An Evaluation Of An Integrated Case Study And Business Simulation To Develop Professional Skills In South African Accountancy Students

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ABSTRACT

One of the most debated topics in extant accounting education literature is that of professional skills. It appears that many universities are failing to sufficiently equip their graduates with the generic professional skills required for the workplace. The case study method and business simulations are two complementary teaching and learning tools that have proven successful in promoting the development and assessment of professional skills in accounting; however, very few existing cases or simulations appear to be integrated across the discipline areas within accountancy. This study aims to contribute to the field in three ways: 1) in aiding to fill the apparent gap in the literature on the usage of inter-disciplinary integrated case studies or simulations, 2) by producing a (hypothetical) case study and business simulation that can be used or adapted by accounting educators to develop and assess professional skills, and 3) by providing some evidence of students' experiences (using a questionnaire adapted from a previous study) of such an assignment that can inform the development of future assignments. The findings show that the most obvious benefits of the assignment relate to the perceived level of learning that takes place and the exposure to real-life accountancy practice, as well as the perceived contribution to the development of various professional skills. A significant percentage of students did, however, experience high levels of stress and reported serious time constraints in completing the assignment.

Keywords: Accounting Education; Skills; Integration; Case Study; Business Simulation; Teaching and Learning; Assessment

INTRODUCTION

This paper reports on a study of the perceptions of a group of South African accountancy students and the observations of the author on the introduction of an integrated case study and business simulation assignment which emanated from a need to explore more creative ways of delivering accounting curricula that will have a greater impact on skills development. The interest in this topic is that many universities are apparently failing to sufficiently equip their graduates with the generic skills required for the workplace (e.g. Barac, 2009; De Lange, Jackling & Gut, 2006; Kavanagh & Drennan, 2008) whilst some others resist change (e.g. González, Montaño & Hassall, 2009). Recent literature in the field is littered with pleas to incorporate more skills development opportunities in accountancy curricula (e.g. Stainbank, 2010; De Villiers, 2010; Montaño, Cardoso & Joyce, 2004; Wessels, 2008) and, as such, this paper is aimed mainly at assisting accounting educators in finding creative ways to do this. Incorporating such skills into academic curricula is also a requirement of the South African Institute of Chartered Accountants’ (SAICA’s) ‘competency framework’ which places great emphasis on the pervasive skills chartered accountants (CAs) will need in practice (South African Institute of Chartered Accountants, 2010). Professional accountancy bodies and potential employers may therefore also find this paper informative as skilled accountants play a fundamental role in the economy of any country and educational interventions can assist in developing accounting students as future business leaders (Sing, 2013).
The two complementary tools that formed the basis of the assignment and, based on the literature, have proven successful in the development of soft skills in accounting are the case study method (e.g. Ashbaugh & Johnstone, 2000; Ahmad, 2011; Healy & McCutcheon, 2010; Ballantine & McCourt Larres, 2004; Wynn-Williams, Whiting & Adler, 2008; Hassall & Milne, 2004; Weil, Oyelere & Rainsbury, 2004) and business simulations - including role plays - (e.g. Steenkamp & Rudman, 2007; Fouche' & Visser, 2008; Hassall & Milne, 2004; Fortin & Legault, 2010; Avramenko, 2012; Xu & Yang, 2010; Towler, Lean & Moizer, 2009). Various authors have reported on cases they have used in a variety of accountancy disciplines; the problem is, however, that very few appear to be integrated across all or most of the discipline areas within accountancy. For example, in a review of four years of accounting education literature by Apostololou, Hassell, Rebele and Watson (2010:183-187), they referred to the 89 instructional cases that were contributed by 170 authors from 2006 to 2009 (the most recent summary). Although some form of integration is present in some of the cases, they were able to clearly categorize each of the cases belonging to a particular main discipline (auditing, financial accounting, corporate governance, managerial accounting and taxation).

Inter-disciplinary integration is a major feature of the ‘assessment of professional competence’ (APC) which is written by prospective South African CAs before they can qualify (South African Institute of Chartered Accountants, 2011). It is also a requirement of the Higher Education Qualifications Framework (HEQF) of South Africa that there is at least one integrated assessment procedure for each qualification (including ordinary three-year bachelors degrees) which is a valid test of the key purposes of the (entire) program (Council on Higher Education, 2004:20). A study by Bruns, Falsetta and Rupert (2008) also found that inter-disciplinary integrated exercises are useful for learning and Cheng (2007) suggests that accounting education be ‘upgraded’ by integrating different subjects. For these reasons, the central argument of this paper is that CA students - at least at the third-year level of their degrees - should be exposed to inter-disciplinary integration, but because third-year students generally do not yet possess the high level of cognitive ability required at the APC level, it is advisable that students have sufficient time to complete such assignments, that they work in groups, that lenience is allowed in regard to core (technical) knowledge when grading such assessments, and that assessment criteria should focus on the pervasive qualities and soft skills.

