactory way while at the same time they experienced deficiencies concerning the expert level skills they thought they should have attained in order to be competent in working life. The latter can be described as the relative level of learning and it poses real challenges to educators and educational institutions. This is a very important and result and should get further attention in future accounting education studies.

The same kinds of results concerning learning in general have been witnessed in higher education studies carried out in Finland on other disciplines (like education) by Heikkilä and Lonka (2006), Lindblom-Ylänne and Lonka

(1999), Lonka (2004) and Tynjälä (1997 and 1999). Those studies have, indeed, highlighted the importance of students' conceptions of learning, approaches to learning, self-regulative abilities, and the importance of development of expert knowledge. It can thus be concluded that the results of this study in accounting context are in line with the results of higher education studies in other discipline contexts.

Despite the considerable amount of educational research, the number of studies on learning accounting is quite limited in Finland. Since educational systems in different countries are not similar, it was considered interesting to investigate the learning experiences of accounting in the Finnish higher education context among the polytechnic students. The setting was suitable for carrying out this kind of a study since there is not only a heavy pedagogical orientation but also a clear professional aim in the polytechnic level education, and the students have thus been subject to many kinds of learning and teaching methods and to professionally oriented tuition. Since there will most probably be larger sets of data collected on the whole OECD area on the higher education level, this study aims at serving as a point of reference for larger investigations.

Finally, this study also added to the rich pool of Finnish qualitative accounting studies using the ideas and material presented by Manninen (1994, 1995, 1996 and 1997) and Pihlanto (1990, 2003a, 2003b and 2006). The former has contributed in the conception of knowledge in accounting and the latter has investigated the concept of man and role of actor in accounting studies and used Jungian psychology in many accounting studies. In the qualitative accounting study pool, this study follows the mainly European research tradition of interpretive paradigm striving towards theoretically valuable interpretations that increase our understanding of the phenomenon in question.

6.3 Practical contributions

> *"Researchers should not only identify the gaps, but also plan and design studies that investigate how these gaps are effectively closed" (Watson et al. 2003).*

This study has explored accounting from a learning point of view which, as was stated in the beginning, should be an integral part of any discipline. When learning has been taken as an object of the study it has some practical implications concerning the key elements in the learning process. In this study they are the student, the teacher and the methods. Some elementary features are such that it is not easy to influence them since they are relatively stable characteristics of a person and can be seen as tools that a person is inclined to use. However, being aware of them is important in understanding how the process of learning in accounting functions. The mediator elements, i.e. the teacher's part and the methods, are more easily changeable by certain choices made in the course of the learning process. The purpose of this chapter is to investigate those possibilities.

Phillips (1988) states that students vary in the degree to which they believe learning involves effortful acquisition, uncertainty or complex abstractions. This means that accounting educators would need to know what kinds of beliefs students hold about the nature of knowledge, cognitive development and learning of accounting in order to anticipate responses to instructional materials and methods and to be able to decide which kind of instructional material would be the most effective in any given situation. Overall belief sophistication is positively associated with student performance.

The same phenomenon can be seen in the results of the present study. The present study took the conceptions of learning as a starting point. The more learning was interpreted as being a matter of personal change, interpretation and abstraction, the more it had an influence on the students emphasising learning and teaching methods that are based on the constructivist conception of learning which also seem to produce the good experiences of learning. It becomes thus a teaching challenge to evoke the awareness of students on their own beliefs about the basic notions concerning learning, and this can best be done through the choices made in teaching. Since students' conceptions were seen varying remarkably, it implies that teaching should support the different conceptions, the awareness of the conceptions and the development of the conceptions towards more constructivist categories. This can, of course, be realized only if educators themselves are aware of the students' conceptions and their influence in learning.

In the scope of this study, the belief sophistication issue was also raised when the significance of personality was discussed, because accounting as a discipline was seen as requiring personal features like perseverance and a willingness to invest a great deal of effort in the studies. Improvement of these qualities in the course of the studies becomes crucial.

The importance of group activities and co-operational learning in general was raised in the student personality descriptions, which emphasizes the need to have such a personality that it makes group activities easy because the support of peer students is seen crucial in learning. According to prior studies (Hall et al. 2004) the introduction of group activities is also associated with an increase in students' deep approach to learning and a decrease in students' surface approach to learning. Accounting educators can thus influence students' learning approaches by adopting changes in the learning environment. This means the utilization of co-operational teaching and learning methods.

The conceptions of accounting as a profession and accounting professionals were recognized influential. Perceptions of accounting as a profession influence on both the students' career choice and the choice of a major. It becomes thus an educational challenge to influence the students' perception of accounting. Changing the negative perception towards a positive one can improve the learning process significantly.

