EDUCAÇÃO E DESENVOLVIMENTO SOCIAL
EDUCATION AND SOCIAL DEVELOPMENT
EDUCACIÓN Y DESAROLLO SOCIAL

millenium 13

Millenium, 2(7), 13-20.

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COMO AS TEORIAS DA EDUCAÇÃO PODEM SER APLICADAS NO ENSINO DA CONTABILIDADE

HOW LEARNING THEORIES CAN BE APPLIED IN ACCOUNTING EDUCATION

COMO LAS TEORÍAS DE LA EDUCACIÓN SE PUEDEN APLICAR EN LA ENSEÑANZA DE LA CONTABILIDAD

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RECEIVED: 29th March, 2018
ACCEPTED: 13th September, 2018

Silva, I. L. (2018). How learning theories can be applied in accounting education.
Millenium, 2(7), 13-20.
DOI: https://doi.org/10.29352/mill0207.01.00181

RESUMO

Introdução: Possuir competências técnicas não é suficiente para ser um bom formador em contabilidade. O conhecimento sobre as teorias da aprendizagem, os métodos de aprendizagem, as diferentes formas de avaliação de conhecimento, os diferentes métodos de ensino, é também fundamental para ser um bom formador em contabilidade.
Objetivos: Analisar as teorias de aprendizagem que podem ser aplicadas no ensino da contabilidade e como podem ajudar os formadores de contabilidade a melhorar o processo de aprendizagem de acordo com as suas competências.
Métodos: Revisão da literatura sobre as competências dos profissionais de contabilidade e análise da aplicação das teorias de aprendizagem no ensino da contabilidade.
Resultados: Tendo por base algumas teorias de aprendizagem (behaviorismo, humanismo, cognitivismo, cognitivismo social e construtivismo), proporcionar um conjunto de recomendações aos formadores em contabilidade de modo a melhorar o processo de aprendizagem.
Conclusões: Mesmo que um formador disponha de uma boa formação académica, uma larga experiência profissional; mesmo que use tecnologias de ensino inovadoras, se o formador não escutar os formandos; se o formador não perceber que cada formando apresenta uma formação de base diferente, uma cultura diferente, uma forma diferente de aprender; se o formador não perceber que não existe uma forma standard de ensinar, o formador não será bem sucedido.

Palavras-chave: Ensino de contabilidade; Competências em contabilidade; Teorias de aprendizagem; Estilos de aprendizagem; Educação de adultos.

ABSTRACT

Introduction: Having expertise in accounting is not enough to be an effective accounting educator. Knowledge about learning theories, learning styles, different types of assessment, and the variety of available teaching methods, is also fundamental to be a good accounting educator.
Objectives: Analyse which learning theories can be applied in accounting education and how they can help accounting educators to improve the learning process according with their competences.
Methods: Literature review about the professional accountant competencies and analysis of the learning theories application in accounting education.
Results: Based on certain learning theories (behaviourism, humanism, cognitivism, social cognitivism, and constructivism), provide a set of recommendations to accounting educators in order to improve the learning process.
Conclusions: Even if an educator has a very good academic background, and significant professional experience in the teaching area; even if he uses innovative teaching technologies, if the educator does not listen learners; if the educator does not understand that each individual learner has a different background, cultural experience and way of learning; if the educator does not understand that there is no standardized way to teach, this educator will not succeed.

Keywords: Accounting education; Accountant skills; Learning theories; Learning styles; Adult learning.

RESUMEN

Introducción: Poseer competencias técnicas no es suficiente para ser un bueno formador en contabilidad. El conocimiento sobre las teorías de aprendizaje, los métodos de aprendizaje, las distintas formas de evaluación del conocimiento, los distintos métodos de enseñanza, es también fundamental para ser un bueno formador en contabilidad.
Objetivos: Analizar las teorías de aprendizaje que pueden ser aplicadas en la enseñanza de la contabilidad y como ellas pueden ayudar los formadores de contabilidad a mejorar el proceso de aprendizaje.
Métodos: Revisión de la literatura sobre las competencias de los profesionales de contabilidad y análisis de la aplicación de las teorías de aprendizaje en la enseñanza de la contabilidad.
Resultados: Teniendo por base ciertas teorías de aprendizaje (behaviorismo, humanismo, cognitivismo, cognitivismo social y constructivismo), proporcionar un conjunto de recomendaciones a los formadores en contabilidad con el fin de mejorar el proceso de aprendizaje.
Conclusiones: Mismo que un formador disponga de una buena formación académica, una larga experiencia profesional; mismo que utilice tecnologías de enseñanza innovadoras, si el formador no escuchar los alumnos, si el formador no percibir que cada alumno presenta una formación de base distinta, una cultura distinta, una forma distinta de aprender; si el formador no percibir que no existe una forma standard de enseñar, el formador no será bien sucedido.