The research question of the current study is “Do accounting students perceive participation in an inter-disciplinary integrated accountancy case study and business simulation as valuable in the enhancement of their professional skills?” To answer this question, the author aims to 1) develop and administer a hypothetical, inter-disciplinary integrated case study used in an assignment that simulates business and accountancy practice and 2) gather the perceptions of students at the completion of the assignment on their experiences thereof. The second objective is answered through a research case study of a selected group of third-year students using a questionnaire adapted from a previous study. The discussion will also be supplemented by the author’s observations as an active participant in the delivery of the assignment. It is hypothesized that the assignment would be perceived as a valuable learning experience that contributes to the development of professional skills.

This study aims to contribute to the field in three ways: 1) in aiding to fill the apparent gap in the literature on the usage of inter-disciplinary integrated case studies or simulations, 2) by producing a (hypothetical) case study and business simulation that can be used or adapted by accounting educators to develop and assess professional skills, and 3) by providing some evidence of students’ experiences of such an assignment that can inform the development of future assignments. The importance of this study is that accountants play a significant role in the economies of any country and, hence, it is essential that every effort is made to prepare them sufficiently for the workplace. The study is also valuable to the South African situation specifically as the adoption of the recent SAICA competency framework sparked a renewed interest in the assessment of soft skills and the findings also provide insight from the perspective of African students.

The remainder of the paper is organized as follows: first a review of literature that is core to the objectives of this study is provided; next the method employed in answering the research question is explained, followed by a presentation of the main findings, conclusions, and suggested directions for further research. The actual integrated case study and business simulation assignment is also appended in the paper.
SKILLS DEVELOPMENT IN ACCOUNTING EDUCATION LITERATURE

To prove the relevance of the study, this section will provide a brief overview of recent literature focusing on the main types of skills that are central to accounting practice and empirical evidence of some pedagogical tools that can help in developing these skills in students, offering clear arguments for using case studies and business simulations in accounting education in light of their skills development benefits whilst also serving as the basis for developing such an assignment.

In a survey of chartered accountants in New Zealand, two key areas in accounting education noted as needing improvement are team work and experience with real world problems (Wells, Gerbic, Kraneburg & Bygrave, 2009). Soft skills are crucial to have in the modern workplace (De Villiers, 2010; Stoner & Milner, 2010) and include oral and written communication and presentation (e.g. Kerby & Romine, 2009; Matherly & Burney, 2009; Lynn & Vermeer, 2008; Cheng, 2007), information and communication technology (ICT) skills - including working with spreadsheets - (e.g. Schmidt, Green & Madison, 2009; Wessels, 2008; Rhodes, 2012), and interpersonal, social, teamwork and leadership skills (e.g. Schmidt, Green & Madison, 2009; Kennedy & Sorensen, 2006; Jackling & De Lange, 2009). Time management and the ability to plan is also a crucial skill (de Jager & Bitzer, 2013:402; Stoner & Milner, 2010; Fischer & Lehman, 2005). The practicing of these non-technical skills also facilitates the learning of the subject content and complements the technical skills (Montaño, Cardoso & Joyce, 2004; De Villiers, 2010).

The ability to apply professional judgment is also of particular relevance in accounting (e.g. Barth, 2008) which Correll, Jamal, and Robinson (2007:131) believe can be improved through developing the underlying skills. Other subject skills advocated include financial literacy (Louw, Fouché & Oberholzer, 2013), critical, conceptual and analytical thinking, problem-solving, self-criticism/reflection and other intellectual skills (e.g. Tonge & Willett, 2009; Jones & Davidson, 2007; Correll et al., 2007).

Another area that has received much attention in accounting education literature is that of ethics and professional responsibility. A study by Madison and Schmidt (2006) suggests that ethics should be integrated within existing courses as opposed to teaching ethics in a stand-alone course. Welton and Guffey (2009) found that educators influence ethical values through educational interventions and that such influences persist over time, a finding substantiated by both O’Leary (2009) and Delaney and Coe (2008). Shawver (2006) suggests that case studies are useful to promote a change in a student’s ethical awareness.

