

The changing roles and skills gap in the accounting profession: an examination of practitioners in their first year of experience as a potential resource

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Phenomenographic findings highlight a need to develop new practitioners' competence to integrate the profession's fundamental values and ethics into practices towards achieving outcomes.

Keywords: skills gap, changing roles, critical thinking skills, mentoring and professional development.

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1. Introduction and the changing roles of the accounting profession

This study examines new practitioners to the accounting profession as a potential resource to address two related challenges that the accounting profession is presently facing. The first is the increased demand for highly skilled practitioners which is a consequence of the changing and expansive roles of accounting professionals and the second is the skills gap which is the shortage of supply to meet the demand of suitably skilled practitioners.

Zeff documents how the US accounting profession has evolved and changed during the 20th century (Zeff, 2003a & 2003b). Particularly in the last three decades where management advisory and consulting services rapidly took over the priorities of traditional audit and tax services especially in the big accounting firms.

The trend of the changing roles of the accounting profession is continuing into the present time and in the different fields of practice. For instance, in a recent document issued by KPMG (KPMG, 2007a), the changing role of the internal auditor from that of value preservation to value creation is described. The new role that is

expected involves responsibilities in strategic planning, operational and growth initiatives and raising capital, which are not the traditional responsibilities of the internal auditor. In another document (KPMG, 2007b), which is the fourth study in a series of research into the changing role and status of chief financial officers (CFOs), the new CFO's role in strategy development and execution for adding value is emphasised. The study also found that the expected prerequisite for a CFO career is a professional accounting qualification. In an interview with Jim Turley, Chairman and CEO of Ernst & Young (Ernst & Young, 2007), he talked about the profession's role in governance and credit management in the present and future global economic transformations. In another article, Whitehorn (2007) explains the role of accounting practitioners in enterprise risk management where they are responsible for evaluating and managing uncertainties that an enterprise faces to maximise opportunities and value.

A recent study conducted by the International Federation of Accountants (IFAC) on the crucial roles of professional accountants in business (PAIBs) in mid-sized enterprises shows similar expectations (International Federation of Accountants, 2008). Excerpts of interviews in the report describe roles that require high-level critical thinking skills and attributes for identifying and addressing the root causes of problems rather than focusing on symptoms; and for defining problems and opportunities (usually messy and complex) and then representing them by numbers in order to create a common understanding in the strategic planning towards value sustenance and creation. The roles of PAIBs are also expected to uphold the trust, reputation and professionalism in the face of integrity challenges in business for long term success.

The expansive and changing roles of the accounting profession may not be seen as a problem per se by many.¹ It is the consequential skills gap, which is the shortage of suitably qualified and skilled accountants in the workforce to meet demand at this level that is the challenge. A research on human resource acquisition and development conducted by Deloitte (Deloitte, 2004) documents a global skills shortage situation, especially at the high end of the talent pool. "Critical talent is

¹ However, see the rejection of the role of the American Institute of Certified Public Accountants (AICPA) in promoting the roles of the profession towards commercialisation and competition for business at the cost of compromising the profession's hallmark values of expertise, independence, integrity and commitment to the public interest as a costly failure. He also held the AICPA responsible to a large extent for the damage to the reputation, loss of autonomy and embarrassment of the American accounting profession in Fogarty et al. (2006).

scarce, and about to become much more scarce because of two looming trends: the retirement of the Baby Boom generation² and a growing skills gap.” (Deloitte, 2004: 1). The Deloitte’s study identifies critical talent as attributes of “highly developed skills and deep knowledge – not just of the work itself but also of “how to make things happen” in an organization.” (Deloitte, 2004: 1). The IFAC study cited earlier also identified highly skilled practitioners with a wide array of accounting/finance and business experiences, such as turnaround specialists and growth-funding specialists, as the most sought-after PAIBs in mid-sized enterprises. The study also ranked continuous development to attain high levels of skills as a top priority (International Federation of Accountants, 2008).

CPA Australia has been proactive in addressing the skills gap problem. One of its initiatives is researching the possibilities of retaining mature-age accountants in the workforce to meet the demand for skilled accounting professionals in its Mature-Age Employment Project (CPA Australia, 2006). The present study targets new practitioners to the profession as a potential resource and specifically examines their understandings and applications of critical thinking skills in their actual work experiences. There are a number of reasons for targeting the critical thinking element in the roles of new entrants to the profession:

1. Quality practitioners that possess high level critical thinking skills are demanded for the expansive roles (the relation between critical thinking and roles will be discussed later).

2. From a cognitive development perspective critical thinking skills develop in stages (both hierarchically and inclusively) as documented in the reflective judgement model of cognitive development in King and Kitchener (1994). Kimmel’s (1995) framework for incorporating critical thinking into the accounting curriculum also assumes that critical thinking skills develop with intellectual development in stages with appropriate training and education.

