

Adopting appropriate Teaching Models to develop knowledge and skills to academic standards in the accounting discipline

ABSTRACT:

In higher education globally, graduate attributes are recognised as a critical outcome of a modern university education. This is particularly relevant in the discipline of accounting in the context of professional accreditation requirements, criteria defined in program standards (ALTC, 2010) and the employment agenda of the federal government. Cooperative learning models of teaching are the most suitable teaching models for the development of professional accounting competencies in the accounting discipline. While the role of an accountant has changed the rate of change in emphasis and teaching methods and strategies in accounting is much slower. Joyce, Weil, and Calhoun categorised a wide variety of teaching models into four families including: information processing, behavioural, personal, and social models. This paper applies the Australian accounting teaching and learning standards criteria to the models of teaching by Joyce, Weil and Calhoun to evaluate which teaching and learning model would be most appropriate to teach future accountants. The findings indicate that the social interdependence theory and the cooperative learning model are the most appropriate in order to develop the standards and professional accounting competencies required of an accounting graduate.

Introduction

The major objective of accounting education is to prepare students for work places. For many years academics (Accounting Education Change Commission 1990b; Matthews, Jackson, & Brown, 1990; Albrecht & Sack 2000; Kavanagh & Drennan, 2008) and professionals (Andersen 1989; Grant Thornton, 2010) are seeking to restructure accounting education to meet the requirements of business environment. However, currently accounting education as a model has failed to focus on developing graduates for successful careers worldwide (Awayiga, Onumah & Tsamenyi 2010). Whereas, accounting education should enable students to possess the necessary skills for the work place, it seems that accounting education stakeholders are still debating the nature and level of skills that graduates should possess and how these skills can best be developed. This is particularly relevant in the context of professional accreditation requirements (Guthrie, 2010), program standards (ALTC, 2010) and the employment agenda of the federal government (BIHECC, 2007).

The objective of this paper is to apply Australian accounting learning and teaching standards criteria to the models of teaching categorised by Joyce, Weil and Calhoun (2009) to evaluate which teaching and learning model would be most appropriate to teach future accountants.

The paper is divided into five sections. First, it explores the background regarding the skills needed by accountants, and the subsequent accounting education challenges. In the second section, the criteria to evaluate the teaching models is highlighted and the research question outlined. The third section presents the teaching models as categorised by Joyce, Weil and Calhoun (2009). In the fourth section, the criteria are applied to the teaching models and their related learning theories. Finally, discussion and conclusions are presented.

Background and development of research question

Skills needed by accounting professionals

Currently, the role of accountants has changed from being one of a technical nature to one which is more client-focussed. Change is a significant characteristic of the environment in which professional accountants work. Pressures for change come from many sources, including (a) globalization, (b) advances in technology, (c) business complexity, (d) societal changes, and (e) the expansion of stakeholder groups, including regulators and supervisory bodies and the broader community. Change requires professional accountants to maintain and develop new and/or more specialized knowledge and skills throughout their careers (IFAC 2009; Reckers 2006). The rapid development and ever-changing needs of the global business environment have resulted in evolutionary changes in the skills required by accountants to add value for their clients (De Lange, Jackling & Gut, 2006). In times of such change and development few would deny that the role of the traditional accountant as a mere score-keeper is no longer a viable contributor to business (Jackling & De Lange, 2009).

While technical accounting competencies remain obligatory for the professional accountant, these competencies alone are insufficient in today's workplace. A study by Rebele (1985) found that accounting students are inclined to rank technical accounting competencies and oral communication skills higher than other skills. However, recent studies indicate that development of students' generic skills is required for career success. For example, Hurt (2007) emphasised fundamental skills rather than a technical orientation. He advocated that the development of critical thinking skills in future accountants is of primary importance. Schmidt, Green and Madison (2009) surveyed 122 accounting administrators from North American institutions with the largest enrolments in accountancy programs. Their results showed that communication skills—especially writing skills—are considered important and most valued in the accounting curriculum. Kavanagh et al (2009) emphasise

the ability to really listen to and understand clients' needs as an essential communication skill. Accounting practitioners are no longer merely required to undertake the necessary task of information provision such as bookkeeping and data analysis; rather, they are regarded as information facilitators. This has resulted in the need for future accountants to be forward thinkers, skilled strategists and team players (Jones & Abraham 2008).