Evidence of the benefits that certain teaching and learning strategies have for skills development is plentiful. Lynn and Vermeer (2008) conclude that student written assignments could improve technical writing over time. Stainbank (2009), Dyball, Reid, Ross & Schoch (2007), and Ballantine and McCourt Larres (2009) observed positive student perceptions about the benefits of group work and cooperative learning, which complement Hwang, Lui & Tong’s (2008) finding that cooperative learning results in students achieving significantly better marks compared to traditional learning approaches.

Wolmarans (2005) mentions that simulations have not been used much in financial education, which is irrational as in his study students had positive experiences of simulations in regard to learning. Kastantin and Novicevic (2008) agree that current trends in accounting education focus on student-centered learning and simulations are useful in this regard. Xu and Yang (2010) confirm that the social interaction through simulations has a positive impact on learning and the synergistic knowledge development enables students to form complex mental models.

Wynn-Williams et al. (2008) indicate that active involvement by students in case studies appears to lead to a more balanced learning style. Cheng (2007) believes they promote the development of professional skills. Case study material can also be organized in such a manner to encourage problem-based learning (Milne & McConnell, 2001) - for example, by making them “real and complex” (Montaño et al., 2004). Weil, Oyelere, Yeoh and Firer (2001:138) agree that the major benefits of using case studies are exposure to real-world complexity and the fact that they teach students there is seldom only one correct solution to business problems.
The preceding literature overview therefore supports the use of case studies and business simulations as educational tools and provided the author with a basis for the development of such an assignment which is described in the following sections.

RESEARCH METHOD

The study that was conducted fits into the domain of “action research”, which is defined by Apostolou et al. (2010:154) as “an iterative approach to learning that involves data collection, reflection, and adjustment to the learning environment based on the reflection”. Various authors promote the use of this approach in accounting education; e.g. Cunningham (2008) and Baker and Logan (2006).

As a partial answer to the skills dilemma, the author developed a group work business/practice simulation assignment utilizing a complex, hypothetical case study that was invented by the author. The assignment was given to a group of 56 third-year CA students near the end of the academic year at the institution the author was affiliated with. Faithful to the experimental nature of action research, it was decided to only involve students enrolled at the smallest campus of the institution and use the experiences gained to refine the tool for roll-out to all campuses in future years. The author carried out all the groundwork relating to this assignment, including the evaluation of all the groups’ presentations. Ethical clearance was obtained from the institution. Involving only this campus in the first round of the assignment had the added benefit of gaining the perceptions of native African students (which is especially useful in the context of the South African socio-economic setting), as all of the students on this campus came from said background.

The research method could be described as a “survey within a case study” (Yin, 2009:13) as the study investigated the case of a particular group of students whilst gaining their perceptions through the utilization of a questionnaire, supplemented by the author’s own observations (field notes were kept) as an active participant in the delivery of the assignment. The questionnaire used was inspired by some sections of a questionnaire developed by Fouché and Visser (2008) in a study that also assessed students’ experiences of a simulation assignment.

The next section of the paper clarifies the content of this questionnaire. Self-reported levels of knowledge or skill are often used in accounting education research (e.g. DeBoskey, 2009; Ballantine and McCourt Larres, 2009), not that a particular form of feedback is necessarily preferable as Hassall and Milne (2004:136) feel that “what is most important is that educators have good reasons for what they and their students do in the classrooms in terms of their learning. How they might justify these reasons, what feedback they might choose to collect, and how they might choose to collect it is really for them to judge. We tend to believe that good narrative descriptions of instructors’ and students’ experiences of particular approaches may be every bit as valuable for encouraging innovation as student responses to some Likert-type scales”.

THE CASE STUDY AND BUSINESS SIMULATION ASSIGNMENT

The integrated simulation assignment was developed as an educational tool to assess and strengthen third-year CA students’ technical and generic skills. The assignment and all supporting materials are given in the Appendix. The salient features of the assignment are:

- The assignment was in the form of a complex case study via an email from a “client” where background information was given regarding the business. The company was hypothetical, although the information, in the case, was inspired by a real-world industry and product the students could relate to (the Apple iPhone). The requirements of the assignment further ensured that elements of real-life accountancy practice are simulated; therefore, both of the complementary tools discussed in the literature (case studies and business simulations) were utilized in the assignment.
- To develop teamwork skills, the assignment was completed in groups. Students selected their own groups which resulted in nine groups of six to seven persons each. Van der Laan Smith and Spindle (2007) established that self-selected groups may increase the effectiveness of cooperative learning, which challenges the conventional wisdom of instructor-imposed heterogeneity. The students who participated in their study also perceived the self-selection as more effective at promoting individual learning.
The groups had three full academic weeks (plus a brief university recess if they chose to utilize this) to answer certain questions asked by the “client”. Normal classes and tests continued during this time. The assignment required the use of technical knowledge from all of the main subject areas (financial accounting, taxation, auditing, managerial accounting and finance). To integrate risk management principles, the groups also had to perform a risk assessment of the company, including the utilization of financial statement analysis.