Conceptions of accounting were linked with motivation. The motivational aspects were seen important in learning though their significance was smaller than the significance of higher order thinking skills and learning styles and ap-

proaches. It was rather so that motivation was described in terms of career aspirations, which is typical for professionally oriented studies like accounting. Motivation, however, has an influence on a student's effort measures and self-regulation activities and thus on learning effectiveness and the utilization of the deep learning approach. Understanding the influence of motivation is important for accounting educators although it may be relatively difficult to influence on the students' motivation.

As higher order thinking skills and learning styles and approaches were seen as the most important student personality features, it can be concluded that it is necessary to include in teaching not only the discipline based content but also activities that aim at developing the higher order thinking skills. Such activities would also help the students to expand their ability to use learning styles and approaches that are not inherently natural to them. The use of teaching methods such as group activities, problem based learning and co-operational learning in general and the teaching of efficient self-study methods and learning to learn skills can increase the students' ability to develop their higher order thinking skills and, as a consequence, their learning styles and especially their learning approaches.

As Brown (2003; 2006a) states, thinking styles or meta-programmes can be changed and taught. In the accounting context this is important, because, according to Brown's studies, there are accounting students who are studying the subject in the hope of finding a good job rather than because of their inner motivation or because they actually like accounting. This means that these students may not be motivated. There is thus a connection between motivational aspects and meta-programmes, the latter being an instrumental way to cover for the deficiencies in motivation. In order to achieve improvement, an ability to be conscious of thinking styles, is required from the teacher. Enhanced communication can increase the students' intrinsic motivation to learn, which is related to the deep approach to learning. Knowledge and awareness of the students' meta-cognitive thinking processes can help accounting educators design instructional materials and pedagogy so as to maximise learning outcomes and give their feedback in a more appropriate and understandable way. When students become aware of their meta-programmes, they obtain tools for change and improve their educational experience and become able to manage the whole educational process. In other words, they will learn to coordinate something that normally operates at an unconscious level.

For accounting educators it is useful to know that difficulties in communication in teaching situations are often outcomes of the mismatches of meta-programmes, and being aware of students' meta-cognition can enhance the possibilities of improving the conditions for good learning in accounting. The notion of teacher responsibility was emphasized in the student descriptions although learning as such was seen to be student centred. In their study, Lord and Robertson (2006) also describe the notion of responsibility suggesting that a maximum advantage may be gained when the students perceive learning as occurring in a self-teacher-peer partnership. The study also suggests that ac-

counting students who learn by trying to understand find value in both didactic and interactive teaching approaches. However, students who approach learning in a surface way prefer just to be taught by the tutor.

When describing higher order thinking skills, students usually described them with the help of some concrete learning aids and techniques they had learned to use and with the help of writing based activities. This implies that it could be possible to include in the curriculum or in the teaching of accounting different kinds of techniques that aim at improving the development of higher order thinking skills and the development of memorizing techniques that lead to meaningful memorization. This also implies that it would be possible to increase the amount or written information as part of accounting assignments.

It should also be noted that the different phases in learning may require different kinds of techniques. Another possibility to improve the higher order thinking skills lies in the connection of the studies to the accounting profession. The benefits of direct work experience on knowledge acquisition have been revealed by Maletta and co-workers (1999) who state that the benefits are greater the higher the learning aptitudes of the individual in question are. On the other hand, subjects without actual work experience in the field benefit more from structured tasks that provide a greater level of learning and retention. Subjects with work experience learn more by unstructured tasks that are cognitively demanding. Direct learning experiences benefit knowledge acquisition especially for individuals with lower learning aptitudes.

As was stated earlier, learning styles tend to be more permanent features of a student personality, but since they can be seen as a continuum, it is possible to some extent influence the learning styles so that it becomes possible for the student to use a wider variety of different styles instead of the most preferred one. Providing a variety of teaching methods and giving assistance in developing students' self-learning skills, instructors can reach the broadest range of learning styles.

As to learning approaches, they are flexible and thus it should be relatively easy to influence the approaches adopted by a pedagogy that regards students as central participants in the learning process. Since approach to learning is affected by task requirement perceptions, the concrete ways of influencing would include, for instance, curriculum design, teaching materials, teaching style, teaching methods, assignments and assessment tasks that promote good learning. This is one of the reasons why researchers (Bonner 1999; Duff 2004b; Sharma 1997) have found the concept of approach to learning useful; it identifies students' response to a learning activity by making the model dynamic and sensitive to the learning context. To improve the quality of students' approaches to learning, accounting educators need to determine the students' perceptions of assessment, workload, teaching and support. High quality outcomes that promote active learning can be attained with the use of teaching methods which encourage students with the opportunity to demonstrate the quality and integrity of their learning, facilitating a deep approach.