Accountants need intellectual skills such as problem solving and critical thinking. Intellectual skills include the ability to relate concepts learned to new situations, the ability to think for oneself, to critically assess new information and situations, and to apply knowledge from one workplace context or problem to another. Kavanagh et al. (2009) defined problem solving as the ability to apply theory to practice, as well as critical analysis and thinking skills. Mohamed and Lashine (2003) defined critical thinking as the ability to reach justifiable conclusions to questions that cannot be answered definitively—and where all relevant information may not be available. Intellectual skills help accountants to: a) exercise judgment based on comprehension of an unfocused set of facts; and b) display a capability for inductive-thought process and apply value-based reasoning in unfamiliar settings (Awayiga, Onumah & Tsamenyi 2010).

Communication skills are essential to the success of accountants and are seen as vitally important in satisfying the requirements of the workplace (Kavanagh et al. 2009). Communication skills are concerned with the ability to transfer and receive information easily (Andersen 1989; Awayiga, Onumah & Tsamenyi 2010; Ballantine & Larres 2009; Hancock et al. 2009). In addition, communication skills include listening effectively to gain information, understanding opposing points of view, and having the ability to present ideas orally or in writing and discuss matters with others (Fortin & Legault 2010; Hancock et al. 2009; Jones & Abraham 2008; Rebele 1985).

Interpersonal skills enable accountants to work with others to achieve the goals of the business. Companies require employees with good interpersonal skills and the ability to work in a collaborative environment (Accounting Education Change Commission 1990a). Interpersonal skills include the ability to interact with and influence different kinds of people from different backgrounds and with different value systems, and to negotiate work collaboratively. Interpersonal skills also include the ability to organize and delegate tasks, motivate, resolve conflicts, and enhance client relations and decision making (Awayiga, Onumah & Tsamenyi 2010; Ballantine & Larres 2009; Jones & Abraham 2008; Kennedy & Dull 2008). Watson (1928 in Gillies & Ashman 2003) noted that groups think more efficiently than the best member of the group working alone. Vygotsk (1978 in Kozulin et al. 2003) asserts that a person is able to perform a certain number of tasks alone, however, in collaboration a greater number of tasks can be performed.

The need for a broader set of skills beyond technical accounting competencies, intellectual, communication, and interpersonal skills includes: a) accountants can cope more efficiently in a challenging business environment; and b) it will increase accountants' competencies levels required by the global market (Jackling & De Lange 2009; Jackling & Watty 2010; Kavanagh & Drennan 2007, 2008; Kavanagh et al. 2009; Mohamed & Lashine 2003). Specifically, Jackling and De Lange (2009) believe a mixture of skills is a major requisite of employers as it helps in solving a diverse range of business challenges. This raises the issue of how universities provide the accounting profession with suitably qualified graduates (Albrecht & Sack 2000).

Accounting education challenges

Numerous studies have explored the development of accounting graduates. Stoner and Milner (2010) stated that accounting educators should work closely with various stakeholders to prepare graduates for lifelong learning and successful business careers. Typically, these studies suggest major changes to the teaching and learning of accounting (Accounting Education Change Commission 1990b; Albrecht & Sack 2000; Andersen 1989) in preparing students for work in an accounting career. Howieson (2003) put forward that the new millennium will require even greater changes in accounting practice to meet changes in the business environment which, in turn, will further influence the future directions of accounting education.

Because current teaching models are no longer considered adequate, universities are actively seeking updated and contemporary strategies to teach and enhance professional accounting competencies. Teaching models which emphasise memory and recalling of facts are considered a less desirable approach when teaching accounting and may result in passive students (Jackling 2005). Kavanagh and Drennan (2007) state that current teaching models place little emphasis on development of students' professional accounting competencies. Universally, the training and education of accountants has been the subject of much debate (Mohamed & Lashine 2003). Albrecht and Sack (2000) stress the significance of skill development throughout accounting programmes. Accounting educators need to address the expected shift in accountants' skills by developing courses and teaching models that are more interdisciplinary and analytical in their orientation (Howieson 2003). Suggested strategies for addressing the identified deficiencies have focused on broadening the curriculum and developing alternative delivery strategies.

Some research in accounting education emphasises the importance of teaching accounting students problem-solving and group skills. For example, Hodson (1988) argued that since identifying and solving unstructured problems is an essential requirement in the

business environment, students should identify and solve unstructured problems by using multiple information sources. Farrell and Farrell (2008) state that team work in a university subject is sound preparation for participation in the workplace. Zakaria and Iksan (2007) assert that accounting students must work in groups as they need these skills in the business environment. Mohidin et al. (2009) stated that by working in groups, accounting students fostered greater participation, self confidence and leadership ability. Most employers do not expect their employees to sit in rows and compete with colleagues without interacting with them (Johnson & Johnson 1994). Therefore, teaching of accounting should enable students to develop the necessary communication and business skills (Albrecht & Sack 2000; Jones & Abraham 2008).