Deliverables included a spreadsheet budgeting model (integration of ICT skills), a typed report of 3,000 words (integration of report writing skills) and a 20-minute presentation to the “client” (integration of presentation skills). Each group member was required to participate in the presentation.

The email from the “client” also contained some deliberate ethical and corporate governance violations to assess whether the groups pick up on ethical concerns, including potential fraud indicators that students may have picked up through considering described control deficiencies and conducting proper ratio analysis (for example, control deficiencies in the payroll system, coupled with an increasing trend in salaries and wages while revenue and profits are declining). Students were requested to prepare some questions to ask the chief executive officer (CEO) of the client after the presentation to confirm or refute any “concerns” they may have had. Based on the responses given by the CEO, they then had to submit a report of 500 words addressed to whichever board committee they chose, a mere three days after the presentation (to simulate real-world time pressures and client demands).

The author acted as the client (in the role of the CEO, a colorful character that enjoys his riches, is not fully up to date with all technical accounting principles and does not exactly respect authority). A blog was created where students could post questions or comments for the CEO and the whole class was able to follow this blog. This was done to give hints to the groups if they really got stuck. A study by Lindquist and Olsen (2007) showed no difference in knowledge gains with or without homework assistance; however, homework assistance resulted in higher student satisfaction and lower frustration with the assignment.

The author attended all presentations during which he acted like the ignorant client asking questions such as, “so what is the logic behind that accounting rule?” and “what do you mean with discounting to present value?” to really keep students on their feet and simulate real-life client interaction.

The case in the assignment did not contain all information students may have needed and it required students to do some ‘research’ on the internet (also an essential skill) on the real-life industry, product and general market indicators. Hassall and Milne (2004:135) seem to endorse such an approach as “case studies are not determined by their material content, but rather by what students do with them”. They advocate that the case method is not effective if it is dominated by the instructor; it should be student-centered.

The assignment was graded by the author (see the Appendix for assessment criteria), but marks included a component of peer assessment of individual effort within the groups. Although Stainbank (2009) reported negative attitudes by students toward peer assessment, it was decided to include this component to promote fairness and give students ownership of their group learning (Clinton & Smith, 2009).

**STUDENT FEEDBACK ON THE ASSIGNMENT**

Table 1 provides descriptive statistics on the student feedback obtained after completing the assignment. A 5-point Likert scale was used in this first part of the questionnaire (1 = strongly disagree; 5 = strongly agree). The table has been sorted in order of positive to negative perceptions.
Participating in the assignment developed/enhanced my stress management skills. Participating in the assignment developed/enhanced my soft skills in general. I enjoyed the social aspects of the assignment. Participating in the assignment broadened my view of the role of an accountant. What I have learned during the assignment will stay with me in the long run. The assignment tested my ability to think for myself. I was motivated by the assignment. My interest in chartered accountancy has been enhanced by the assignment. Participating in the assignment developed/enhanced my teamwork skills. Participating in the assignment broadened my understanding of real-life practice. I prefer such assignments instead of lectures. Participating in the assignment broadened my knowledge. The assignment increased my insight into the relationship between theory and practice. I am now more motivated to become a qualified accountant because of this assignment. The assignment increased my knowledge. The assignment was an effective learning experience. Participating in the assignment broadened my insight into the relationship between theory and practice. The assignment broadened my understanding of real-life practice.

Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
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<tbody>
<tr>
<td>1. What I have learned during the assignment will stay with me in the long run.</td>
<td>4.73</td>
<td>.486</td>
</tr>
<tr>
<td>2. I took the assignment seriously.</td>
<td>4.71</td>
<td>.494</td>
</tr>
<tr>
<td>3. Participating in the assignment broadened my view of the role of an accountant.</td>
<td>4.64</td>
<td>.554</td>
</tr>
<tr>
<td>4. The assignment was an effective learning experience.</td>
<td>4.64</td>
<td>.616</td>
</tr>
<tr>
<td>5. The assignment increased my knowledge.</td>
<td>4.62</td>
<td>.558</td>
</tr>
<tr>
<td>6. The assignment increased my insight into the relationship between theory and practice.</td>
<td>4.61</td>
<td>.493</td>
</tr>
<tr>
<td>7. Participating in the assignment broadened my understanding of real-life practice.</td>
<td>4.59</td>
<td>.596</td>
</tr>
<tr>
<td>8. The assignment tested my ability to think for myself.</td>
<td>4.58</td>
<td>.629</td>
</tr>
<tr>
<td>9. Participating in the assignment enhanced my technical competencies.</td>
<td>4.56</td>
<td>.601</td>
</tr>
<tr>
<td>10. Participating in the assignment developed/enhanced my teamwork skills.</td>
<td>4.56</td>
<td>.660</td>
</tr>
<tr>
<td>11. My interest in chartered accountancy has been enhanced by the assignment.</td>
<td>4.54</td>
<td>.687</td>
</tr>
<tr>
<td>12. I was motivated by the assignment.</td>
<td>4.5</td>
<td>.505</td>
</tr>
<tr>
<td>13. The assignment demanded insight/application from me and not only knowledge replication.</td>
<td>4.45</td>
<td>.537</td>
</tr>
<tr>
<td>14. I am now more motivated to become a qualified accountant because of this assignment.</td>
<td>4.42</td>
<td>.762</td>
</tr>
<tr>
<td>15. Participating in the assignment developed/enhanced my research skills.</td>
<td>4.39</td>
<td>.652</td>
</tr>
<tr>
<td>16. Participating in the assignment developed/enhanced my computer skills.</td>
<td>4.36</td>
<td>.672</td>
</tr>
<tr>
<td>17. Participating in the assignment developed/enhanced my communication skills.</td>
<td>4.34</td>
<td>.721</td>
</tr>
<tr>
<td>18. Participating in the assignment developed/enhanced my presentation skills.</td>
<td>4.24</td>
<td>.744</td>
</tr>
<tr>
<td>19. Participating in the assignment developed/enhanced my report writing skills.</td>
<td>4.18</td>
<td>.748</td>
</tr>
<tr>
<td>20. Participating in the assignment developed/enhanced my time management skills.</td>
<td>4.13</td>
<td>.810</td>
</tr>
<tr>
<td>21. Participating in the assignment developed/enhanced my language skills.</td>
<td>4.07</td>
<td>.920</td>
</tr>
<tr>
<td>22. I enjoyed the social aspects of the assignment.</td>
<td>4.04</td>
<td>.953</td>
</tr>
<tr>
<td>23. Participating in the assignment developed/enhanced my soft skills in general.</td>
<td>4.02</td>
<td>.774</td>
</tr>
<tr>
<td>24. Participating in the assignment developed/enhanced my stress management skills.</td>
<td>3.80</td>
<td>.999</td>
</tr>
<tr>
<td>25. I prefer such assignments instead of lectures.</td>
<td>3.38</td>
<td>1.315</td>
</tr>
</tbody>
</table>

Table 1 shows that students generally had positive experiences with the assignment. The most obvious benefits of the assignment related to the level of learning that has taken place and the exposure to real-life accountancy practice. Furthermore, the students believed that the assignment helped to develop their professional skills, most noticeably teamwork skills ($M = 4.56$), research skills ($M = 4.39$), communication skills ($M = 4.36$), computer skills ($M = 4.34$), presentation skills ($M = 4.24$), and report writing ($M = 4.18$) Although there were no generally negative perceptions (no mean below the neutral score of 3), the only means below 4 related to the development of stress management skills ($M = 3.80$) and the students’ preferences of such assignments compared to traditional lectures ($M = 3.38$), although the higher standard deviations indicate that students had divergent views on these matters. These more negative results may be explained by the level of stress that students experienced during the assignment (refer to Figure 1).

The second part of the questionnaire gauged the students’ feelings towards the assignment (1 = extremely negative; 5 = extremely positive), as shown in Figure 1.
As can be seen from Figure 1, students generally experienced positive feelings toward the assignment. It is, however, clear that a significant percentage of students experienced stress (32.7% of students gave a score of 1 or 2, with a mean of 3.25). This feeling seems to be corroborated by the level of tension ($M = 3.60$) and discomfort ($M = 3.67$) experienced by the students, which were scored less positively than other matters.

