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An innovative approach to educating accountancy students

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Abstract

Over the years, increased attention has been paid to preparing students for the future and this has resulted in educators and practitioners seeking innovative pedagogies for teaching and learning. At the same time, employers are expecting graduates to possess skills, knowledge and mindsets that will be valuable in the unknown future environment. One promising approach is Gardner’s framework, ‘the five minds for the future’ which include disciplined, synthesising, creating, respectful and ethical minds. The literature shows that Gardner’s framework has been mostly used in schools and not much yet in tertiary education. To address this gap, a qualitative study was conducted with post-graduate accounting students in a New Zealand university. The findings show that there is positive indication in the development of respectful and ethical minds and some awareness of the significance of developing the remaining minds for the future workplace. Implications for educators and researchers are outlined in the paper.

Keywords: Five minds, higher education, accounting, pedagogy

Introduction

The rapid changes in a highly globalised and interconnected world have created a need and interest among educators, researchers and practitioners to prepare students to meet the unpredictable challenges in the workplace of the future. In response, higher educational institutions are constantly looking for new pedagogies that will prepare students with relevant skills and competencies that are geared towards the demand of future jobs. Several authors have stated that traditional management approaches need to be replaced with new innovative models (Gosling & Mintzberg, 2003; Weick, 2007; Schoemaker, 2008) that develop new skills and abilities for students, leaders and managers to operate in situations that require different mind sets for future workplace success. In short, education needs to ‘future-proof’ its students. Since we do not know what specific skills and knowledge will be required in the future we need to equip students with the creativity and analytical skills that will enable them to generate within themselves the ability to succeed in a changed, and changing environment.

Howard Gardner, a leading thinker at Harvard University has put together what he calls ‘five minds’ that aim to prepare students to meet the challenges in their careers. In his best-selling book, Gardner claimed that the ‘current formal education’ does not prepare students for the future world (2006). He is not alone in that and other authors have raised similar concern (e.g., Schoemaker, 2008). Gardner’s ideas have had a particularly strong impact in the field of education.

A recent review of literature shows that most studies using Gardner’s framework have been used at lower and upper levels in schools (Ranz, 2012; Davies, 2014). There is little empirical
research on its applicability to the education of tertiary post-experienced students. This research addresses the gap and reports on how post-graduate accounting students in a New Zealand University perceive the ‘five minds of future’. By doing so, it helps to provide some empirical evidence on the value of Howard’s framework at this level.

**Literature Review**

**The Disciplined Mind**

The disciplined mind is explained as having an in-depth knowledge and understanding of a specific discipline, in this case, accounting. Gardner asserts that it is important and necessary for students to have mastery of discipline in at least in one field. He cautions that the absence of mastery of a specific discipline would destined people to ‘march to someone else’s tune’ (2006, p. 3). He further explains that a disciplined mind helps to develop not only the mastery of a subject or content but it intrinsically links to a way of thinking about the subject. Moreover, cultivating a disciplined mind goes beyond just having a good knowledge of a subject. The disciplined mind develops a scholarly way of thinking that transcend the home discipline, in this case accountancy and enables the practitioner over time to add on further skills and knowledge from other disciplines (Davis & Gardner, 2012). Considering that mastery and honing of skills takes much time and effort, it will be necessary for higher education institutes to encourage students to develop a disciplined mind from the start of their tertiary education.

**The Synthesising Mind**

According to Gell-Mann (1995), the most important and valued mind will be the synthesising mind. He claims that the speed and access to a wide range of sources, notably via the World Wide Web which was in its infancy when he wrote, will necessitate students and others to develop a synthesising mind. The new technology makes facts easy to come by; the need then is to assess, assemble and to synthesise that into knowledge. The synthesising mind is described as a process for putting together and making sense of information from a wide and diverse range of sources (Gardner, 2006). Some important factors are involved in the process. Effective filtering is the first to consider. Filtering of information allows one to understand a given topic or task at hand in terms of its past, present and what can be derived or learnt from it. This is very time consuming as one is required to differentiate a vast amount of information and decide what is important, relevant and accurate. Moreover, the capacity to synthesise forces one to go beyond one’s old habit or practice to settle for ‘minimum’ information to understand or make a decision on a topic or issue. It is necessary to construct a draft of the synthesised information that is both understandable to novice and experts. Gardner claims that with practice one would be able to acquire this skill.