From a practical perspective, Birkett (1993) asserts that the competency of accounting practice develops over time where proficient and even expert practitioners gain their expertise through experiences of various types and professional development over their career. Combining the cognitive development and practical perspectives, new entrants to the profession are identified as a critical transient sub-

² The Baby Boom generation’s first crop of retirement is in 2008.

group of the community of practice to meet the skills gap challenge through systematic mentoring, education and professional development.

3. The results of the study describe conceptions (i.e., the understandings) and applications of critical thinking skills from the perspective of new practitioners derived from their work experiences. The descriptive form of the findings can provide valuable insights for human resource recruitment and development strategies. The findings are also useful for planning professional development and mentoring by senior management. “If we are to know where to focus our instruction, we must “start with where they are” in specific aspects of critical thinking.” as Ennis (1993: 180) has it.

4. The findings can also inform critical thinking development in the accounting higher education curriculum. Most reported studies on developing critical thinking in the accounting higher education curriculum have hitherto targeted items of skills on the Accounting Education Change Commission’s (1990) list or from critical thinking skills instruments (see (Wolcott, Baril, Cunningham, Fordham and Pierre, 2002) for a review of these studies) rather than the types of critical thinking skills that are required in actual practice contexts. The conceptions of critical thinking skills of new practitioners from their direct experiences in actual practice are more relevant.

Critical thinking, however, is a complex subject and a universal definition for critical thinking cannot be found in the literature. In the accounting context, the business environment in which accounting functions is changing rapidly and the problems that practitioners face are usually ambiguous and ill-structured. Operating within this type of environment calls for critical thinking skills to analyse and evaluate complex information and systems, identify the essence of problems, develop possible alternatives, make decisions for actions, evaluate outcomes, and ultimately add value (Reinstein and Bayou, 1997). The definition for critical thinking in Kurfiss (1988) as the ability to make sound judgements in complex, real-world situations, based on available evidence and a clearly worked out value system is also relevant to the accounting context.

Earlier, this paper posited that practitioners with high level critical thinking skills are in demand for the expansive roles of the profession. A valid question to ask is: How do critical thinking skills relate to the roles that are in demand? Bonk and

Smith’s (1998) framework of thinking skills, which integrates creative thinking and critical thinking skills, for meeting the demands of workplaces of the 21st

century can provide the match, but first to rehash. In the research cited previously, roles that ultimately add value, such as involvement in strategic planning, risk management, system improvements, turning a distressed business around, or more directly in the critical talent of “making things happen” in Deloitte (2004), are in demand. These roles imply being creative or coming up with something new that will add value to the business.

In (Bonk and Smith, 1998), creative thinking is described as something that begins when an unstructured problem is first confronted. It then continues to explore the problem, and finally culminates in the production of something new or original. Creative thinking is therefore an outcome of critical thinking. In fact, Perkins (1986) refers to creative thinking and critical thinking as sibling skills that essentially assess and evaluate evidence and situations, recognise assumptions and biases, judge and make a decision for action.

It is, however, important that all roles, traditional and the more expansive, espouse the fundamental values of the accounting profession such as integrity, expertise, independence and the commitment to serve the public interest. Therefore, an ideal situation is where there is a supply of quality practitioners that possess high-level critical thinking skills who are able to work towards creating or adding value in a professional environment where the fundamental values of the profession pervade all practices. How do new entrants to the profession fair as a potential resource?

The rest of the paper tackles the question. The next section reviews the literature on critical thinking and highlights its relevance in the accounting context. Section 3 explains the rigour of the phenomenographic method used in the present study. The findings are reported in Section 4. In Section 5 we discuss the findings and conclude the study with some suggestions for development.

2. Relevant literature on critical thinking

Different disciplines have different knowledge bases leading to different conceptions and approaches to critical thinking. For example, in the critical literature (where studies are usually motivated by emancipative objectives), critical thinking aims at democratic processes and examines power relations and focuses critically on social inequities and disparities between democratic principles and undemocratic realities.

Critical thinking (or reading) in the ESL³ literature involves cognitive skills for analysing and synthesising a text and evaluating the author's argument. Analysis, synthesis and evaluation are the three higher levels cognitive skills in Bloom's (1956) taxonomy of educational objectives that are widely accepted as high level thinking skills applied in critical thinking processes.

Perkins, Jay and Tishman (1993) posit that despite the different approaches to and conceptions of critical thinking, there are common dispositions that underlie critical thinking processes. A number of authors have also alluded to affective elements in their discussions of critical thinking, for example, Ennis (1993) identifies persistence, open-mindedness and thoroughness, and the Saskatchewan Education model (Saskatchewan Education, 1988) includes values and attitudes like truth, rationality, integrity and objectivity. For the accounting profession, values like truth, integrity and professionalism are particularly important for upholding the reputation of the profession to maintain public and stakeholder trust, and for long-term business success.