Research (English et al. 2004; Hall et al. 2004; Lucas 2001) has also shown that it is possible to discourage a predisposition to rote learning by ensuring that learning activities and assessment require the demonstration of understanding, analysis and critical evaluation. Factors that could result in students adopting surface approaches to learning in accounting include: excessive workloads; the nature of assessment tasks; a didactic teaching style; and low staff per student ratios. On the other hand, the structure of the course and lectures; enthusiasm of lecturers and tutors; generation of a personal learning context; provision of student feedback; and the provision of direction to students, are crucial elements affecting the students' choice of approaches to learning in accounting.

As to mediators in learning accounting, i.e. the teacher and the teaching methods, it can be suggested on the basis of the results of the present study that the teachers should be aware of the key elements. These include their teaching style and meta-programmes and a variety of co-operational methods complemented with self-study methods. Understanding the learning process as a whole seems to be crucial for good learning experiences. It is also of help if teachers can recognize different ways of conceptualizing things and alternative ways of presenting them.

Indeed, the value of phenomenographic research in general is in connection with the idea of phenomenographic pedagogy, which involves teaching for conceptual change. It is founded on the premise that students engage with alternative ways of viewing the subject and educators engage with alternative ways of viewing the student. The basis of phenomenographic pedagogy is to make the learners' conceptions explicit to them by observing how the students approach the solution of problems. The aim of phenomenographic pedagogy is to raise teachers' awareness of their thinking and practice and of how variation in this practice might be related to their students' approaches to learning. The conditions used to achieve this reflection are teaching activities including assessment methods aligned with learning objectives. From the teachers' perspective, some types of learning are better than others; learning for understanding that involves a conceptual change is superior to learning of information or skills where the focus of the learner is on meeting external requirements. Phenomenographic pedagogy also assumes that the characteristics and behaviour of teachers, departments, institutions and educational systems have effects on how students learn. Changing teaching practices to improve learning quality is desirable. Improvements in teaching and learning processes require teachers to have both a theoretical and practical understanding of how students learn and how they can be encouraged to learn in more effective ways. (Lucas 2001; Trigwell 2005.)

6.4 Critical evaluation

The purpose of the present study was to explore phenomena that have substantive content. This is why the research process took, from the beginning, a qualitative approach. The value of qualitative research in accounting lies in its ability to take the research beyond the functionalist and normative view of accounting and in the use of rich empirical material collected from a variety of sources. The purpose of qualitative research is to strive towards theoretically valuable interpretations. In addition, qualitative research serves as an important pedagogical and educational purpose by offering a deeper perspective into the topic. In qualitative research, theory is a local and temporal description and explanation. It emerges from a local context and is limited by the particular characteristics of this context. It is not supposed to be universally valid, generalizable in a statistical sense. Nor is it supposed to be an eternal construction but, instead, something giving birth to a theory that has a lifespan and that, eventually, dies. (Vaivio 2008.)

A qualitative accounting study should have a well-designed research question in order to avoid overly pragmatic and technical findings. It should also have a prior theoretical orientation in order to guide the empirical observation to the right context. Moreover, the dilemma of depth versus breath should be considered. As to the data collection, it should also be well designed in order to bring empirical evidence to the study. Triangulation between different empirical materials is performed in order to increase reliability, and the role of interpretation is crucial. The study should also be able to give theoretical sense to the multitude of illuminating evidence. This requires numerous iterations between theory and data and the avoidance of hasty conclusions by the researcher. (Vaivio 2008)

In a phenomenographic study, the outcome space represents a relationship between the researcher and the data, which means that it is not the only possible one. It is an outcome that can be argued for, not empirically proven, representing a partial understanding of the phenomenon. However, since phenomenography is an empirical research approach, the results of the research must be well-grounded on the basis of the data. The method requires the researcher to put aside pre-existing experiences and assumptions as much as possible, in order to stay as open as possible to the range of meanings and the structure of meaning represented in the data. Because the study does not start from a strict theory or model, reflection on the researcher's part is required. Questioning one's own knowledge creation basics is part of good research practice. (Aaltio 2006; Åkerlind 2002.)

The data for the present study was collected from different kinds of sources. The report of the present study was illuminated by many quotations translated from the original utterances coming from the data of the study. The reader can compare the excerpts and the interpretations made on the basis of them. The researcher's interpretation is one possible made on the basis of the

material. The classification of material was attempted as many times as possible in order to make each category reveal something distinctive about learning accounting. Later on, the categories were organized so that they related to each other in a logical way. The number of categories is, at this point, considered to be the lowest possible and the whole learning accounting model as simple as possible.

The researcher thus constitutes a set of different meanings and a logical structure relating to them. On this basis, it is possible for the researcher to make a professional judgment about the optimal structure of the outcome space. It may go beyond what is present in the data as long as it is not inconsistent with the data, but needs to be justified and acknowledged when reporting the research outcomes. (Åkerlind 2002.) In this study, the structure partially represents the professional judgment of the researcher. More concretely, it becomes evident in the way how the data was organized in the sub-categories of a primary category of description basing on the fact that the researcher has both knowledge and experience of the phenomenon, and thus can be considered able to constitute a logical and meaningful structure.