The last part of the questionnaire gathered qualitative remarks from students. They were required to describe/summarize the assignment in one word. Forty-one of the 56 students used clearly positive words whilst only two used negative words. The other words may be interpreted as either positive or negative (challenging, competitive, difficult and intense). The words that were repeated more than once were: challenging, difficult, exciting, fantastic, fun, insightful, interesting, knowledgeable, motivating and practical. Students were also asked to write down one positive and one negative remark about the assignment. Most of the positive remarks revolved around the assignment being an eye-opener of what real-life accountancy is, like a renewed excitement in career choice, the opportunity to experience integration between disciplines, skills development and the educational/learning value. On the negative side, no less than 38 students commented that insufficient time was allocated to the assignment. Seven students also commented that the information in the case study was confusing or incomplete (which, in actual fact, is the aim of a case study and therefore not construed as negative feedback).

It is also worthy to mention that the author was concerned about the level of skill the students exhibited generally. The major concerns were that students generally did not demonstrate a clear ability to think on their feet when asked about the logic behind technical principles, as well as a lack of improvisation where specific information was not provided in the case material; for example, none of the groups used the budget they prepared as an input in calculating the ‘value in use’ of an asset (the case material did not provide a value in use and the groups, therefore, simply ignored it).

Presentation skills were also fairly poor with many students simply reading off all the detail on the slides and most groups exceeding the allocated 20 minutes. The fact that English was not their first language (the participants were African students) was also an apparent stumbling block to effective oral presentation for some students. The questions asked by the groups to the CEO were also poorly handled by some groups; they did not ask relevant questions because they either did not pick up on the ethical/governance/fraud risks or they might have been uncomfortable asking these questions to their lecturer. Some groups even forfeited the opportunity to ask any questions. Other groups were on the right track, but once given an explanation that made reasonable sense, they did not probe the CEO any further and just let the matter slide. Only a few groups approached this aspect of the assignment well. On the positive side, some groups discussed various valid issues the author did not even think of when the assignment was developed.

CONCLUSION

This paper provided an overview of relevant educational literature on some tools that may be used for professional skills development in accountancy students and, through questionnaire responses supplemented by the author’s own observations, explored the experiences of a group of previously disadvantaged South African CA students of the introduction of an integrated accountancy simulation assignment. The purpose of the paper was to investigate whether accounting students perceive participation in such an assignment as valuable in the enhancement of their professional skills. Although the study was carried out in a South African context, the results are relevant for accounting educators worldwide as it is clear from the literature that the skills development problem is a global one.

The study found a generally positive response to the introduction of the assignment and especially in relation to the development of professional skills, and, as such, the hypothesis was proven to be true in the context of this study. The author experienced the project as a great learning opportunity for students and, at the same time, the students had great fun in the process, even though some of them appeared quite nervous during the presentations and the majority of them reported serious time constraints as mentioned, which implies that insufficient time was allocated to the completion of the assignment. It can therefore be concluded that using more assignments of a similar nature may be beneficial to skills development endeavors of accounting educators, but it is suggested that the time allowed for completion and additional support be carefully considered to prevent negative experiences which may impair the level of learning that takes place.
The paper supplemented the scarce literature on the usage of inter-disciplinary integrated assignments, and the case material and simulation ideas can be used or adapted by other accounting educators to develop and assess professional skills. This was the first attempt at the institution to integrate all the main accountancy disciplines in one assignment at undergraduate level; therefore, the merit of this study was obvious to the institution. The practical implication of the study is that more assignments like this are needed as in the end, it was clear that many students did not possess over the level of skill to be expected from a third-year CA student.

The contribution of the paper is also the production of an actual case study and business simulation assignment that can be used or adapted by accounting educators to develop and assess professional skills, which is obviously of practical value. On a broader scale, the value of this paper is also that it provides evidence that educators are seeking to innovate and offer their students opportunities to actively engage with media and material, their peers and lecturers so that they may learn and develop the skills necessary for the workplace. The investigation of the impact the chosen approach had on students’ attitudes, experiences and learning is critical to fostering self-reflection in accounting education and, hopefully, others who read articles like this will be encouraged to reflect on their own approaches to teaching and learning.

Like all other research studies, this one had limitations and the results should be interpreted in this context. The most obvious limitations relate to a lack of generalizability based on the selection of a particular group of student participants (as a case study) and the general disadvantages of using a questionnaire with fixed responses. It is recommended that future studies be conducted on a broader scope and also investigate student experiences using more interpretive approaches, like interviews and focus groups. Also, the study measured skills development through the perceptions of participating students as it is challenging to objectively measure immediate skills improvement. Further research may seek to investigate whether the positive perceptions found in this and other studies correlate with actual skills improvement.

Regardless of its limitations, this paper provides some evidence of the skills development value of innovative ideas in the accounting classroom. Highly skilled professionals are one of the basic building blocks of a prosperous economy and, thus, the merit of research endeavoring to find solutions to the skills development conundrum is obvious.