**Creating Mind**

The creating mind builds on disciplined and synthesise minds and are classified as cognitive. The main essence of creating mind is to create new knowledge and use different types of questions that leads to innovative and meaningful insights (Stork, Woodilla, Brown, Ogilvie, Rutter & Trefry, 2010). Gardner (2006) emphasised that a creating mind can only be nurtured on the foundation of disciplined and synthesise minds. Synthesising is only possible with some mastery of the constituent discipline. In other words, it is unlikely for new creation to take place without disciplinary mastery and the ability to synthesise. It is also noted that some factors such as risk, failure and time are involved in developing the creating mind. Gardner states that
creative people are those who take risk and challenges for learning and creation. As such, students must be made aware of these factors and must be encouraged to develop creating mind despite the risks because creativity and innovation will be increasingly valued in the future.

Respectful Mind

As stated earlier, the disciplined, synthesis and creating minds are categorised as cognitive since they involve thinking about things. In contrast, both the respectful and ethical minds are classified as relational capacities. While the cognitive minds are internal workings of individuals, the respectful and ethical minds move beyond ‘individuals’ to interact and embrace people of other mindsets. In a globalised and interconnected world, with greater mix of cultures and nationalities, it is crucial to develop the respectful mind (Damon, 2008). It is apparent that developing a respectful mind should be a key focus of individuals and tertiary institutions. Genuine attempts must be made to move away from superficial expressions of tolerance and understanding to a deeper respectful empathy. This is a challenge, though a principle to embrace is the recognition that it is ‘natural and legitimate’ for differences among people (Stork et al. 2010, p. 31). Gardner (2006) cautions that any form of cultural disrespect will become unviable. It is also noted that nurturing or developing a mindset is more challenging than a simple skill as it involves how people view the world and make sense of it (Estienne, 1997). It would be beneficial for educational institutes to emphasise developing respectful minds as students come from different cultural backgrounds and most of the courses involve working in groups.

Ethical Mind

Over the years, there has been an increasing interest in the education sector in nurturing the ethical mind among students (Karassavidou & Glaveli, 2006; Chambers & Ransom, 2015). Though ethics refers to individual behaviour, it is more focused on the needs of society in which one lives (Gardner, 2006). Ethics has a dual role; developing an individual’s own ethical systems and the broader collective good and responsibilities that goes beyond self-interest (Duening 2010; Stork et al., 2010). Higher education institutions have a great responsibility of developing the ethical mindset among students (Bollman & Gallos, 2011). This is because they are preparing and educating people to become future leaders, managers, etc. Some authors have stated that to some extent tertiary institutions are responsible for unethical behaviour in business organisation (Pizzolatto & Bevill, 1996). In higher education, the most common and geographically widespread form of unethical behaviours is cheating and plagiarism (Heyneyeman, 2013). Simply, this is the result of high competition for academic achievements. Altogether, the literature points for a greater attention for nurturing an ethical mind in educational institutes and businesses. Gardner argues that rapid continuous changes will pose moral and ethical challenges; thus, nurturing an ethical mind will enable people to align values according to both self and society’s expectations. However, it is also widely known that developing an ethical mind does not necessarily lead to ethical behaviour because of the tendency of meeting the needs of self-interest above society. Considering this weakness in human thinking, the emphasis on ethical awareness takes a high priority. In some cases, ethical issues have to be viewed from context. In sum, this discussion suggests that educators think and reflect on their roles, and adopt Gardner’s innovative approach to evolve the practice to develop the five minds in students.
Methodology

To examine Gardner’s concept in a real-life situation, this research was carried out utilising group work in a post-experience class in accounting. Group work was used as a learning activity and also a component in the research.