Researchers using qualitative methods are usually expected to address the issues of validity and reliability of their research. This is true even though the notions of validity and reliability derive from a positivist approach that attempts to study an objective reality. Validity is regarded as the extent to which a study is seen as investigating what it aims to investigate, or the degree to which the research findings actually reflect the phenomenon studied. However, phenomenographic validity is not how well the outcomes correspond to the phenomenon as it exists. It is rather how well they correspond to the human experience of the phenomenon. The results of a phenomenographic study should be generalizable to other groups of people from a similar population. That is, the range of ways of experiencing should be common to other groups with a similar spread of characteristics. An interpretive process can never be objective, but it always represents the data as experienced by the researcher. Research quality means ensuring that the research aims are reflected in the research methods. If multiple interpretations of the same data are legitimated, a strong emphasis must be placed on the researcher's ability to argue for the interpretation that should be defensible since there is no search for the right interpretation. (Åkerlind 2002; 2005.)

The present study claims to have found the experiences of good learning in accounting by Finnish higher education students in the polytechnic setting. The aim of the research was to define what good learning in accounting is, and the phenomenographic method was chosen as the most suitable to reveal experiences in education. The results of the present study do not claim to be objective but they are the interpretation made by the researcher, a teacher of accounting in higher education. The interpretations made in the course of the present study are considered defensible, not right, nor corresponding to good learning as an objective reality.

Another aspect of qualitative research validity includes the extent to which the research outcomes are seen as useful. The research aim is then to provide useful knowledge, where knowledge is defined as the ability to perform effective actions. Research outcomes may then be judged in terms of the insight they provide into more effective ways of operating in the world. This is a validity check for phenomenographic research in that much of phenomenographic research has aimed to provide useful insights into teaching and learning. Phenomenography has been developed primarily as an educational research approach. In this sense, phenomenography has two purposes: a research tool to explicate the nature of human experience, and an educational tool to improve teaching and learning especially in higher education. (Åkerlind 2002.)

This study has presented the key elements of an outcome representing learning accounting in higher education and also the relationships between the key elements. The results show that some of the key elements like personality and learning styles are relatively stable, and as such they are not easily affected in education. What can be done, however, is that educators are aware of the implications of these kinds of elements in learning situations. As to the elements that are mouldable or more easily developed in a learning process, such as higher order thinking skills or learning approaches, there are many ways how these qualities can be developed in students during their stay in higher education. In addition, what the teacher actually does and what kind of teaching or self-study methods seem to work best are revealed in the present study.

The present study tries to reveal the core elements of good learning experiences - and their relationships - in accounting and communicate it in such a way that it is possible for the reader to understand how the interpretations were made on the basis of the data. The outcome of the study should reveal what is good learning as experienced by learners. As stated earlier, this analysis is not the only possible one but it tries to be one that is plausible and defensible.

6.5 Suggestions for further research

The number of qualitative and phenomenographic studies in learning accounting is still quite limited comparing to the large number of quantitative studies. Therefore, there is room for further research in this area in different contexts and under different educational systems and for using methods that have been used infrequently in prior studies. When the pool of qualitative studies grows larger, it allows comparative studies. In addition, since qualitative studies are usually in the role of discovering something, they can serve as a basis for building hypotheses for studies that aim at seeking universal generalisations and higher validity than it is possible in the scope of a qualitative study.

It would also be possible to investigate how exactly the high-level conceptions of learning could be developed in the higher education context in order to improve the experiences and, thus, hopefully the outcomes of learning. Moreover, there is a need for research designs that run for a longer period of time to

allow scrutiny of changes over a period of time not only in higher education but also in working life. Questions about the best way to learn and teach have not yet been answered by longitudinal studies.

Since the aim of the present study was to create a holistic insight on how students best learn accounting according to their own experience, it is hoped that the findings of the study can give ideas on more focused studies concerning the different elements in the learning of accounting process, conceptual learning and especially practical learning and teaching innovations. Although there are already many studies on different teaching methods, there is still scope for further research on the impact of different teaching and self-study strategies and methods. The focus should not be only on the method as such but on the whole educational infrastructure (like curriculum and assessment) since it is not possible to change only one aspect in the whole process. This research would enrich the literature in the field of accounting education and learning in a notable way.