Palabras Clave: Enseñanza de contabilidad; Competencias en contabilidad; Teorías de aprendizaje; Estilos de aprendizaje; Educación de adultos.

INTRODUCTION

The main purpose of this article is to analyse which learning theories can be applied in accounting education and how can they help accounting educators to improve the learning process for accounting learners.

To better understand the application of learning theories in the accounting education process, first we need to have an idea about the kind of competencies a professional accountant should have. To achieve that purpose, we start by analysing the definition of accounting, highlighting as well the International Education Standards (IES) to be applied to the training and education of accountants, and by analysing the report produced by a joint task force sponsored by the Management Accounting Section (MAS) of the American Accounting Association (AAA) and the Institute of Management Accountants (IMA) with the purpose of creating a comprehensive educational framework that defines the required competencies of accounting and finance professionals.

Then, the learning theories are analysed and their application to the accounting education is discussed, followed by the characterization of learning styles and their application in accounting education, and by a brief reference to assessment methods. The article finishes with some recommendations to accounting educators in order to facilitate learning by accounting learners and with the conclusion.

1. THE REQUIRED COMPETENCIES FOR THE PROFESSIONAL ACCOUNTANTS

1.1 The definition of accounting

According with Weygandt, Kieso, Kimmel, and DeFranco (2009, p. 2), accounting "is an information system that identifies, records, and communicates the economic events of an organization to interested users". Following this definition, a professional accountant should be able to select the economic events that are relevant to a specific organization, and record them in a chronological and systematic manner. As we know, a professional accountant should follow a set of standards, usually called Generally Accepted Accounting Principles (GAAP). So, a hard skill of an accountant should be to acquire the technical knowledge about the GAAP. For example, beyond other accounting principles, to be able to prepare an Income Statement, an accountant should have the technical knowledge about the revenue recognition principle and the matching principle.

However, the definition of accounting also includes the communication of accounting information to interested users. As Weygandt et al. (2009) states, a very important element in communicating economic events is the accountant's ability to analyse and interpret the reported information, which involves explaining the uses, meaning, and limitations of the reported data. Therefore, a professional accountant should also possess some additional important soft skills, such as communication and interpersonal skills.

1.2 A good example of a framework for the accounting education

With the aim to ensure that accountants across the globe meet a minimum standard, the International Accounting Education Standards Board (IAESB) of the International Federation of Accountants (IFAC) has issued eight International Education Standards (IES) to be applied to the training and education of accountants. IES 1 establishes the entry requirements to a program of professional accounting education and initial professional development (IPD); IES 2 details the technical competence that aspiring professional accountants are required to achieve by the end of IPD; IES 3 concentrates on the needed professional skills; IES 4 requires trainee accountants to learn professional values, ethics and attitudes; IES 5 prescribes the practical experience that aspiring professional accountants are required to complete by the end of IPD; IES 6 highlights the assessment of professional capabilities and competence; IES 7 covers continuing professional development; and IES 8 covers the requirements for audit professionals (International Federation of Accountants, 2017).

Lawson, Blocher, Brewer, Gary, Sorensen, Stout, and Wouters (2014) reports the work done by a joint task force sponsored by the Management Accounting Section (MAS) of the American Accounting Association (AAA) and the Institute of Management Accountants (IMA) with the purpose of creating a comprehensive educational framework that defines the required competencies of accounting and finance professionals. According with Lawson et al. (2014, p. 296), competencies "are the set of knowledge, skills, and abilities required for professional success in accounting. Knowledge "is the intellectual content to be learned", skills are "the capacity to apply the knowledge to achieve specific goals and objectives, and abilities are the application of knowledge and skills in a professional work environment".

The authors propose four recommendations: accounting education should focus on curricular requirements for long-term career demands; the focus of accounting education should include organizational settings beyond a focus on public accounting; curriculum recommendations should derive from an analysis of how accountants add organizational value; and the competencies of accounting education should be developed within the curriculum as integrated competencies. Based on these recommendations, Lawson et al. (2014) propose an educational framework formed around three interconnected components: foundational competencies, broad management competencies, and accounting competencies. This is summarized in Figure 1.