The CA Competency Map (Canadian Institute of Chartered Accountants, 2005) explicitly identifies ethical behaviour and professionalism as a category of pervasive qualities and skills to be brought to all tasks that chartered accountants do. The personal demeanour element in the AICPA Core Competency Framework for Entry into the Accounting Profession (American Institute of Certified Public Accountants, 1999) also requires all CPAs to demonstrate objectivity, integrity and ethical behaviour in performing their roles to maintain a public reputation for excellence in business and society.

Despite the vast literature on critical thinking, a universal definition cannot be found. The following are some descriptions or definitions found in the literature: 1) According to McPeck (1981), critical thinking is discipline specific and is the propensity and skill to engage in an activity with reflective scepticism. 2) Kurfiss (1988) defines critical thinking as an investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information in order to be convincingly justified. 3) Critical thinking skills have been described as abilities to make correct assessment of situations by Ennis (1993). 4) In accounting, Jenkins (1998) describes critical

³ ESL is the acronym for English as a Second Language.

thinking as an intellectual skill that enhances an accountant's ability to analyse and solve non-deterministic problems, detect errors and irregularities, and reach sound judgments. 5) The National Council for Excellence in Critical Thinking (National Council for Excellence in Critical Thinking, 1987) defines critical thinking as the mode of thinking – about any subject, content or problem – in which the thinker improves the quality of his or her thinking by skilfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them.

The literature has also tackled critical thinking from several different aspects. The following is a brief description with relevance to accounting.

Critical thinking as processes and activities: The Bloom's (1956) taxonomy of educational objectives classifies learning and thinking according to levels of cognitive skills. According to Bloom, both teaching and learning involve different procedures and activities. His theory suggests that higher level learning occurs when higher-level skills or critical thinking skills are used for analysis, synthesis and evaluation. Bloom's taxonomy also implies that the levels of thinking are incremental.

In the accounting context, Reinstein and Bayou (1997b) see the role of accountants as having to add value to what has been observed, read and written, in order to meet expectations of their clients. The role requires critical thinking which envelopes these activities to work towards adding value and communicating the results effectively to clients and other interested groups.

Critical thinking as skills and abilities: Wolcott (1997) describes critical thinking from the perspective of skills and abilities. She recognises that developing critical thinking skills is an important component of accounting education. Jenkins (1998) provides evidence which shows that students with higher measures of critical thinking skills outperform other students in auditing exams which suggests that critical thinking is an intellectual skill.

Critical thinking in terms of cognitive development: Wolcott and Lynch (1997) and Wolcott et al (2002) adapt King and Kitchener's (1994) reflective judgment model, which focuses on abilities to identify, frame and resolve unstructured problems in a world of uncertainty, for developing critical thinking in the accounting context. A key feature of the reflective judgment model is that the cognitive development of critical thinking happens in stages. Importantly, development at a less complex stage is prerequisite for development at a more complex stage. Therefore, in practice, attempts to develop abilities or skills at a more complex level before

grounding at less complex levels – i.e. bypassing levels – are at best futile. Lynch (1996) argues that in order to develop accounting students' critical thinking, instructors need to: 1) challenge students with unstructured problems; 2) develop a better understanding of the sequence of steps students must learn to successfully address unstructured problems; and 3) challenge their students with developmentally appropriate and increasingly complex assignments.

Critical thinking from a dispositional perspective: Perkins et al. (1993) argue that abilities-centred theories are insufficient for explaining thinking or intelligent behaviours. They propose a list of dispositions that underlie good or higher-order thinking. Three elements are identified in their expanded concept of intelligent behaviour which they called 'triadic' dispositions. They are: 1) inclination, which explains a person's felt tendency toward behaviour X; 2) sensitivity, which refers to the person's alertness to X-occasion; and 3) ability, which refers to the actual ability to follow through with behaviour-X.

Perkins et al further argue that dispositions are grounded in values, attitudes and systems as much as in cognitive structures. Dispositions are therefore acquired through institutional and interpersonal levels of social contact or social interaction with the more experienced members of society. This characteristic implies that the development of dispositions needs to be culturally based or that development is a social activity.

The accounting profession has recognised the importance of fundamental values and ethics that underlie accounting practices and tasks. The CA Competency Map (Canadian Institute of Chartered Accountants, 2005) explicitly identifies ethical behaviour and professionalism where all chartered accountants are expected to carry out their roles with objectivity and independence and to deliver the highest level of service with integrity, objectivity and commitment to public interest.

Similarly in the US, the AICPA Core Competency Framework for Entry into the Accounting Profession (American Institute of Certified Public Accountants, 1999) includes personal demeanour which essentially is a commitment to quality, confidentiality and integrity through professional and personal conduct, capabilities, and ethical behaviour.

In sum, critical thinking skills in accounting can be described as intellectual skills that enhance the abilities to analyse situations and information to solve non-deterministic problems and reach sound judgments in the business environment that

will eventually lead to adding value. It is, however, crucial that the fundamental values of the profession pervade all roles and their associated critical thinking processes to uphold the reputation of the accounting profession and for long-term business success.