OECD reports (OECD Observer 2006) state that we are evidencing the emergence of the knowledge economy, which is making higher education more central. As Global Higher Education Rankings (2005) states, Finland and the Netherlands are the success stories of the survey in terms of accessibility and affordability. They have large student bodies, high attainment rates, extensive grant programmes, and student bodies that are reasonably reflective of broader society. No country has consistently high scores across both the affordability and accessibility rankings. Just over a third of young people graduate from universities in the OECD area but the rapid expansion of higher education is focusing attention in many countries on issues of quality, relevance and efficiency. A measure of student competencies would probably be the most credible tool of assessing the quality of education, rather like the OECD has done with PISA for secondary education. However, measuring quality should go beyond quantitative measures such as the measure of cost, for instance. In this way it can be stated that there is room for more studies carried out particularly in Finland because in many ways the education system has been estimated to produce good results in international comparisons at least in terms of quantitative measures.

6.6 Conclusions

When good learning experiences in accounting are depicted, it is the student himself with certain qualities that can be found in the focus of the phenomenon and the role of the teacher and teaching methods can be seen as mediators between the student and his learning. In the background, there is the conception of learning in general that defines how the student places himself, the teacher and the choice of methods in the process of learning. The present study relies on the constructivist conception on learning and on phenomenographic study methods. The process of the research work has been described in a detailed way

in order to give the reader a possibility to judge the quality of the study results. This study aims at defining the key elements of the learning process in accounting in the Finnish higher education context. The recognition of the key elements and their relationships hopefully assists in developing learning contexts that produce better learning outcomes and enhance the experiences of learning in general. It is also desirable that this study serves as a basis for larger investigations concerning the higher education in Finland.

Finally, it is worth acknowledging that studying learning in accounting has been an interesting endeavour personally. Hopefully, the results of this endeavour can be seen materialising during the coming years in better teaching practises, better understanding of the students and better learning environment design in the everyday teaching job of the researcher.

YHTEENVETO

HYVÄ OPPIMINEN LASKENTATOIMESSA
Fenomenografinen tutkimus suomalaisten korkeakouluopiskelijoiden kokemuksista

Yksi suomalaisen korkeakoulutuksen kehittämisen prioriteetteja on tehokkuuden lisääminen. Korkeakoulutusta tuottavat yksiköt toimivat lisääntyneiden rahoituksellisten paineiden ja muuttuvien rahoitusmallien alla. Jokaisen koulutusta tuottavan yksikön kannalta on tarpeen kiinnittää entistä enemmän huomiota opiskelijoiden oppimisen tukemiseen kehittämällä sellaisia oppimismenetelmiä, joiden avulla oppimista voidaan tehostaa sekä laadullisesti että käytetyn ajan suhteen. Koulutusta tuottavien yksiköiden odotetaan palvelevan sekä yhteiskunnan että liike-elämän tarpeita, ja tästä näkökulmasta niiden tulisi pystyä tuottamaan korkealaatuista työvoimaa, jolla substanssiosaamisen rinnalla on runsaasti erilaisia yleisiä työelämätaitoja, esimerkiksi analyyttisiä, teknisiä ja kommunikatiivisia taitoja. Koulutuksen odotetaan myös edistävän koulutettavan emotionaalista kehittymistä, henkilökohtaista hyvinvointia ja sosiaalista kyvykkyyttä elinikäisen oppimisen periaatteiden mukaisesti.

Laskentatoimen koulutuksen haasteina pidetään aiemman tutkimustiedon valossa koulutuksen lisääntyviä tehokkuusvaatimuksia, koulutuksen tuottajien arvioinnin lisääntymistä, laskentatoimen ammattilaisten työtehtävien monimuotoistumista ja yleisten ammatillisten kompetenssien merkityksen korostumista teknisten taitojen rinnalla sekä elinikäisen oppimisen korostumista. Aiempien tutkimusten mukaan opiskelijoiden motivaatio ammatillisesti suuntautuneissa opinnoissa on usein ulkoisesti ohjautunutta. Stereotyyppiset ammattikuvat ovat omiaan vahvistamaan välineellistä suhtautumista opintoihin. Opintojen aikana laskentatoimi nähdään usein säännöstön hallitsemana aihealueena, jonka oppiminen tapahtuu ulkoa oppimalla tai muistamalla. Traditionaaliset oppimis- ja opetusmenetelmät ja tutkintoihin sisällytetty valtaisa tietomäärä vahvistavat osaltaan oppimiskäyttäytymistä, joka johtaa oppimistuloksiin, joita työelämä ei odota tai jotka eivät ole toivottavia elinikäisen oppimisen näkökulmasta. Tutkimusten mukaan oppimista on kuitenkin mahdollista suunnata uudelleen oppijakeskeisempään ja tehokkaampaan suuntaan, mikäli pystytään tunnistamaan oppimiseen vaikuttavat keskeiset tekijät ja tarvittaessa muuttamaan niitä.