Research in accounting education has urged the adoption of alternative teaching models to develop professional accounting competencies. For example, the Accounting Education Change Commission (1990b) suggests that accounting instructors should adopt alternative teaching methods to develop ‘critical thinking’ skills in accounting graduates. Jones (2010) examined the nature of generic skills and presented a conceptual overview for theorising generic skills. She emphasized that generic skills need to be taught and understood as part of the professional and scholarly practice of accounting. Fortin and Legault (2010) found that using mixed teaching methods promoted generic skills of accounting students more than traditional lectures; and Mohidin et al. (2009) advocated the importance of adopting teaching methods that help students better understand accounting as a discipline. Accounting educators must also implement alternative teaching methods to help achieve more effective learning outcomes. Concern has been expressed that accounting education over-emphasises the technical abilities of graduates to the detriment of other competencies and suggest the need for alternative teaching methods to engage students in the learning process and develop skills such as critical thinking (Kavanagh & Drennan 2007).

As a result of these findings, the question arises that if accounting teaching models require change, which teaching models would be the most appropriate to teach accounting in the new millennium? This paper evaluates the possible alternative teaching and learning theories which focus on the delivery of professional accounting competencies in university programmes. The first step in choosing an appropriate novel teaching model for accounting education is to categorize and describe the criteria for choosing the teaching models and the potential teaching models options as discussed in the next section.

Choosing the most appropriate teaching model

(i) Teaching models criteria

The Australian Learning and Teaching Council through the Learning and Teaching Academic Standards Project have provided a thorough set of criteria for determining what it is necessary to teach in accounting education. The statement prescribes threshold-learning outcomes that all providers of Bachelor and coursework Master degree programs in accounting are expected to meet. These criteria meet international academic standards for accounting. In a report published recently by the Australian Learning and Teaching Council and Learning and Teaching Academic Standards Project (ALTC, 2010) the knowledge and skills required by accounting graduates in the changing business environment, are identified. This report states that the threshold learning outcomes for Bachelor graduates in accounting from all Australian tertiary providers will be able to demonstrate the following:

Knowledge

Integrate theoretical and technical accounting knowledge that includes a selection of auditing and assurance, finance, economics, quantitative methods, information system, commercial law, corporation law, and taxation law.

Judgement

Exercise judgement under supervision to solve routine accounting problems in straightforward context using social, ethical, economic, regulatory, and global perspectives.

Application skills

Critically apply theoretical and technical accounting knowledge and skills to solve routine accounting problems.

Communication and teamwork

Justify and communicate accounting advice and ideas in straightforward collaboration contexts.

Self- management

Reflect on performance feedback to identify and action learning opportunities and self-improvements.

The above outcomes are used as criteria to evaluate possible teaching methods to teach accounting. So the main research question of this paper becomes:

RQ: Which teaching and learning model would be most appropriate to the development of the prescribed learning outcomes in undergraduate accounting programs?

Critical to this is an understanding of appropriate teaching models and related learning theories as discussed in the next section.

(ii) Teaching models and related learning theories

Joyce, Weil and Calhoun (2009) categorised a wide variety of teaching models into four families including: information processing, behavioural, personal, and social models. They discuss the characteristics of their underlying learning theories, examine the research that has tested them, and illustrate their uses. Each of these families was examined in relation to the criteria listed above, and the most appropriate teaching models were chosen to teach accounting.

The information processing family and its related teaching models view students as receptacles of memorised information that needs to be organised. The models in the information processing family focus on the way learners handle information. The information processing family emphasises ways of enhancing a student's innate drive to make sense of the world by acquiring and organizing data. The most typical instructional methods suggested by the information processing metaphor are lecturing and presenting textbooks. The role of the teacher in the information processing system is one of a dispenser of information and students are the recipients (Mayer 1996). Information processing models focus on how people attend to environmental events, encode information to be learned, and relate the information to knowledge and memory (Schunk 1996). Information processing models take a mechanistic view of the mind and objectify the student as an unimaginative passive object (Mayer 1996).

In the behavioural family and behavioural theory, students learn passively when the teacher reinforces positive behavioural responses. Teaching based on the behavioural family relies on exercises that provide consistent repetition necessary for effective reinforcement of

response patterns (Reid 2005). The most typical instructional methods suggested by the behavioural models are drilling and practise on basic skills. Behavioural theory assumes that learning takes place as a result of a response that follows a specific stimulus. The role of the teacher in behavioural theory is a dispenser of rewards and punishments (Mayer 1996). Banet and Ayuso (2003) stated that the theory of constructivism rejects behavioural models because behavioural models assume students are passive receptors. Therefore, behavioural models miss opportunities to engage students more actively in their own learning.