3. Research questions and method

This study focuses on the conceptions of critical thinking skills of practitioners who are in their first year of working experience in the profession and how critical thinking skills are applied in their actual work roles. Specifically, the following two related research questions are asked:

RQ1: What are practitioners' conceptions of critical thinking skills in accounting in their first year of experience in accounting practice?

RQ2: How have critical thinking skills been applied by practitioners in their first year of accounting practice?

The object of study of both questions is conceptions and the phenomenon of interest is critical thinking skills in accounting. Johansson et al. (1985) describe a conception as a way of seeing something, how something is understood or its meaning to a person. A person's conception of something is assumed to be relational because it is internally constituted by the person's experiences and the world (Marton and Booth, 1997). As discussed previously, the subject of critical thinking is complex and practitioners' conceptions of critical thinking skills in accounting and how they are applied are expected to vary depending on their personal experiences.

Phenomenography

A research method that can uncover variations of experience is phenomenography.⁴ Phenomenography is a research orientation that focuses on 'human-world relationships' (Svensson, 1997). The object of phenomenographic studies is the identification of conceptions that people have, collectively, of a particular phenomenon (Marton and Pong, 2005). Empirically, the phenomenographic process systematically explores peoples' experiences and interprets their conceptions

⁴ See Sin (2008) for a comprehensive discussion of the considerations of quality and guide on the rigour of phenomenographic method.

of the phenomenon of interest and then classifies the conceptions according to their similarities and differences into categories of qualitatively different conceptions of the phenomenon. Phenomenographic findings are reported in an outcome space which describes the categories.

The phenomenographic method was chosen for the following reasons. 1. The phenomenon of interest in the present study is complex. Practitioners are expected to have qualitatively different conceptions depending on their experiences and these conceptions can be captured by the phenomenographic method.⁵ 2. In phenomenography, the findings of conceptions are described and quotes from participants are used to support interpretations and to clarify the conceptions. The descriptive form of the findings provides insights that satisfy the stated purpose of the study. Further, the descriptive form also makes the findings easy to understand and use. 3. The present study and phenomenography embrace consistent underlying ontological (relational) and epistemological (researcher's non-dualistic engagement with participants) assumptions of knowledge as the object of study – conceptions – is common to both.

Selection of participants

The selection of participants aims at maximising conceptual variations (Marton and Booth, 1997) to ensure adequate data in the abstraction process to derive an optimal set of categories. Altogether 18 practitioners who were within their first year of experience in accounting practice were selected. The participants worked in different fields of accounting such as management accounting, auditing, tax, public services and commerce/business in Australia. The participants were of different genders and ages, have different cultural and language backgrounds and they hold accounting degrees from different universities. The spread of characteristics in the selection of participants aims at maximising conceptual variations in the data. Eighteen participants were considered adequate as they included a wide range of characteristics. Consideration was also given to ensure that there were not too many participants as to give rise to data management problems and superficial analysis as the phenomenographic analysis is both a complex and in-depth process.

⁵ Säljö (1996) emphasises the appropriateness of phenomenography for studying people's lived experiences of complex social phenomena.

Data collection

The data for the research were collected by semi-structured one-on-one interviews conducted by the second author.⁶ The interviews were audio recorded and later transcribed for analysis. Prior to the actual interviews, three pilot interviews were conducted.⁷ The researchers listened to and reviewed the recordings of the pilot interviews very carefully. Issues were identified and discussed to make improvements for the actual interviews. The actual interviews with participants were carried out incorporating the suggestions for improvement from the review of the pilot interviews.

In the actual interviews, interviewees were asked questions about what they think critical thinking skills are in accounting practice and also about situations that they have applied critical thinking skills.⁸ Specifically, interviewees were asked “In your work experience so far, what do you think critical thinking skills in actual accounting practice are?” This question is directly aimed at the object of study in *RQ1*. It was intentional that phrases like “in your work experience” and “what do you think” were included in the question to draw out interviewees’ own conceptions or understandings of the subject of interest that have been constituted by their personal experiences. If a direct question like “What are critical thinking skills in accounting?” was asked, it is likely that a direct textbook type definition for critical thinking skills would be given.

Later, interviewees were asked to describe two separate situations at work that required critical thinking. They were then asked “What critical thinking skills did you apply in that situation?” or “In what ways did you apply critical thinking skills in that situation?” This part of the interview was aimed at the object of study in *RQ2*.

Svensson, Anderberg, Alvegard, & Johansson (2006) point out that different linguistic expressions can mean the same thing, and a single expression or term can mean different things to different people. The intentional-expressive approach for phenomenographic interviews (Anderberg, 2000) was adopted in the study because it is a useful and systematic interview strategy for elucidating and confirming conceptual meanings of interviewees in the expressions that they have made in the interviews.

⁶ Approval for ethics has been obtained for the research prior to interviews.