Tutkimus liittyy laskentatoimen oppimisen tutkimukseen, joka on vireä tutkimusalue kansainvälisesti. Suomessa oppimista on tutkittu vastaavalla tavalla kasvatustieteen näkökulmasta esimerkiksi lääketieteessä ja luonnontieteissä. Tutkimuksen tavoitteena on tuoda suomalaiseen laskentatoimen tutkimuksen kenttään laskentatoimen oppimisen näkökulma. Oppimisnäkökulmaa pidetään minkä tahansa aihealueen yhtenä keskeisenä tutkimuskohteena. Tutkimuksen avulla pyritään selvittämään millaiset seikat nousevat keskeisiksi oppimisessa nimenomaan laskentatoimen ollessa kyseessä, koska tutkimuksessa

oletetaan aiempien tutkimusten tuloksiin nojaten, että oppiminen on erilaista erilaisissa oppiaineissa ja erilaisissa konteksteissa. Oppimista käsitellään hyödyntäen konstruktivistisen oppimisteorian tarjoamaa tutkimustietoa. Tutkimuksen kohteena ovat oppiminen ja opiskelija sekä opiskelijan kokemukset ja niiden merkitys oppimisprosessissa. Tutkimusongelmana on selvittää, mitä on hyvä oppiminen laskentatoimessa. Tutkimuksen tavoitteena on löytää onnistuneiden oppimiskokemusten keskeiset elementit opiskelijan näkökulmasta ja tuottaa sellaista tietoa laskentatoimen oppimisesta, että sen avulla voidaan kehittää laskentatoimen opetusta käytännön tasolla ja toisaalta ymmärtää selvemmin laskentatoimen oppimisen erityispiirteitä suomalaisen korkeakoulujärjestelmän puitteissa.

Menetelmäksi tutkimukseen on valittu fenomenografinen menetelmä, joka on laadullinen, empiirinen tutkimusmenetelmä. Siinä kuvataan kuvauskategorioiden avulla kollektiivisesti ihmisten erilaisia tapoja kokea jokin ilmiö, ja näiden yleistettävissä olevien kuvauskategorioiden suhdetta toisiinsa. Tuloksena syntyy yleensä luokiteltu kuvaus jostakin ilmiöstä ja sen keskeisistä elementeistä. Tulosten avulla ei pyritä niinkään väittämään mitään todellisuudesta vaan ennemminkin siitä, miten todellisuus näyttäytyy kokemusten valossa. Fenomenografia on kehitetty nimenomaan ajattelun ja oppimisen tutkimukseen ja sitä on käytetty erityisesti korkeakoulutuksen tutkimuksessa. Fenomenografisella tutkimustiedolla on välitöntä sovellettavuutta koulutuksen kehittämisessä. Tutkimuksen kontekstina on suomalainen ammattikorkeakouluympäristö. Tutkimuksen materiaali on kerätty päiväkirjojen, ryhmä- ja yksilöhaastattelujen sekä videoitujen oppimistilanteiden avulla. Tulokset muodostuvat tutkijan analyysin ja tulkintojen avulla ja lopulliset tutkimustulokset on esitetty kuvauskategorioiden avulla.

Tutkimuksen pohjana käytetään kansainvälisissä laskentatoimen julkaisuissa referoitua tutkimusmateriaalia koskien laskentatoimen koulutuksen ja oppimisen onnistumiseen ja tehokkuuteen vaikuttavia tekijöitä. Näistä yleistasolla keskeisiksi käsitteiksi näyttävät nousevan oppijan persoonallisuus, metakognitiiviset taidot, kognitiiviset oppimistyylit sekä oppimiseen liittyvät lähestymistavat ja näiden edellä mainittujen seikkojen vuorovaikutus oppimistilanteessa. Lisäksi oppimistilanteessa vaikuttavat myös opettajan asema sekä käytettävät opetusmenetelmät. Tutkimuksen aihepiirillä on runsaasti yhtymäkohtia laskentatoimen lisäksi myös kasvatustieteelliseen ja yhteiskuntatieteelliseen tutkimukseen. Tässä tutkimuksessa fokus on laskentatoimen koulutuksessa ja oppimisessa. Aiemmat tutkimukset voidaan jakaa karkeasti kahteen tyyppiin. Osa tutkimuksista keskittyy yläkäsitteiden tarkasteluun, osa tutkimuksista on puolestaan yksityiskohtaisia selvityksiä jonkin tietyn pedagogisen ratkaisun soveltuvuudesta peilattuna johonkin ylätason käsitteeseen. Aiempi tutkimus on tehty lähinnä angloamerikkalaisessa viitekehyksessä, joten tutkimusasetelmassa on huomioitava se, että tavoitteet opetukselle ja oppimiselle johdetaan suomalaisesta viitekehyksestä.