A qualitative, phenomenological approach was undertaken in this research. This methodology was considered appropriate as the study explores ‘lived experiences’ (Creswell, 2007) in this case of perceptions, feelings and thoughts about how group work can help to enhance or inhibit the development of the five minds for the future. Interviews were the primary source of data used in this research. In-depth interviews were necessary as the study sought to understand students’ involvement in group work in a ‘natural language’ (Denzin & Lincoln, 2000). Also, qualitative in-depth interviews allow one to not only gain participants’ opinions and perspectives but also enable one to explore the reasons for a specific viewpoint (King, 2004).

Interviews lasting 45 to 100 minutes were conducted with 18 post experience accounting students. All 18 students participated in the research. Out of the 18 participants, there were 8 males and 10 females. The participants each had one to fifteen years of work experience. Their age ranged from 24 to 38 years. The students are required to undertake a management module as part of their qualification. In part of it, all students are assigned a group assignment which required them to choose an organisation, critically analyse a specific problem and provide recommendations. The participants were interviewed upon receiving their grades for their group assignment.

The aim of the interviews was to explore students’ perceptions, experiences and viewpoints on group work using Gardner’s five minds. An interview guide was derived from the literature and was used to gather information about students’ experience in relation to the five themes: disciplined, synthesising, creation, respectful and ethical minds. Firstly, they were asked about the relevance of group work in general and their experiences of working in groups in their respective organisations. This was followed by why it is important to integrate the five minds during their involvement in the group work. The final question was directed towards each type of the five disciplines and the benefits and challenges in embracing these disciplines for personal and professional learning.

All interviews were tape-recorded and transcribed. The main themes were identified and the coding process was carried out by categorising and sorting data, labelling, separating and organising them. The data was analysed using Constat’s (1992) category process development approach which enables the combining views from the literature and the study.

Findings and Discussion

The Disciplined Mind

As explained earlier, as part of the assessment, the group assignment required participants to choose a topic of their interest for analysis. Most of the participants chose topics that are directly to their specific accounting discipline such as ‘Accounting Information System’. The choice of narrowing it to accounting arose from the thinking of using familiar knowledge and also as not to delve into new areas of topic that would require much effort by the group members. Almost half of the total number of participants had taken courses on management as part of their undergraduate qualification. Yet, the majority of participants did not see the need to have in-depth knowledge related to the field of management. This thinking was strongly verbalised in some of their comments such as, “my specialisation is accounting”, “my future is in accounting”. Throughout the course, the benefits and application of management knowledge
across disciplines was emphasised considering that future workplace will require interdisciplinary skills and knowledge for a successful career. However, a there was a strong tendency for participants to work on issues that were familiar and closely related to accounting.

When we started our assignment, there was a mix of management and accounting topics. After discussing for a while, we thought it is sensible to choose something all of us know something about it. Only one module of management. The others are accounting. The easy way to do is to settle for accounting. This is best way for us.

Three reasons became apparent. First, they do not see the need to experiment with new knowledge. Second, they thought disciplinary knowledge outside accounting is not important or relevant to them. Third, it was the most time-consuming way of completing the assignment. This conflicts with Gardner’s observation that learning and acquiring knowledge from other disciplines is an expectation of the future workplace. The findings show that students have taken a narrowly transactional approach towards the group assignment. This aligns with Murphy and Tyler (2005) who explained that such an approach is taken by students who use the time and effort efficiently to obtain a good grade. Though participants expressed that the module is “very interesting” and “eye-opener” there was no evidence of deep learning engagement for new knowledge. Notably, the findings suggest that participants’ main focus was to achieve a good grade within the timeframe. This has implications for course.