The personal family of teaching models focuses on the development of the integrated feeling and thinking self. The personal family of teaching models shapes the environment around the capacity for self-education and the need to develop self-awareness and understanding (Joyce, Weil & Calhoun 2009). In the personal family an individual constructs and organises his or her reality (Ji-Ping & Collis 1996). The teacher respects the students' ability to identify their own problems and formulate solutions (Joyce, Weil & Calhoun 2009). Students only focus on their self-interest, and are responsible for their own destinies and personal success—they ignore as irrelevant the successes and failures of others (Johnson, Johnson & Smith 2007; Joyce, Weil & Calhoun 2009).

The similarity between constructivism and personal family is their focus on constructing knowledge by individuals. The main principle of constructivism is that knowledge is not transmitted directly from one to another; rather, the knowledge is constructed by the learner (Baviskar, Hartle & Whitney 2009; Fosnot 1989; Ji-Ping & Collis 1996; Joyce, Weil & Calhoun 2009). Constructivism recognises that challenging and helping students to correct their preconceptions and misconceptions is essential for effective learning.

The social family of teaching models is oriented toward developing social interaction among students to promote academic learning. Most advocates of social family models

believe that the central role of education is to prepare citizens to generate integrative democratic behaviour, both to enhance individual and social life and to ensure a productive democratic social order (Joyce, Weil & Calhoun 2009). When students engage in dialogue with their peers, they internalise the language of interactions and use this language to organize their individual learning. In other words, when students work together and interact with their peers and teachers, they can explain and discuss each other's perspectives—which leads to a greater understanding (Johnson & Johnson 2002). A key benefit of social family models is that cooperative interactions in classrooms are beneficial for students socially, as well as intellectually (Joyce, Weil & Calhoun 2009).

The social family of teaching models is oriented toward developing social interaction among students to promote academic learning. Social-interdependence theory is part of the social family and focuses on the social interactions among students as a primary source of knowledge that cannot be gained in isolation from other students. Johnson and Johnson (2005) stated that learning occurs when the goals of individuals are affected by each other's actions. Individuals are open to the influence of others and are willing to exert influence on their collaborators. The teacher's role in providing students opportunities to promote each other's success produces the necessary interaction among students required for mutual success (Summers & Svinicki 2007).

(iii) *Cooperative learning*

Cooperative learning is a teaching model based on the social interdependence theory (Johnson & Johnson 2007; Johnson, Johnson & Roseth 2010) where students work in small groups to help one another. Cooperative learning encourages interactive learning wherein teachers and students construct new knowledge through social interactions in a context that enhances creativity and a free exchange of ideas. Cooperative work rarely replaces teacher instruction but, rather, replaces individual lectures and drill work. If cooperative learning is

organized and gives consideration to constructivism, students' achievement and social skills will be improved (Acar & Tarhan 2007). An important rationale of cooperative learning is allowing students to develop their latent skills and knowledge to the greatest extent possible. The safety of the group allows the quiet student to gain self-confidence to put forward ideas in a secure environment (Farrell & Farrell 2008). Cooperative learning not only enhances students' learning, but also improves critical thinking, communication and group process skills (Fortin & Legault 2010).

The accounting education literature states that cooperative learning helps to develop students' professional accounting competencies and attitudes, even students previously educated in passive learning environments. For example, Ballantine and Larres (2007, 2009) provided evidence that final-year undergraduate accounting students believe cooperative learning to be effective in delivering generic skills within a accounting degree. They also found that cooperative learning is a more effective model than simple group learning for delivering interpersonal and communication skills. Hwang, Lui and Tong (2005, 2008) found that cooperative learning is more effective than the traditional model for students who were educated in a passive learning environment. Farrell and Farrell (2008) found that cooperative learning provides students with good opportunities to develop the interpersonal, professional and written communication they need in their professional life. Miglietti (2002) suggested the importance of using small groups in introductory accounting courses. He concluded that group learning could foster critical thinking skills, improve interpersonal skills and increase active participation in learning to enable students to experience greater empowerment and enhance their achievements. Cheng and Chen (2008) found that cooperative learning improved students' attitudes toward accounting and learning of accounting. They advocated cooperative learning as a teaching model among accounting students.

However, in assessing the impact of cooperative learning in accounting students Clinton and Kohlmeyer (2005) found no differential effect on students' achievement in group quizzes. These results may be attributable to the effect of prior academic achievement and group formation on performance (Van der Laan Smith & Spindle 2007).