Tutkimuksessa löydettiin hyvän oppimisen keskeiset tekijät oppijan, opettajan sekä menetelmien näkökulmasta. Oppimiskäsitysten määrittely näytti tut-

kimuksen mukaan olevan keskeistä tutkimuksen tulosten tarkastelun kannalta. Käsitys oppimisesta vaikuttaa ratkaisevalla tavalla siihen, millaisiksi oppimiskokemukset muodostuvat, millainen opettajan orientaatio koetaan oppimistilanteessa sopivimmaksi ja millaiset menetelmät näyttävät tuottavan parhaat oppimistulokset. Oppimiskokemuksia voidaan monesti tarkastella kahdella tavalla. Tarkasteltaessa oppimiskokemuksia absoluuttisessa mielessä tarkastelussa korostuvat oppijan henkilökohtaisen osaamisen näkökulmat. Toisaalta oppimistuloksia saatetaan myös tarkastella suhteessa johonkin ulkopuoliseen standardiin, esimerkiksi alan asiantuntijaan tai yleiseen käsitykseen alalla vaadittavasta osaamisesta, jolloin seurauksena voi olla se, että absoluuttisen ja suhteellisen oppimisen välillä saatetaan kokea ristiriitaa. Tämä asettaa haasteita koulutuksen tuottajille.

Tutkimuksen tuloksena syntyi malli laskentatoimen hyviin oppimiskokemuksiin vaikuttavista tekijöistä ja niiden välisistä suhteista. Mallin keskeiseksi elementiksi nousivat oppija itse ja vuorovaikutussuhteet oppijan persoonallisuuden, ylempien ajattelutaitojen sekä oppimistyylin ja lähestymistavan välillä. Välittäjinä prosessissa toimivat niin opettaja kuin käytettävät menetelmätkin. Mallia voidaan pitää dynaamisena siinä mielessä, että se sisältää monia sellaisia elementtejä, joihin voidaan vaikuttaa oppimisprosessin kuluessa. Tulosten voidaan ajatella paitsi tuottavan tietoa laskentatoimen oppimisesta myös antavan käytännöllistä näkemystä siihen, millaisia oppimisprosesseja laskentatoimessa kannattaa tukea. Tulosten pohjalta on mahdollista suunnata pedagogiikkaa siten, että oppimisen kokemukset muodostuvat hyviksi, jolloin voidaan ajatella oppimistulostenkin parantuvan ja yleisellä tasolla oppimisen tehokkuuden lisääntyvän.

Huomionarvoista mallissa on opiskelijan roolin ja henkilökohtaisten ominaisuuksien keskeisyys, ja toisaalta se, että vaikutussuhteet ovat korostetun yksisuuntaisia opettajasta opiskelijaan, vaikka kuitenkin samanaikaisesti tärkeimpinä menetelminä oppimisen kannalta pidettiin yhteistoiminnallisia menetelmiä. Yhteistoiminnallisuudessa korostuivat siis nimenomaan toiset opiskelijat ja heidän merkityksensä oppimisprosessissa. Tätä tulkittiin laskentatoimen koulutuksen erityispiirteeksi. Opettajaa tarvitaan ammatilliseksi malliksi lähinnä sisällöllisten kysymysten tähden. Laskentatoimen ominaispiirteenä voidaan pitää faktuaalisen ja teknisluonteisen tiedon suurta määrää, ja näin ollen opettajan merkitys tiedon oikeellisuuden arvioijana korostuu. Toisten opiskelijoiden merkitys edesauttaa erityisesti muiden geneeristen taitojen kehittymisessä. Opettajan merkitys korostuu myös menetelmien valitsijana - tosin opettajan valitsemia oppimismenetelmiä täydennettiin itseohjautuvasti hyvin monin erilaisin tavoin.

Opiskelijan keskeisimpinä henkilökohtaisina ominaisuuksina tulivat esiin tietyt persoonallisuuden piirteet ja erityisesti se, mikä vaikutus näillä piirteillä on opiskelijan oppimistyyliin, jonka tiedostaminen on keskeinen hyvien oppimiskokemusten elementti. Oppimistyylin löytämistä pidettiin riippuvaisena opiskelijan kyvystä hyödyntää korkeampia ajattelutaitoja eli niin kutsuttuja metakognitiivisia taitoja. Oppimistyylit puolestaan vaikuttivat siihen, millaisia lä-

hestymistapoja opiskelijat kykenivät valitsemaan erilaisissa oppimistilanteissa. Persoonallisuuden tärkeimpinä elementteinä laskentatoimen menestyksekkään oppimisen kannalta pidettiin itsetuntemusta, kykyä sopeutua ryhmätilanteisiin ja toisaalta sitkeyttä. Motivaation merkitys mallissa on vähäisin ja sitä voidaan pitää edellytyksenä hyvälle oppimiselle siinä mielessä, että motivaatio lähinnä määrittelee sen, kuinka paljon ponnisteluja opiskelija on valmis tekemään oppimisen vuoksi. Tärkeimpinä metakognitiivisina taitoina pidettiin kriittistä ja loogista ajattelua ja yleensäkin erilaisia itsesäätelytaitoja. Myös tiedon jäsentelyn taidot nousivat esiin samoin kuin muistiin ja muistamiseen liittyvät kyvyt. Oppimistyylin osalta mikään tyyli sinänsä ei näytä tuottavan toista onnistuneempia oppimiskokemuksia, vaan oleellista on oman oppimistyylin tunnistaminen, jolloin itsesäätelyn avulla oppiminen voidaan suunnata oman tyylin mukaiseksi. Lähestymistapana syväoppiminen tuottaa yleensä parempia oppimiskokemuksia, mutta tärkeää on myös osata valita erilaisia lähestymistapoja tilanteesta riippuen.