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APPENDIX

The Integrated Case Study and Simulation Assignment

Below is the actual case given to the students. Some of the words, phrases, and hidden ratios that should have triggered concerns of potential poor governance, ethics, fraud or similar risks are indicated in bold text for illustrative purposes (i.e., the text was not bolded in the version given to students):

You are a group of financial advisors employed by Price Young and Touche (‘PYT’), a professional services firm, and just received the following email from Mr van der Merwe1, the Chief Executive Officer of African Manufacturers (Pty) Ltd (‘AMPL’), which is one of your bigger clients.

One person in your group also serves on the Audit Committee of AMPL and another person serves on the Social and Ethics Committee. The other committee members are made up of independent non-executive directors.

You are extensively involved with giving advice to the company as it currently does not employ a financial manager due to a disagreement between Mr van der Merwe and the previous financial manager about three years ago, which led to the resignation of the financial manager. Since then, Mr van der Merwe has been the only senior employee with day-to-day involvement in the finances of the company as the other directors are mainly involved with the operational side of the business. Your firm also holds 10% of the ordinary shares in the company.

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1 A common South African last name.
Email from Mr van der Merwe:

Dear Financial Advisors, PYT

Wow, it has been a long time since I last spoke to you. I’ve been enjoying my new Ferrari too much. I can tell you it looks fantastic next to my Lamborghini!

As you know it is almost time for the audit of our 30 June 2011 financial statements and there is still a lot that needs to be done and I was hoping that you could provide technical assistance in this regard. I also need your advice on a few business-related matters. Can we discuss my questions below at a meeting somewhere in October? I am available from 10 October and will arrange a specific date and time with you later.

Note: Where I refer to a specific year in my email, it is the financial year as opposed to the calendar year.

Diversification Into Electronic Devices Industry

As you know, the Apple company in the USA made an offer to purchase 40% of the shares in AMPL in exchange for the right for AMPL to produce Apple products because the Apple company wanted to expand their manufacturing operations to South Africa with its cheaper labor and raw materials. Our shareholders eventually accepted the offer because all other industries we have invested in have been performing very poorly in recent years.

On 1 July, 2010, we invested in a new Apple iPhone production plant consisting of various items of machinery (with an original production capacity of 500,000 units per annum) at a total cost of R230 million. An iPhone is a cell phone/Mp3 music player combination, if you didn’t know. We should be able to use the plant for about 6 years before technological obsolescence would render it useless for our purposes (although we will probably be able to sell it to another company for about R2 million at that stage based on today’s prices, which is a bummer seeing as the plant was worth about R20 million on 30 June, 2011).

We are financing the plant in the exact same way as all our other sources of debt financing; i.e., a loan incurred on 1 July, 2010 from ABSA Bank, fixed at the South African prime interest rate + 100 basis points (which was market-related throughout the year and still is). The first of the equal annual repayments was made on 30 June, 2011 and the last one will be made at the end of the plant’s useful life. We do not have any issued preference shares and do not intend on ever issuing preference shares.

We are exporting the iPhones to the USA at a rand equivalent price based on a 17.5% mark-up (ex VAT) on manufacturing cost.

Manufacturing costs and operating expenses (excluding depreciation) amounted to R1 350 per unit in 2011, made up as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard drives</td>
<td>500</td>
</tr>
<tr>
<td>Other electronic components</td>
<td>320</td>
</tr>
<tr>
<td>Plastics</td>
<td>180</td>
</tr>
<tr>
<td>Direct labor</td>
<td>200</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>150</td>
</tr>
</tbody>
</table>

In 2011, we produced and sold 55,000 iPhones based on demand, but we do foresee a growth in demand from 2012 (I am not sure what a suitable growth rate for Apple iPhones would be; perhaps you can research this? I’ve seen phenomenal sales figures on the internet for the last few years).
From 2012, we are making use of my wife’s electronics company to supply the hard drives in the iPhones. The hard drives are of a high quality and cost 20% more than what we paid the previous supplier in 2011. We already concluded a contract with the supplier and agreed that no inflationary increases will be imposed up until 2014.

Due to the company’s increased use of temporary employees, we expect that direct labor cost will increase by about 15% in 2012 and after that, it will be linked to inflationary increases. Temporary labor in this industry is more expensive, but it is much more flexible because we pay them outside of the payroll system and can easily replace workers who are not performing or we can appoint new workers through the employment agency.