Cooperative learning needs a specific environment—not just placing students in groups. Simply placing students into groups and requiring them to work together does not necessarily promote cooperative learning (Gillies & Ashman 2003). Teachers should structure the work in such a way that ensures the skills are covered in a cooperative learning model. Five elements should apply when teachers conducted cooperative learning, namely, positive interdependence; individual accountability; face-to-face interaction; appropriate use of social skills; and group processing (Johnson & Johnson 2005; Johnson, Johnson & Roseth 2010; Johnson, Johnson & Smith 2007). For example, Ahern (2007) found teachers in civil engineering courses appear to ignore cooperative learning, rather, they tend to simply divide students into groups—which does not necessarily promote cooperative learning. He emphasised the need for training in using cooperative learning to applying concepts in class.

Results; The application of the criteria to the various theoretical families and learning theory

The teaching models under information processing, behavioural and personal family families do not meet the criteria needed to teach accounting for the global business environment. The information processing and behaviour families can teach students knowledge of accounting; however, they do not do a good job of teaching students the full range of Australian academic learning and teaching standards. By memorising and staying passive in the classroom, students will not develop their own judgement, application skills, communication, teamwork and self-management. The information processing and the behavioural families are not appropriate choices to teach accounting in the new millennium. The most important criticism of teaching using the personal family is that it hampers teaching communication and teamwork skills by focusing on one individual (Table 1).

Table 1: Application of the criteria ‘the threshold learning outcomes for accounting’ to the various theoretical families and learning theory examples

	Theoretical Families			
	Information Processing	Behaviour	Personal	Social
knowledge	Yes	Yes	Yes	Yes
Judgement	No	No	Yes	Yes
Application skills	No	No	Yes	Yes
Communication and teamwork	No	No	No	Yes
Self management	No	No	Yes	Yes
Related learning theories	Information processing	Behaviourism	Constructivism	Social Interdependence

The social-interdependence theory and cooperative learning model meet all the criteria listed above. Therefore, cooperative learning model based on the social-interdependence theory is the most appropriate model to teach accounting in the new millennium.

Conclusion

This paper applied the Australian Accounting Teaching and Learning Standards criteria to the models of teaching categorized by Joyce, Weil and Calhoun (2009) to evaluate which teaching and learning model would be most appropriate in teaching future accountants. Analysis indicates that the traditional teaching model is not suitable to teach accounting. Teaching in this model focuses on the teacher's delivery and the students' capacity to memorize. In the traditional teaching model, the teacher starts the lesson by presenting information (*delivers a lecture*), while the students listen quietly (*passively receive*) (Ahmad & Gao 2004; Alhmali 2007). Instruction is based on the teacher's presentation, regardless of the subject matter. Teachers teach the students the right answers instead of teaching them the process for finding the answers. Most teachers using traditional teaching models believe that the teacher's job is to demonstrate and teach the material. They do not give students opportunities to clarify vague concepts in the classroom (Sulaiman & Boumtarai 2007). The Traditional teaching model encourages students to concentrate on superficial indicators rather than on fundamental underlying principles, thus neglecting deep (active) learning (McCarthy & Anderson 2000). The traditional teaching model is considered a less desirable approach when teaching accounting and may result in passive students (Jackling 2005). Generally, in such a teaching environment, students rely on their teachers to decide what, when and how to learn. The traditional state of the classroom using the traditional teaching model depends heavily on lecturing and memorization.

However, in cooperative learning models teachers focus on discussion, guided discovery, and supervised participation in academic tasks. In cooperative learning models, the teacher starts the lesson by encouraging students to work together cooperatively. Instruction is based on the teacher's discussion, regardless of the subject matter and students work in groups where they are expected to help each other find answers to their questions, rather than seeking answers from the instructor (Johnson, Johnson & Smith 2007). Most teachers using cooperative learning give students opportunities to clarify vague concepts in the classroom. Cooperative learning model encourages students to concentrate on fundamental underlying principles, thus deep (active) learning occurs (Johnson, Johnson & Holubec 1993). Gomleksiz (2007) suggested that the learning environment be designed in a learner-centred style to ensure all students have an opportunity to contribute to their learning. Generally, in such a teaching environment students rely on each other and their teacher to understand the concepts in the classrooms and promote the social skills required by accounting graduates.

Discussion

This paper has highlighted the importance of the necessary professional accounting competencies needed to be successful in the workplace, as well as the need to include teaching these skills to accounting students in university programmes. It has also highlighted Australian learning and teaching academic standards. Moreover, the research has applied the Australian learning and teaching academic standards to four groups of teaching models to choose the most suitable teaching model to teach the skills required by accountants in today's contemporary business environment.