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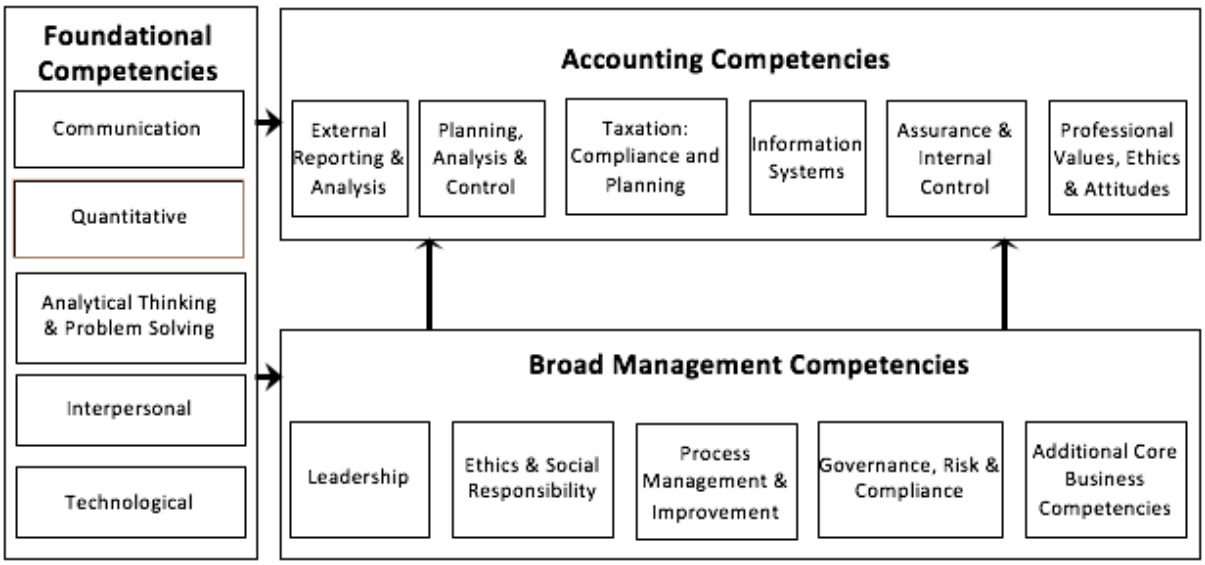

Figure 1. Competency Integration: A Framework for Accounting Education. From "Focusing Accounting Curricula on Students' Long-Run Careers: Recommendations for an Integrated Competency-Based Framework for Accounting Education", by Lawson et al., 2014, *Issues in Accounting Education, 29*(2), p. 300.

According to Lawson et al. (2014), Foundational Competencies are those that all business school graduates need to have because they support broad management and specialized accounting competencies and prepare students for life-long careers. The Accounting Competencies enable accountants to integrate management and analytical methods, supported by technology, to assist an enterprise to formulate and execute its strategy successfully. The Broad Management competencies help accountants work jointly and effectively with all members of the organization to create value, and these competencies are essential for those who aspire to become successful managers and executives.

2. THE APPLICATION OF LEARNING THEORIES, LEARNING STYLES AND DIFFERENT TYPES OF ASSESSMENT IN ACCOUNTING EDUCATION

2.1 Learning theories and accounting education

Following Merriam and Bierema (2014), there are five traditional learning theories that offer different explanations of learning: behaviourism, humanism, cognitivism, social cognitivism, and constructivism.

Introduced by Watson in the 1920s and developed into a comprehensive theory by Skinner and others, for behaviourists human behaviour is the result of the arrangement of particular stimuli in the environment. If this behaviour is reinforced or rewarded, it is likely to continue; if it is not reinforced it is likely to disappear (Merriam & Bierema, 2014). In the context of the learning process, the learner should be conditioned through punishments and rewards. Learning occurs when appropriate stimuli are presented and the learner is subsequently rewarded for exhibiting the desired behaviour. Therefore, it is the observable behaviour (and not the internal mental processes or emotional feelings) which demonstrates that learning has occurred (Merriam & Bierema, 2014).