⁷ Pilot interview data were not used in the analysis.

⁸ The interview guide is found in the Appendix.

The interviewer also took care not to influence interviewees with his own biases and preconceptions. One way was by asking the key questions in alternative ways, in other words, asking for the same things in different ways.⁹ To further enhance the validity of the interview process, during an interview, special attention was given to what was said by the interviewee. Clarification of meanings was sought by asking directly about the intended meanings of various terms or expressions used by the interviewee, or asking the interviewee to give an example to illustrate or explain the meanings. The clarification of interviewees' meanings during interviews is important for interpretation later because it is the conceptions or meanings of other people that the researchers are looking for during analysis. Throughout the interview, the interviewer kept eye-contact with the interviewee, but consciously avoided showing any sign of agreement or disagreement with what the interviewee has said. In cases where the interviewee needed time to think about a question, sufficient time was given to the interviewee. On average, the duration of each interview was thirty minutes.

Transcription

The audio recordings of the interviews were transcribed to prepare the data for analysis. In phenomenographic studies, the focus is on the intended meanings of interviewees in their expressions about the phenomenon of interest. Therefore, verbatim transcription, which does not allow interpretation or restatement of the conversations, was the level of transcription adopted for the study. The transcription was done professionally by an external company. In order to retain the context of each interview as much as possible, the interviewer reflected on the experience of the interviews from time to time and made notes of relevant contextual features, listened to the recordings several times before and after the transcription.

Analysis and interpretation

The analysis of data did not commence until all interviews have been completed to avoid the risk of interview bias (Bowden, 2005). The analysis of the data involved reading and re-reading the transcripts throughout the process. However, the transcripts were not analysed or interpreted individually, they collectively constituted the overall pool of data. The aim was to look for qualitatively different conceptions of

⁹ Richer data can also be obtained this way.

the subject of interest from the pool of data rather than the conceptions of the individual participants (Marton, 1994).

It is important to note that in phenomenographic research, the conceptions that are reported are not constructed by researcher. They are derived from analysis and interpretation of data. Thus, they are other people's conceptions and not that of the researcher (Marton, 1981). The interpretation process therefore presupposes quality interview data in that the intended meanings from the interviewees' perspectives have been elicited and clarified during interviews.

Empirically, what do conceptions look like and how to find them in the data? Marton and Pong (2005) show empirically that a conception has two intertwined aspects: referential and structural. The former denotes the global meaning of the object conceptualised, and the latter refers to the combination of features that gives the support or structure for that particular global meaning. The different global meanings and their associated structures are identified and reported as different categories of conception in the outcome space.

After the initial stage of reading, the researchers looked for qualitatively different overall meanings or referential aspects that were evident in the 'pool' of data. A global meaning is formed when there is sufficient evidence that a particular overall meaning has been expressed. The associated structure is found in the variations in views and features about the global meaning expressed by the interviewees. For each global meaning (putting the others on hold), the associated structural aspects or features supporting the global meaning were identified. The process was repeated for each global meaning found in the data. The process involved several revisits and readings of the transcripts, confirming the meanings with both the immediate context of surrounding statements and the transcript as a whole to ensure communicative validity of interpretation.¹⁰

This part of the analysis was critical. The researchers met several times to discuss and revise the global meanings and their structures, and to confirm that the interpretations were validly derived from the data. The final global meanings are the different categories of conceptions that are reported. The NVivo program was used to manage the data and track the stages of the analysis to ensure the rigour of the process.

¹⁰ Communicative validity involves an on-going dialogue in which alternative interpretations are debated throughout the research process (Kvale, 1989).

4. Results

The findings are reported in the two outcome spaces below.¹¹ Outcome Space One reports the qualitatively different conceptions of critical thinking skills in accounting from the perspective and experience of practitioners in their first year of practice in the profession. Outcome Space Two also reports qualitatively different conceptions from the same group of participants but from a practical perspective in terms of the applications of critical thinking skills in their work experiences. Thus, Outcome Space Two complements in Outcome Space One.

Direct quotes from the interviews are provided to clarify the meaning of each conception and to show its supporting structure. The quotes also serve as evidence that the conceptions were derived from the data. It should be noted that the findings have emerged from interview discourses and were based on the discursive consciousness of interviewees. Therefore, different orientations are expected and new or extended categories may be found in other studies and contexts. Nonetheless, valuable insights can be gained from the conceptions reported. Further, the global characteristic of the accounting profession and the wide conceptual variations of participants have enhanced the utilisation of the findings in contexts beyond the present study.

Outcome Space One

Conception C1: Critical thinking skills are associated with attitudes.

In this conception, practitioners described various attitudes associated with critical thinking skills that influence certain actions or behaviour when carrying out tasks. The attitudes identified include paying attention to details and not taking things at face value, being sceptical, seeking understanding and not accepting the status quo.

Supporting quotes from interviews:

P: You have to be very careful. That's where the attention to detail comes in ... you really need to be alert and aware.