A major finding to emerge from this paper is that a cooperative learning teaching model underpinned by the social interdependence theory is the most appropriate model to teach accounting in order to develop the skills and knowledge required today of the

profession. This was initially identified by applying the Australian learning and teaching academic standards to four families of teaching models and their related learning theories. The result suggests that cooperative learning is the superior traditional model to teach accounting. These results provide a model for use by accounting educators as they grapple with ensuring accounting graduates achieve desired standards across the required accounting learning outcomes.

This paper is part of an unpublished PhD proposal by Wahida Zraa 2010. The thesis will test cooperative learning models and compare them with traditional models of teaching with Libyan accounting students. Specifically, it will assess the effects of cooperative learning (CL) and traditional models (TM) on students' perceptions of empowerment, performance and the experience of students and instructor (researcher) in the development of professional accounting competencies under both teaching models. Future research will apply the theory developed in the Australian context.

References

Abdul-karim, A 2007, *Improve the quality of accounting education*, Academic of Postgraduate Studies, Tripoli, Libya.

Acar, B & Tarhan, L 2007, 'Effect of cooperative learning strategies on students' understanding of concepts in electrochemistry', *International Journal of Science and Mathematics Education*, vol. 5, no. 2, pp. 349-73.

Accounting Education Change Commission 1990a, 'Urges priority for teaching in higher education', *Issues in Accounting Education*, vol. 5, no. 2, pp. 330-1.

Accounting Education Change Commission 1990b, 'Objectives of education for accountants: position statement number one', *Issues in Accounting Education*, vol. 5, no. 2, p. 307.

Ahern, A 2007, 'What are the perceptions of lecturers towards using cooperative learning in civil engineering?', *European Journal of Engineering Education*, vol. 32, no. 5, pp. 517-26.

Ahmad, NS & Gao, SS 2004, 'Changes, problems and challenges of accounting education in Libya', *Accounting Education: An International Journal*, vol. 13, no. 3, pp. 365-90.

Albrecht, W & Sack, R 2000, *Accounting education: charting the course through a perilous future*, American Accounting Association Sarasota, FL.

Alhmali, R 2007, 'Student attitudes in the context of the curriculum in Libyan education in middle and high schools', PhD thesis, University of Glasgow.

Andersen, A 1989, *Perspectives on Education: Capabilities for Success in the Accounting Profession*, New York.

Australian Learning and Teaching Council (2010), *Learning and Teaching Academic Standards Project: Accounting Academic Standards Statement (Draft 4)*, <http://www.altc.edu.au/standards/disciplines/BME> (accessed 27 January 2011)

Awayiga, JY, Onumah, JM & Tsamenyi, M 2010, 'Knowledge and Skills Development of Accounting Graduates: The Perceptions of Graduates and Employers in Ghana', *Accounting Education: An International Journal*, vol. 19, no. 1-2, pp. 139-58.

Business Industry and Higher Education Collaboration Council BIHECC Department of Education Science and Training BIHECC, (Ed.) (2007) Graduate Employability Skills.

Ballantine, J & Larres, P 2007, 'Cooperative learning: a pedagogy to improve students' generic skills?', *Education+ Training*, vol. 49, no. 2, pp. 126-37.

Ballantine, J & Larres, P 2009, 'Accounting undergraduates' perceptions of cooperative learning as a model for enhancing their interpersonal and communication skills to interface

successfully with professional accountancy education and training', *Accounting Education: An International Journal*, vol. 18, no. 4-5, pp. 387-402.

Banet, E & Ayuso, GE 2003, 'Teaching of biological inheritance and evolution of living beings in secondary school', *International Journal of Science Education*, vol. 25, no. 3, pp. 373-407.

Baviskar, SN, Hartle, RT & Whitney, T 2009, 'Essential criteria to characterize constructivist teaching: derived from a review of the literature and applied to five constructivist-teaching method articles', *International Journal of Science Education*, vol. 31, no. 4, pp. 541 - 50.

Cheng, K & Chen, Y 2008, 'Effects of Cooperative Learning in a College Course on Student Attitudes toward Accounting: A Quasi-Experimental Study', *International Journal of Management*, vol. 25, no. 1, p. 111.

Clinton, B & Kohlmeyer, J 2005, 'The effects of group quizzes on performance and motivation to learn: Two experiments in cooperative learning', *Journal of Accounting Education*, vol. 23, no. 2, pp. 96-116.