By the 1950s, psychologists such as Maslow, had firmly established humanism as a perspective on human nature and learning (Merriam & Bierema, 2014). The main premise of humanism is that people have a natural potential for learning and that significant learning takes place when an individual can see that the subject matter is relevant to him. In this context, the educator should act as a facilitator, encouraging learning rather than identifying specific methods or techniques of instruction (Bates, 2016).

Humanistic learning theory has had a profound effect on adult learning theory. Three major adult learning theories of andragogy, self-directed learning, and transformative learning, all have roots in humanistic psychology (Merriam & Bierema, 2014). According to Knowles, andragogy is the art and science of adult learning, thus andragogy refers to any form of adult learning (Kearsley, 2010 as cited in Pappas, 2013). In 1980, Knowles made four assumptions about the characteristics of adult learners (andragogy), that are different from the assumptions about child learners (pedagogy). In 1984, Knowles added the 5th assumption (Pappas, 2013). According with Knowles (1975, p. 18), self-directed learning is "a process in which individuals take the initiative without the help of others in diagnosing their learning needs, formulating goals, identifying human and material resources, and evaluating learning outcomes".

The cognitivist theory represented a shift in the focus on learning from the environment (behaviourists), or the whole person (humanists), to the learner's mental processes (Merriam & Bierema, 2014). Cognitive theories focus on the conceptualization of

students' learning processes and address the issues of how information is received, organized, stored, and retrieved by the mind. Learning is concerned not so much with what learners do but with what they know and how they come to acquire it. The learner is viewed as a very active participant in the learning process (Ertmer & Newby, 1993).

Piaget is considered a pioneer in this area. He argued the existence of four stages of development: the sensorimotor stage, where learning takes place through touch and feel; the pre-operational stage, where the ability to arrange objects logically starts to be developed; the concrete operational stage, where the ability to think logically about objects and events starts to become more structured; and the formal operational stage, where abstract thinking and verbal reasoning start to develop (Bates, 2016).

Although Piaget's theories were developed based on his studies of children, following Bates (2016), these theories can be expanded to include people of all ages and can be summarized as follows: people react differently to learning according to their stage of cognitive development; educators should take an active, mentoring role towards their learners; learners should be encouraged to learn from their peers; learners should be allowed to learn from their mistakes; the focus should be on the process of learning as well as the outcome; educators should respect each learner's interests, abilities and limits.

The social cognitive learning theory states that much human learning occurs in a social environment:

> By observing others, people acquire knowledge, rules, skills, strategies, beliefs, and attitudes. Individuals also learn about the usefulness and appropriateness of behaviours by observing models and the consequences of modelled behaviours, and they act in accordance with their beliefs concerning the expected outcomes of actions (Schunk, 1996, as cited in Merriam & Bierema, 2014, p. 35).

Vygotsky's Social Development Theory was one of the foundations of constructivism. Vygotsky focused on the connections between people and the sociocultural context in which they act and interact in shared experiences. One of the most important milestones from Vygotsky was the concept of zone of proximal development. According to Vygotsky this is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, as cited in McLeod, 2012). This concept is nowadays widely used in studies about teaching and learning in many subject-matter areas (including reading, writing, mathematics, science, second-language learning, moral education), with diverse kinds of pupils (including so-called disadvantaged, learning disabled, and gifted students), with preschool children and adults, with information technologies and computer-mediated communication, with children's use of libraries, with discussions about teacher training (Chaiklin, 2003). The concept has also been picked up and used in several academic disciplines and professional areas, including nursing, psychoanalysis, psychotherapy, and occupational therapy (Chaiklin, 2003).

Like Helliar (2013) states, authors in accounting are mostly concerned on teaching: how they can teach something, or how they can manage a course to engage students, or how they can have bettered the student experience in teaching accounting, auditing or ethics. The pedagogical practices usually enhance mechanical problem solving, adopting well-structured, well-defined, and recipe-driven learning approaches that provide-"single solution" answers (Wynn-Williams, Whiting, & Adler, 2008). The presence of the behaviourist theory is quite obvious with this kind of pedagogical practices.

However, accounting education is not just about providing technical knowledge such as the double-entry bookkeeping system, or variance analysis or calculating net present values. Students may start as passive learners of the curriculum, but to be able to develop a real mastery of accounting, students need to apply concepts to solve real-life problems in different contexts (Helliar, 2013). To do that, accounting educators need to provide the scaffolding whereby students can move from a passive learning perspective to an active learning perspective.