The Synthesising Mind

The rapidly evolving digital environment facilitates the speed of accessing information (Stork et al., 2010). This is commonly described as producing information overload and is ineffective in terms of deep learning. The need to gather accurate, reliable and relevant information, has increased the importance of nurturing a synthesising mind (Gardner, 2006). Synthesising information can be considered as a complex process as it involves skills and cognitive strategies. The nature of the group assignment required understanding of a topic and also necessitated synthesise to evaluate the issue. The participants explained the process as gathering information by each member and subsequently, collectively discussing and synthesising it at the meeting. When asked about their viewpoints in terms of the process, one participant shared her experience:

Before the meeting all members emailed each other’s summaries. After that we summarise again as a group. I know some people come without reading everybody’s summaries to the meeting. Because of this, it becomes confusing with different people explaining what they think is important. Actually, I find this part very tough; lots of time spent, lots of arguments also. Now I think about it, I learnt something. Good fun. I can apply in workplace.

The message that came through from most of the participants is that synthesising was a difficult and a time-consuming task. The above quote and comments such as “don’t know what is important”, “everything can fit our topic”, shows a constraint in the synthesising mind. Some of the participants expressed disappointment in the process when some of the gathered information was not considered for inclusion in the assignment. On the other hand, some participants found the process interesting and beneficial. Comments such as “you learn a lot”, “you become a mini-expert in the topic”, “good feelings in knowing new things”, point towards a positive outcome in sharing information and working together as a group. Overall, the findings align with Gardner (2006) who stated that nurturing a synthesising mind is difficult, though possible. The way students access information has changed due to the digital environment; thus, to enhance the learning capacity, it is very important for higher learning institutes and organisations to develop synthesising mind and group work can be effective way of doing it.
The creating mind

Over the recent decades, tertiary institutions are increasingly expected to focus on producing people with a creative mind (Florida, 2005; Gibson, 2010). This is because of global competition where organisations and businesses consider creative people as an asset for change, innovation and competitive advantage (Bilton, 2007; Kandiko, 2012). This aligns with Gardner’s framework that emphasise on the importance of nurturing a creating mind for current and future workplace (2006). Creation is a combination of new knowledge, intelligence and personality (Haring-Smith, 2006). The core essence of creativity refers to generating new and original ideas (Amabile, 1996). In this research when students were asked about their contributions to creative ideas, all participants expressed uncertainty whether their solutions were actually creative. A typical comment from a participant:

All of us came up with good solutions out of our experiences. Our lecturers are best people to say whether our solutions were creative. I think, our solutions must be creative because of our good grade. Of course, students will always think that the solutions they wrote must be creative.

The above and other responses such as “I don’t know whether my idea is creative”, “we feel good with our solutions”, “makes us think a lot”, and “depends on the marker” show that the interpretation of creativity involves the role of individuals and how they make sense of the context. Throughout the interviews, it was evident that participants made attempts to derive creative ideas from their analysis. This involved healthy discussions using various strategies and processes such as problem solving, decision-making which were covered in the course. Majority of the participants acknowledge that their solutions can be considered as good suggestions but may not be creative. To some extent, group work activities involve creativity though the participants did not see themselves as appropriate people to judge the merits of creativity. This has implications for educators not only nurturing a creating mind but enhancing students’ self-confidence which is a key motivator for creativity.

Respectful mind

Globalisation and changes in business environment have increased the need to operate in a multicultural workplace which requires people to interact with a wide range of people from different countries and cultures. These changes have led Gardner to term 'the respectful mind' as an important aspect for businesses and educators (Gardner, 2006; Damon, 2008). Nurturing a respectful mind is central to tertiary students as the nature of learning involves working with people from diverse backgrounds. Moreover, it is likely that their future career environment will be even more diverse. As such, educators have a responsibility of nurturing respectful mind that is both useful for students in their current learning process and in their future careers. Gardner describes respectful mind as accepting differences and "value those who belongs to others". This advocacy aligns with other researchers (e.g., Covey, 1989) who states that respecting others should be one of the habit for becoming an effective person. In this research, participants expressed positive feelings of their experiences in doing the group assignment. A typical comment from a participant was:

We don’t have expert knowledge on the topic. So, we must respect other members’ ideas. If we respect others, they will also respect our ideas without judging us. In our group we had different views but we talked about it nicely. In the beginning it was a little uncomfortable. After many meetings, we understand people are different. We learn a lot from each other when we respect them.
The majority of the participants benefited from the group work as they expressed their learning experiences as positive and meaningful. Some of them commented that they learnt to avoid personal judgement and to view other members’ ideas as valid and perhaps useful perspectives. The importance of collaborations resonated throughout the interviews. Comments such as “we need to understand each other”, “common courtesy to respect everyone”, “people are different”, show participants attitude towards accepting differences. Though a few participants felt uncomfortable with others way of getting across their ideas, they did not get into any conflicts. This was evident from remarks that “sometimes people can irritate”, “need to tolerate”, “need to complete” points towards some degree of tolerance and their focus on meeting the deadline. Overall, the research shows participants have developed a respectful mind by accepting differences and have displayed tolerance and cultural sensitivity. However, it is difficult to know whether the completion of the assignment has resulted in maintaining a ‘politically correct’ attitude in this instance.

**The ethical mind**

Increasingly organisations and tertiary institutions are focusing on ethics and ethical behaviour. The focus became intense as more unethical behaviour emerged in businesses. For the accountancy profession the case of Enron in 2001 was a watershed, with continuing ramifications. Organisations are under pressure to employ people with high ethical behaviour. As for tertiary sectors, some efforts are being put in to integrate ethics across disciplines. According to Gardner (2007), respectful mind and ethics are complementary and they play a crucial role at a personal and professional level.

Students are not in a position to ‘cook the books’ as the accountants at Enron did, or to engage in bribery and corruption, but they can attempt to cheat. It can be argued that those who cheat as students are more likely to behave unethically in a later career and as a corollary, those who resist the temptation to cheat are more likely to carry that ethical stand and withstand future temptation.

The most common format of cheating, and one made specifically easy by technology is plagiarism. Many researchers have reported plagiarism as one of the major concern in higher institutions (Yardley, Rodriguez, Bates & Nelson, 2009; Nina & David, 2015) in both individual and group assessments. Participants in this research shows a strong ethical stand on plagiarism. Throughout the interviews comments such as “very wrong”, “students cannot”, “university is for studying not cheating” demonstrate a strong personal value that shapes the thinking of the participants. On the contrary one participant explained:

> Sometimes, students plagiarise without knowing. In my group one member cut and paste lots of paragraphs for literature. We are lucky one of the members checked and found it out. But the student who is from a different country said that it is not wrong to cut and paste in his country. It is considered as ‘sharing learning’.

This aligns with some studies (e.g., Nina & David, 2015) that plagiarism can be explained as a ‘cultural conditioning’ that justifies the act. In contrast, others (e.g., Park 2010) argue that there is no excuse for plagiarism as students ought to understand the consequences at a personal and professional levels. Overall, the findings reveal that participants took precautions to avoid plagiarism and also advise other group members not to indulge in any unethical behaviour. The development of the ethical mind was evident in this research. Though, there are policies on plagiarism in most universities, as a further measure and reinforcement, it could be good for educators to give a workshop during orientation or a ‘mini-talk’ at the beginning of each course (Briggs, 2003).
Conclusion

This research is a contribution to the ongoing discussion on innovative pedagogies that shape the learning and teaching in tertiary education. Gardner’s framework of five minds is considered as one that helps to adequately prepare students for the future workplace. Using the group work as an activity, the research was able to relate the students experience in group work to the five minds framework and understand students’ capability in developing mindsets for future practice in workplace. The research identified two mindsets, respectful and ethical minds, as being relatively embraced compared to other minds. In view of this, it is recommended that educators and curriculum designers take into consideration the integration of ‘holistic’ development rather than on a piecemeal format. For example, over the years there has been an explicit process to include critical and creative thinking as important skills for students. Using Gardner’s framework is particularly valuable in understanding how students use the five minds in practice. It is argued that developing the five minds can be seen a particularly valuable and effective innovative approach to prepare students to cope effectively in a changing environment and to handle challenges. Future research could extend to undergraduate students in comparison to post-graduates and to other disciplinary settings.

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