De Lange, P, Jackling, B & Gut, A 2006, 'Accounting graduates' perceptions of skills emphasis in undergraduate courses: an investigation from two Victorian universities', *Accounting & Finance*, vol. 46, no. 3, pp. 365-86.

Farrell, B & Farrell, H 2008, 'Student satisfaction with cooperative learning in an Accounting curriculum', *Journal of University Teaching and Learning Practice*, vol. 5, no. 2, pp. 39-54.

Fortin, A & Legault, M 2010, 'Development of generic competencies: impact of a mixed teaching approach on students' perceptions', *Accounting Education: An International Journal*, vol. 19, no. 1, pp. 93 - 122.

Fosnot, C 1989, *Enquiring teachers, enquiring learners: A constructivist approach for teaching*, Teachers College Press New York.

Gillies, R & Ashman, A 2003, *Cooperative learning: the social and intellectual outcomes of learning in groups*, Falmer Press.

Grant Thornton, 2010, The evolving accounting talent profile: CFO strategies for attracting, training and retaining accounting professionals. Public Policy and External Affairs
<http://www.grantthornton.com/staticfiles/GTCom/Grant%20Thornton%20Thinking/Whitepapers/Accounting%20talent%20WP/Accounting%20talent%20-%20FINAL.pdf>.2010

Guthrie, J 2010, Accounting education: 2011 time for action. The Institute of Chartered Accountants in Australia (ICAA) 16th December, 2010.
<http://www.charteredaccountants.com.au/News-Media/Media-centre/2010/Accounting-education-2011-time-for-action.aspx>

Hancock, P, Howieson, B, Kavanagh, M, Kent, J, Tempone, I, Segal, N & Freeman, M 2009, 'The roles of some key stakeholders in the future of accounting education in Australia', *Australian Accounting Review*, vol. 19, no. 3, pp. 249-60.

Hodson, D 1988, 'Experiments in science and science teaching', *Educational philosophy and theory*, vol. 20, no. 2, pp. 53-66.

Howieson, B 2003, 'Accounting practice in the new millennium: is accounting education ready to meet the challenge?', *The British Accounting Review*, vol. 35, no. 2, pp. 69-103.

Hurt, B 2007, 'Teaching what matters: A new conception of accounting education', *The Journal of Education for Business*, vol. 82, no. 5, pp. 295-9.

Hwang, NCR, Lui, G & Tong, MJW 2005, 'An Empirical Test of Cooperative Learning in a Passive Learning Environment', *Issues in Accounting Education*, vol. 20, no. 2, pp. 151-65.

Hwang, NCR, Lui, G & Tong, MJW 2008, 'Cooperative Learning in a Passive Learning Environment: A Replication and Extension', *Issues in Accounting Education*, vol. 23, no. 1, pp. 67-75.

IFAC 2009, *Framework for international education standards for professional accountants* <http://www.ifacnet.com/?q=framework+for+international+education+statements&utm_medium=searchbox>.

Jackling, B. 2005, 'Perceptions of the learning context and learning approaches: implications for quality learning outcomes in accounting', *Accounting education*, vol. 14, no. 3, pp. 271-91.

Jackling, B & De Lange, P.D. 2009, 'Do Accounting Graduates' Skills Meet The Expectations of Employers? A Matter of Convergence or Divergence', *Accounting education*, vol. 18, no. 4, pp. 369-85.

Jackling, B & Watty, K 2010, 'Generic skills', *Accounting Education: An International Journal*, vol. 19, no. 1-2, pp. 1-3.

Ji-Ping, Z & Collis, B 1996, 'A Comparison of Teaching Models in the West and in China', *Journal of Instructional Science and Technology*, vol. 1, no. 1.

Johnson, D & Johnson, R 1994, *Learning together and alone: cooperative, competitive, and individualistic learning*, 4th edn, Array Boston: , Allyn and Bacon.

Johnson, D & Johnson, R 2002, *Multicultural education and human relations: valuing diversity*, Allyn and Bacon, Boston.

Johnson, D & Johnson, R 2005, 'New developments in social interdependence theory', *Genetic, social, and general psychology monographs*, vol. 131, no. 4, pp. 285-358.

Johnson, D & Johnson, R 2007, 'Social interdependence theory and cooperative learning: the teacher's role ', in R Gillies, A Ashman & J Terwel (eds), *The teacher's role in implementing cooperative learning in the classroom*, Dordrecht Springer.

Johnson, D, Johnson, R & Holubec, E 1993, *Circles of learning: cooperation in the classroom*, 4th edn, Interaction Book Company Edina.