¹¹ There is always a limitation in studies of people's understandings such as this one in that there is likely to be something that is out of reach or missed (Anderberg, 2000). This limitation, however, does not invalidate the findings reported as they were derived from the data.

- K: Critical thinking skills, from an auditing perspective, are based around professional scepticism, you can't get away from it, it's in everything we do – we don't trust. It's not that we always think they're trying to cheat us – it is part of an unwritten law. You never take what you get for granted...It means not to take everything at face value. ... You have to be sceptical about what they're giving you.
- F: I have to investigate the reason behind ...to see where the problem is. Sometimes it can be common sense, that's where you have to apply your critical thinking skills to see things from different perspectives.
- N: Like I was saying, lateral thinking, thinking outside the square, critically thinking.

Conception C2: Critical thinking skills are problem solving skills.

In this conception, practitioners saw critical thinking skills as problem solving skills. Critical thinking skills were identified in the stages of the problem solving process such as, identifying the problem, analysing and evaluating information and the situation, making a judgement and coming to a solution. C2 is a progression from C1 which focuses on attitudes that underlie critical thinking and actions, to the next stage which focuses on the application aspect of critical thinking skills.

Supporting quotes from interviews:

- A: I define that as problem solving skills.
- C: In my point of view, critical thinking skill is like an evaluation process where you find the problem, evaluate the criteria and then make a reasonable judgement.
- P: Critical thinking skills [pause] I think all graduates in accounting firms especially should have problem solving skills. They need to analyse data and they need to see patterns. If the data don't look right, they should be able to pick up that there are mistakes in the data.
- J: Critical thinking skills are how we come to – in a problem situation – how we come to a solution, how to solve it in a way that is logical. Sometimes the circumstances make it very tough, that's where your critical thinking comes to apply. You need to analyse the situation properly, there are always some things that you can't get to, but you need to have a mind to think of the right problem solving skills.

Conception C3: Critical thinking skills are for achieving outcomes.

In this conception, practitioners saw critical thinking skills in terms of achieving outcomes. The key aspect of this conception is in the substance of an outcome from applying critical thinking skills. The type of outcome depends on the role or the task at hand, adding value and maximising benefits for clients were identified in this conception.

Supporting quotes from interviews:

N: You've really got to use those critical thinking skills in order to advance your client's case. ... I guess your aim is to, you know, help them minimise their tax obligations and maximise their tax benefits.

D: I think it is the ability to work beyond the square. For example, you can work something out which can add value for your clients. Yes, to broaden your horizons to add more value for your clients, rather than doing the routine accounting jobs...like how to increase the net assets of their enterprise.

L: I need to think logically, to maximise my client's benefits.

A progressive relationship is apparent in the hierarchy of conceptions. C1 identifies attitudes that underlie critical thinking. C2 progresses from C1 to the application of critical thinking skills. C3 progresses from C2 to the outcome from applying critical thinking skills. In short, the conceptions have focussed on three different aspects of critical thinking in accounting which are attitude, application and outcome. Figure 1 below illustrates the relationship. The following is an example to illustrate the relationship. A tax accountant who has the attitude of not taking things at face value will tend to seek a better understanding of the client's business by asking for more information from the client, doing further research and analysing the tax law and provisions, and examining the information thoroughly (which is the application aspect) in order to minimise the tax liability (outcome) for the client.

Figure 1

**The relationship of the conceptions in Outcome Space One
(insert here)**

Outcome Space Two

Conception A1: Critical thinking skills applications require knowledge and experience.

In this conception, experience and knowledge, especially discipline knowledge and specific contextual knowledge, are identified as prerequisites for applying critical thinking skills. The lack of knowledge or understanding is seen as an impediment to applying critical thinking skills.

Supporting quotes from interviews:

D: To be able to [apply critical thinking skills] you need more knowledge and expertise in the area before you can do the job right.

A: Sometimes I still find that I don't understand the accounting standards. If I don't understand the correct accounting treatment, I can't apply any critical thinking in these situations.

G: So you need your experience to apply critical thinking skills to identify if there is anything that is important for audit purposes that the client doesn't want to talk about. You have to dig a bit more in those situations.

N: So I think not knowing the context is certainly an impediment to your ability to think critically. Because if you don't even understand the problem, you can't even think of your arguments let alone the critical arguments.

Conception A2: Critical thinking skills are applied to solve problems and for verifications.

A2 has advanced from the focus on the prerequisites for critical thinking to the actual process of applying critical thinking skills. In A2, critical thinking skills are applied to solve problems and to verify the correctness and accuracy of processes and information. Although critical thinking skills are applied to solve problems, not all problems can be solved by critical thinking.

Supporting quotes from interviews:

C: Critical thinking is applied in this case – I need to make sure they are the same when I enter them into the system, so that means I have to double check.