Accounting graduates only can become successful professional accountants if they adopt the life-long learning concept, and thereby continually adapt to changes in the business environment (Hassall, Joyce, Arquero Montaño, & González González, 2010). In this context, maybe accounting educators should pay more attention not only to the behaviourist learning theory, but also to other learning theories such as humanism, cognitivism, social cognitivism, and constructivism.

2.2 Learning styles and the accounting education

Improving the teaching skills of accounting educators requires an understanding of how students learn (Fatt, 1995). Some students, for example, learn best by active participation whereas others learn best through observation. Some prefer working in groups whereas others prefer working alone. Some may prefer passive learning through lecture presentations whereas others may prefer active learning by experimenting with ideas and engaging in practical applications (Tan & Laswad, 2015).

Of all models of learning Kolb's Learning Style Instrument, which is based on experiential learning theory, is one that is well established and widely adopted in business education research (Tan & Laswad, 2015). David Kolb, inspired by the work of John Dewey, Kurt Lewin, and Jean Piaget, developed a model of experiential learning involving a four-stage cycle. Learning, according to Kolb, is a holistic process whereby knowledge is created through the transformation of experience (Duangploy & Owings, 1994). Following Chen, Jones, and Moreland (2014), the process starts when a learner finds a new experience, usually called "concrete experience" (feeling). The next phase, "reflective observation", involves drawing upon past experiences to perceive the new experience from different perspectives. Then we have the "abstract conceptualization", in which a person generates theories and solutions to the new issues encountered. Finally, the development of concepts leads to "active experimentation",

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where the person tests and applies the theories and solutions previously generated. The cycle can be continuous or repeating as individuals encounter other new experiences. According with the same authors, these dimensions of perceiving and processing information can be organized into four styles of learning: "diverging" (combine concrete experience and reflective observation), "assimilating" (combine reflective observation and abstract conceptualization), "converging" (combine abstract conceptualization and active experimentation), and "accommodating" (combine concrete experience and active experimentation).

Individuals can have different preferences associated with learning in different contexts, but most tend to default a particular style of learning. Tan and Laswad (2015) presents very good examples for each kind of learning style. For example, using the case of depreciation of fixed assets in financial accounting, a "diverger" will work through a problem with varying depreciation methods and useful lives of assets (concrete experience), then will compare the resulting effects on net income of the different depreciation expense amounts (reflective observation). For example, "convergers" can be drawn to a lecture in the framework of the accounting equation and its relevant components (abstract conceptualization), followed by the preparation of financial statements (active experimentation). An "assimilator" will prefer to work through an assignment requiring the construction of a model, for example, asking them to prepare a comprehensive master budget for a company (abstract conceptualization) and come up with relevant financial and operating budgets (reflective observation). An example of a learning structure that is appealing to "accommodators" is the case of working through profitability and liquidity ratios from class exercises (concrete experience), followed by analysing a case study and making recommendations based upon these various ratios.

As stated by Wynn-Williams, Whiting, and Adler (2008), it was believed that business learners in general, and accounting learners in particular, displayed a "converger" learning style. However, more recently, this idea has been challenged because later studies suggest that accounting learners evidence a wider variety of learning styles, with the "assimilator" and "accommodator" styles being often equally present as the "converger" style (Wynn-Williams, Whiting, & Adler, 2008).

Besides Kolb's Learning Style Instrument, other models of learning have been used or referred to recently in accounting education. Between others, it is possible to highlight the Gregorc Learning Styles, the Canfield Learning Styles Inventory, the Myers-Briggs Type Indicator, and the Honey and Mumford's Learning Style Questionnaire.

2.3 Assessment and accounting education

Following Schunk (2014), the methods of assessing learning include: direct observations, written responses, oral responses, ratings by others, and self-reports. According with the same source, self-reports can take several forms: questionnaires, interviews, stimulated recalls (recall of thoughts accompanying one's performance at given times), think-alouds (verbalizing aloud one's thoughts, actions, and feelings while performing a task), and dialogues.

Assessments can also be formative (assessment for learning) or summative (assessment of learning). As various assessment methods can be used to evaluate students' achievements of learning outcomes, these assessment methods may have an impact on the performance of students with particular learning styles (Tan & Laswad, 2015). Therefore, it is important that accounting educators resolve to use a variety of these methods in order for individual learners to have the opportunity to demonstrate their true ability and capability.