Johnson, D, Johnson, R & Smith, K 2007, 'The state of cooperative learning in postsecondary and professional settings', *Educational Psychology Review*, vol. 19, no. 1, pp. 15-29.

Johnson, D, Johnson, R & Roseth, C 2010, 'Cooperative learning in middle schools: interrelationship of relationships and achievement', *Middle Grades Research Journal*, vol. 5, no. 1, p. 18.

Jones, A 2010, 'Generic attributes in accounting: the significance of the disciplinary context', *Accounting Education An International Journal*, vol. 19, no. 1, pp. 2-21.

Jones, G & Abraham, A 2008, 'Preparing accountants for today's global business environment: The role of Emotional Intelligence in accounting education', *Faculty of Commerce-Papers*, p. 482.

Joyce, B, Weil, M & Calhoun, E (eds) 2009, *Models of teaching*, 8th edn, Pearson Education, Inc., Boston.

Kavanagh, M & Drennan, L 2007, 'Graduate attributes and skills: are we as accounting academics delivering the goods?', paper presented to Accounting & Finance Association of Australia and New Zealand conference, Gold Coast, Australia.

Kavanagh, M & Drennan, L 2008, 'What skills and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations', paper presented to Accounting & Finance Association of Australia and New Zealand Conference Adelaide, Australia.

Kavanagh, M, Hancock, P, Howieson, B, Kent, J & Tempone, I 2009, 'Stakeholders' perspectives of the skills and attributes for accounting graduates'.

Kennedy, F & Dull, R 2008, 'Transferable team skills for accounting students', *Accounting education*, vol. 17, no. 2, pp. 213-24.

Kozulin, A, Gindis, B, Ageyev, V & Miller, S 2003, *Vygotsky's educational theory in cultural context*, Cambridge University Press, Cambridge.

Mayer, RE 1996, 'Learners as information processors: legacies and limitations of educational psychology's second', *Educational Psychologist*, vol. 31, no. 3/4, p. 151.

McCarthy, J & Anderson, L 2000, 'Active learning techniques versus traditional teaching styles: Two experiments from history and political science', *Innovative Higher Education*, vol. 24, no. 4, pp. 279-94.

Miglietti, C 2002, 'Using cooperative small groups in introductory accounting classes: a practical approach', *The Journal of Education for Business*, vol. 78, no. 2, pp. 111-5.

Mohamed, E & Lashine, S 2003, 'Accounting knowledge and skills and the challenges of a global business environment', *Managerial Finance*, vol. 29, no. 7, pp. 3-16.

Mohidin, R, Jaidi, J, Sang, LT & Osman, Z 2009, 'Effective teaching methods and lecturer characteristics a study on accounting students at universiti Malaysia Sabah (UMS)', *European Journal of Social Sciences*, vol. 8, no. 1.

Project, Latas 2010, Australian Learning and Teaching Council.

Rebele, JE 1985, 'An Examination of Accounting Students' Perceptions of the Importance of Communication Skills in Public Accounting', *Issues in Accounting Education*, no. 3, p. 41.

Reckers, M 2006, 'Perspectives on the proposal for a generally accepted accounting curriculum: A wake-up call for academics', *Issues in Accounting Education*, vol. 21, no. 1, pp. 31-52.

Reid, G 2005, *Learning Styles and Inclusion*, Sage publications Ltd, London.

Schmidt, J, Green, B & Madison, R 2009, 'Accounting department chairs' perceptions of the importance of communication skills', *Advances in Accounting Education: Teaching and Curriculum Innovations*, p. 151.

Schunk, DH 1996, *Learning theories: an educational perspective*, 2nd edn, Prentice-Hall, Inc, New Jersey.

Stoner, G & Milner, M 2010, 'Embedding generic employability skills in an accounting degree: development and impediments', *Accounting Education: An International Journal*, vol. 19, no. 1, pp. 1-16.

Sulaiman, MG & Boumtarai, FA 2007, *Factors affecting the efficiency of the educational process and its impact on students*, Academic of Postgraduate Studies, Tripoli, Libya.

Summers, J & Svinicki, M 2007, 'Investigating classroom community in higher education', *Learning and Individual Differences*, vol. 17, no. 1, pp. 55-67.

Van der Laan Smith, J & Spindle, RM 2007, 'The impact of group formation in a cooperative learning environment', *Journal of Accounting Education*, vol. 25, no. 4, pp. 153-67.

Zakaria, E & Iksan, Z 2007, 'Promoting cooperative learning in science and mathematics education: A Malaysian perspective', *Eurasia Journal of Mathematics, Science & Technology Education*, vol. 3, no. 1, pp. 35-9.