R: It looks incorrect.¹² So he asked me to go back and check every single item. I checked them and found that I did make a mistake. Well, in that case, I'd say that critical thinking was applied by my supervisor.

O: So I guess critical thinking skills are simply trying to see if there is the right date, the right amount, the right invoice number and the right customer name.

N: But the problem is, even if you try to think critically about the problem, sometimes you can't really get an answer.

Conception A3: Critical thinking skills are applied to make judgements and decisions.

A3 has advanced from the focus on the process of applying critical thinking skills to the outcome. In A3, critical thinking skills are applied to make judgements and decisions. Furthermore, the type of judgement goes beyond professional judgements that are of an accounting or financial nature to the more implicit judgements about power relations, ethics and empathy.

Supporting quotes from interviewees:

H: I have to use critical thinking skills to note their materiality so that I can determine the level of testing that I have to be concerned. If I don't apply those skills then I may not know how far I have to go or test.

C: In this situation, I need critical thinking skills to decide whether I should record the true value or follow the boss's instruction.¹³

A: For example, the manager asked me to do A, B, C for a job...I have to think about the quality required for A, B, C, so I think about the expectations of my manager, I don't just do [the job]. I think critical thinking is thinking a bit further into what you should prepare yourself for.

L: I need to think about who gave me this work and the position level of the person. For example, I got work from a senior analyst and it was due very soon, so I had to really focus working on it. But I also got another piece of work from a partner. It was just a piece of research for a potential client. ... I should apply my critical thinking skills to

¹² The supervisor realised that the information was incorrect as this year's profit margin was 25% compared to the previous year's profit margin of 47%.

¹³ The boss's instruction was to enter a higher sales figure so that his brother-in-law could get more sales commission.

set my priorities. I think the best way to do is to let both the senior staff know that I have got both jobs on my hands.

A progressive relationship is also apparent in the hierarch of conceptions in Outcome Space Two. A1 focuses on the prerequisite of relevant knowledge prior to the application of critical thinking skills. A2 progresses to the actual application of critical thinking skills in doing tasks and A3 progresses to the next stage of making decisions. In short, the conceptions have focused on three aspects in the application of critical thinking skills which are prerequisite, application and outcome. Figure 2 below illustrates the relationship. The following is an example to illustrate the relationship. A management accountant needs to possess disciplinary knowledge in a particular area to perform his daily tasks. He has to apply his critical thinking skills when performing the tasks. To complete different tasks, various decisions have to be made.

Figure 2

The relationship of the conceptions in Outcome Space Two (insert here)

5. Discussion and conclusion

This study has examined practitioners who were in their first year of experience in accounting practice as a potential resource to address the skills gap challenge that the accounting profession is presently facing. In this section, we discuss our interpretation of the findings and their implications and make suggestions for mentoring and professional development to enhance the quality of this transient group of practitioners.

The quotes provided for C1 describe a variation of attitudes that are associated with critical thinking or the application of critical thinking skills. There was, however, no mention of any of the fundamental values of the accounting profession or any reference made to the principles in the code of professional conduct.¹⁴ This is surprising as the accounting profession is presently still recovering from the wake of huge corporate collapses in recent years and in the midst of Sarbanes-Oxley and CLERP 9 compliance.

¹⁴ Only one interviewee alluded to the code but not in a significant context.

The apparent lack of conflation of the values of the profession (we assume that practitioners know about them) with practice in the day-to-day tasks is a concern particularly in the more susceptible audit and tax roles that were described. The findings call for more emphasis in developing this aspect of practice. According to (Perkins et al.1993), dispositions and attitudes can be developed through ‘enculturation’ which means that people start to adopt behaviour and belief systems of a particular culture by observing and being in that culture (Brown, Collins and Duguid, 1989). In the accounting context, ‘enculturation’ can take place in the community of practice within the profession. For example, mentors could explicitly emphasise the importance of the profession’s values in the culture and expectations of professional practice. Discussions of ethical issues (such as the case described by C in A3) experienced by new practitioners with mentors should also be encouraged. Another suggestion is to emphasise in professional development programs the purpose and status of the code of professional ethics and to use cases that develop reflective competence for conflating values with practice.

In C2, practitioners saw critical thinking skills in accounting as problem solving skills. This is consistent with the competency movement in the accounting profession which focuses on generic skills development aimed at problem-solving in the complex accounting work environment.¹⁵

While C2 focuses on the critical thinking process, C3 focuses on the outcome of critical thinking, in particular, ‘adding value’ was identified. It was discussed earlier in the introduction section that practitioners who can ultimately add value are demanded for the expansive roles of the profession. As can be seen in the quotes given in C3, the meaning of adding value depends on the participants’ role. The meaning of adding value from the view of practitioners at entry level and how they go about it in their roles and capacities are useful insights for targeted training and professional development alongside King and Kitchener’s (1994) reflective judgment model for sequential development.