3. FACILITATING LEARNING TO THE ACCOUNTING LEARNERS

A class with a large diversity of learning preferences places challenges on the educator. For example, based on Kolb's types of learners, Baker, Simon, and Bazeli (1987) argue that concrete learners value personal experience, on-the-job training, learning from co-workers, the interaction with others, therefore examples of situations that facilitate learning could be talks by experts, student feedback, exercises and simulations. Reflective learners like pictures and demonstrations, prefer passive learning situations, therefore situations that facilitate learning could be lectures, small group discussion, summaries, examinations, and individual conferences with faculty. Abstract learners enjoy building theory using inductive and hypothetical-deductive methods, enjoy impersonal learning environment, therefore situations that facilitate learning could be case studies, readings on theory, and thinking alone. Active learners enjoy a task-oriented course with a great deal of autonomy, concentrate on practitioner roles, apply principles to problems, therefore situations that facilitate learning could be homework, student feedback, projects, and small group discussion.

Nowadays, employers are expecting graduates entering the profession to have the top three skills: analytical/problem solving skills, a level of business awareness or real-life experience and basic accounting skills. However, employers also expect oral communication skills, ethical awareness and professional skills, teamwork, written communication and understanding of the interdisciplinary nature of business.

Moreover, as stated before, usually students do not present the same preferences to the mode of learning. This scenario places an urgent need for change in the teaching methods used by accounting educators, with the aim of leaving the focus on just technical accounting and adopting a holistic way of teaching. In my opinion, for example:

- Different teaching methods between lectures and tutorials can be implemented to teach non-technical skills, values

and attitudes;
- Role play can be used to discuss ethical dilemmas or negotiating skills;
- Case studies can be used for enhancing and understanding the broader business environment and decision making;
- Computerized business simulations, digital video technology, and spreadsheet models can be used to develop decision making skills and introduce situated learning;
- Socratic dialogue can be used to develop critical reasoning;
- Problem based learning ("learning by doing") can be used to enhance critical thinking;
- Field trips, seminars, guest lecturers (with professionals of the area and alumni), and internships can be used to increase business awareness and to have a better idea about "real life";
- Non-traditional tools such as creative writing (fairy tales, fables, poems) can be used to enhance oral and writing communication skills;
- New technologies (such as Kahoot and Nearpod) can be used to engage more learners and make the learning process funnier;
- Accounting educators should discuss with other accounting educators how to implement more effective educating strategies;
- Accounting educators should try to choose appropriate assessment methods in order to promote active learning;
- Accounting educators should give continuous feedback to accounting learners, in order to improve the learning process;
- Accounting educators should discuss with educators from other areas how to achieve synergies between different courses (including interdisciplinary assignments and projects).

CONCLUSIONS

Looking to the required competencies for the professional accountants, mostly in a changing world like ours, and sometimes dealing with very heterogeneous classes (in terms of age, prior knowledge, culture, and motivation), having a good expertise in accounting is not enough to be a good accounting educator. Knowledge about learning theories, learning styles, different kinds of assessment, and different teaching methods and tools, is also fundamental to be an effective accounting educator.

Following Lucas and Milford (2009), two major starting points of teaching and learning in accounting, business and management are: listening to learners and asking learners to reflect on their learning. Therefore, an essential goal of education should be supporting learners in developing their ability to think critically.

In a world where technology is everywhere, accounting educators should also be able to deal with new technologies. However, more than being an end itself, the use of new technologies should be only a mean to achieve a better learning process (Kirkwood, 2014).

Educators in general, and accounting educators in particular, face a large number of challenges. Only a holistic approach can help educators to deal with all those challenges. In this kind of approach, educators should try to help students do be critical, confident and independent, making learning a process of self-improvement that recognizes not only the individual needs of the learner but also the social context of learning and teaching interaction (Patel, 2003).

In summary, even if an educator has a very good academic background, and significant professional experience in the teaching area; even if he uses innovative teaching technologies; if the educator does not listen learners; if the educator does not understand that each individual learner has a different background, cultural experience and way of learning; if the educator does not understand that there is no standardized way to teach, this educator will not succeed. After all, an educator is, at the same time, a learner…

ACKNOWLEDGEMENTS

This article was written in the context of the author's attendance of the Postgraduate Certificate in Higher Education by the University of Derby (United Kingdom). A special word of thanks should be provided to Peter Tunnicliffe, from the University of Derby, for his supervision, mentoring, and final review of the article. However, any eventual mistakes should be attributed to the author.

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