Opiskelijoiden kokemusten mukaan opettajan merkitys oppimisprosessissa on keskeinen. Kuvaukset opetuskäsityksistä vaihtelivat samalla tavalla kuin kuvaukset oppimisesta; tiedon siirtämisestä tiedon konstruointiin. Opetusta myös arvioitiin samoilla absoluuttisen ja suhteellisen laadun kokemuksilla kuin oppimistakin. Opettajan keskeisiä kykyjä hyvien oppimiskokemusten valossa ovat kyky selittää asioita ymmärrettävällä tavalla, mikä voidaan nähdä metataitojen yhteensopivuutena ja syväoppimisen yhtenä edellytyksenä. Samoin tärkeäksi nousi opettajan kyky vaistota, milloin opiskelijat tarvitsevat tukea, kertausta ja palautetta yleensäkin. Sen sijaan opettajan persoonallisuudella sinänsä ei näyttänyt olevan oppimisen kannalta merkitystä. Keskeiseksi nousi ainoastaan opetustyyli, jota voidaan pitää yhtenä persoonallisuuden osana. Opettajan opetustyylin vastaaminen opiskelijan oppimistyyliä lisää synergiaa oppimistilanteessa kuten myös opiskelijan motivaatiota ponnistella oppimisen tähden. Myös opettajan oma innostus on opiskelijan motivaation lähde. Usein opiskelijat hakeutuvat tietoisesti niiden opettajien opetukseen, joiden opetustyylin he tunnistavat vastaavan omaa oppimistyyliään. Tätä voidaan pitää yhtenä opiskelijoiden itsesäätelyn keinona. Opettajan kyky kantaa vastuunsa oppimistilanteista ja avuliaisuus ovat tärkeitä – myös ottaen huomioon, että tehokkaimpina oppimismenetelminä pidettiin opiskelijakeskeisiä menetelmiä. Tämän voidaan tulkita korostavan opettajan roolia oppimisen ohjaajana. Hyvässä oppimisessa korostuu lisäksi jatkuvan ohjaavan palautteen saaminen. Sen merkitys on tutkimuksen mukaan paljon keskeisempää oppimisen ja motivaation kannalta kuin suoritusten arvioinnin sinänsä.

Opettajan lisäksi oppimismenetelmät toimivat tärkeinä välittäjinä oppimisprosessissa. Käsitys oppimismenetelmien tehokkuudesta on sidoksissa käsityksiin oppimisesta ja opettajan roolista. Yhteistoiminnallisten menetelmien katsottiin tuottavan parhaita oppimistuloksia arvioitaessa sekä ammattispesifejä että yleisiä kompetensseja. Oppimismenetelmät kuten ongelmaperustainen oppiminen koettiin työelämää vastaavina ja strukturoidumman rakenteensa vuoksi sen katsottiin myös tukevan ammatillista kehittymistä paremmin kuin

muiden, löyhemmin rakennettujen yhteistoiminnallisten oppimismenetelmien. Oppimismenetelmiä voidaan pitää opettajan valintana. Niiden lisäksi opiskelijat kykenivät täydentämään opettajan valitsemia menetelmiä omavalintaisilla, omaa oppimista tehostavilla itseopiskelumenetelmillä, jotka vastaavat opiskelijan oppimistyyliä paremmin. Erityisesti kirjoittamisen merkitys laskentatoimen oppimisessa korostui sen metakognitiivisia taitoja ja tietorakenteiden hyväksikäyttöä lisäävän vaikutuksen ansiosta. Harjoitusten merkitys laskentatoimen oppimisessa on keskeistä oppiaineen luonteesta johtuen, ja niiden katsottiin lisäävän syväoppimista. Yleinen työkokemus lisäsi motivaatiota ja paransi oppimista koulutuksen puitteissa. Sen sijaan työharjoittelun ammatin työtehtävissä koettiin aiheuttavan stressiä, koska taitoja verrattiin suhteessa ammattilaisiin ja ammattilaisen kvalifikaatioihin, ja tämän suhteellisen arvioinnin seurauksena oppimistuloksia pidettiin usein riittämättöminä, vaikka opiskelija olikin henkilökohtaisesti tyytyväinen omiin oppimiskokemuksiinsa.

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