According to McPeck (1981) critical thinking is intimately connected to fields of knowledge or with the disciplines’ forms of thought. A1 (in Outcome Space Two) identifies this fact. This conception, however, only came across when participants

¹⁵ Where different levels of critical thinking skills that underlie the range of generic skills in the Core Competency model in AICPA (1999) are listed.

were describing the applications of critical thinking skills and not earlier when they were describing their understanding of critical thinking skills in accounting. A possible explanation could be that critical thinking is often thought of in terms of skills (for example, see AECC 1990). In other words the focus is more on the skills and activities of critical thinking in accounting practice. It can therefore be a danger if the higher education curriculum or other professional development programs place too much emphasis on developing skills and overshadow the importance of core discipline knowledge.

A2 complements C2 where practitioners described the manifestations of their conceptions in terms of problem solving and verification activities where critical thinking skills are applied. A2 can also be seen as an extension of C1 where some of the identified attitudes are coming through as driving some of the activities described. To give a few examples:¹⁶ 1) Taking due care and paying attention to details entails a number of practices, such as double checking source documents. 2) Professional scepticism underlies not just accepting client's words. 3) Not taking things at face value has led the supervisor to suspect that something was not correct with the profit margin and going back to check every single item (A2). Practitioners at entry level are likely to be given more routine tasks, thus the conception of problem solving skills and verification which came across strongly in the data is of no surprise.

In A3 participants describe how critical thinking skills are used to make judgements. Of interest is the type of judgement that was described which was more of an affective rather than of a financial nature, i.e. professional judgement. The affective aspect of practice has not been the emphasis of the literature on critical thinking or competency in accounting. However, it is an aspect not to be overlooked as it is being experienced by new practitioners to the profession and having an effect on their decisions in carrying out their roles.

In conclusion, the findings do support the potential of new entrants to the profession for meeting the skills gap challenge in their career progression. The findings have also highlighted areas like ethics and other affective aspects of practice that require development.

¹⁶ However, do note that in phenomenography, the categories are derived from the 'pool' of data, thus the categories describe the different conceptions of the phenomenon under study (see Sin 2008 for a detailed explanation of the phenomenographic process) as opposed to describing the conceptions of the phenomenon of individual participants. Therefore, it is not appropriate to look for matches between participants' quotes.

Figure 1

The relationship of the conceptions in Outcome Space One

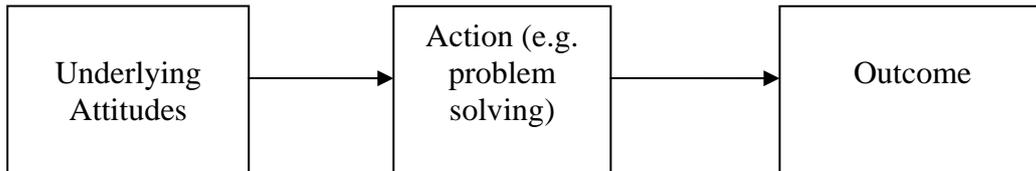
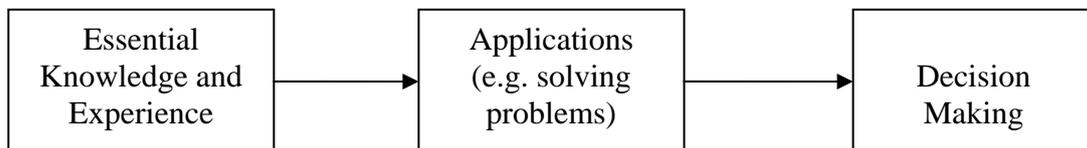


Figure 2

The relationship of the conceptions in Outcome Space Two



Appendix

Final Interview Guide

Before the interview officially starts:

1. Explain the purpose of the study (briefly)
2. Explain ethics standards and assure confidentiality, inform interviewee that a recording machine will be used.
3. Explain a rich description (experience) is needed
4. Also explain that the interviewee will be asked the same thing in different ways for rich data.

Starts:

1. In your work experience so far, what do you think CTS in actual accounting practice are?
[Note: Pick up terms used by interviewees. What do you mean by....Tell me a bit more...ask for examples...one at a time (clarification)]
2. Do you think CTS are important in carrying out your accounting work, why?
[Note: If already said it is important in Q1, ask why?]
3. I am going to ask you for examples of work situations that you have applied CTSs. However, for clear and manageable data, could you please first describe the situation to me, when you have finished describing the situation, then tell me how you have applied CTSs in that situation.

Could you now think of a situation and describe it.
What CTSs did you apply? Or in what ways did you apply CTSs in that situation?

[It is important that you do not interrupt until as much as possible is said by the interviewee. Note: be sensitive to terms and ask for clarification]
4. What challenges regarding applying CTSs have you encountered in your practice?
[Note: term clarification, example]
5. Have your studies at university previously prepared you for this (these) challenges?
[Note: term clarification, example]
6. In what ways do you think your uni studies could have prepared you better for the challenges?
[Note: term clarification, example]

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