Due to my excellent relationship with suppliers, I managed to negotiate a 10% discount on purchases of plastics that will kick in from 2013.

All costs will go up with inflation except where mentioned otherwise.

I am sad to inform you that the new plant was struck by lightning toward the end of June 2011 and our on-site engineer is of the opinion that total annual production capacity will be down by about 200,000 units from 2012 onwards due to irreparable damage caused.

As a result of the above diversification, we no longer had the need for an old item of manufacturing plant (consisting of machinery) that was purchased for R11 million on 1 July, 2008. It was sold for R8 million on 30 April, 2011 to one of our customers. This was an extremely good deal for us because the plant only had a 3-year remaining useful life at the time of sale.

Note: All amounts given above include VAT.

Company Performance

On 30 June, 2011, the Board declared dividends of R8.2 million in total for the 2 million issued shares, which I regard as a fair return compared to the share price of R128.80 per share at that stage (we had a professional valuer do a valuation of our ordinary shares at the time, and he also said that the market value of our debt closely approximates the accounting book value). We expect that increased demand in iPhones will cause total earnings (together with other industries) to grow at least twice as fast as the expected South African GDP growth rate (thank goodness the recession is over!).

I always wondered how the new plant will affect the valuation of the company. I want to increase my existing shareholding in the company and was wondering how the company’s share price might perform in future.

I have to confess that I just don’t know enough about IFRS to know how the financials will change when the effect of the new plant is incorporated. I therefore present you with the draft and summarized key management accounts for 2011, excluding the effect of the new plant (and its financing) and also excluding taxation. All amounts are stated at accounting book values. Please tell me what you think!

<table>
<thead>
<tr>
<th></th>
<th>Rm 2011 Actual</th>
<th>Rm 2011 Budget</th>
<th>Rm 2010 Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>375</td>
<td>390</td>
<td>410</td>
</tr>
<tr>
<td>Cost of sales</td>
<td>275</td>
<td>270</td>
<td>280</td>
</tr>
<tr>
<td>Materials</td>
<td>130</td>
<td>136</td>
<td>140</td>
</tr>
<tr>
<td><strong>Labor</strong></td>
<td><strong>125</strong></td>
<td><strong>105</strong></td>
<td><strong>110</strong></td>
</tr>
<tr>
<td>Overheads</td>
<td>20</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>25</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td><strong>Salaries and bonuses</strong></td>
<td><strong>32</strong></td>
<td><strong>24</strong></td>
<td><strong>22</strong></td>
</tr>
<tr>
<td>Non-current assets</td>
<td>502</td>
<td>N/A</td>
<td>462</td>
</tr>
<tr>
<td>Current assets</td>
<td>44</td>
<td>N/A</td>
<td>54</td>
</tr>
<tr>
<td>Non-current liabilities</td>
<td>287</td>
<td>N/A</td>
<td>301</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>102</td>
<td>N/A</td>
<td>81</td>
</tr>
</tbody>
</table>
I know sales are down, but I’m not worried because the customers are very loyal to the company and will keep on supporting the business for as long as I stay CEO.

Obviously, we foresee a phenomenal increase in company performance for the next few years following the acquisition of the right to produce Apple iPhones.

In Conclusion

I am leaving for Mauritius tomorrow for my holiday. I am taking my whole family with me (it’s nice to be the big boss of a large company, huh?!). I won’t be back before the date of our meeting, so you won’t be able to reach me telephonically or by e-mail. However, you can post questions to me on my blog on [course website] and I will respond to them in between relaxing on the beach and enjoying cocktails in the bars.

I’m not looking forward to the audit when I return. I just want it over and done with. The auditors always hassle me about the fact that I am the sole check signatory and EFT approver. Surely, they must understand that one cannot trust any other employee with such an important responsibility! As you know, we are a bit short on senior staff at the moment. Hopefully, if we are well prepared for the audit, it will go quickly and smoothly and the auditors can get out of my hair, ha ha!

Please also address the tax consequences of everything to give me some advice in this regard. SARS3 and I are not best buddies due to a ‘disagreement’ we had regarding my personal tax return last year.

Where I have not provided you with specific information, you may make any assumptions you deem relevant, but try to be as realistic as possible given the industry and current market indicators.

Speak to you soon!

Regards,
Mr van der Merwe

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3 South African Revenue Service (tax authority)
Required

(a) Use Microsoft Excel to prepare an annual budget in respect of the new iPhone manufacturing plant from 2012 onwards. Your spreadsheet model should contain a list of assumptions (inputs) that Mr van der Merwe may edit if he wishes to evaluate the effect that changes in assumptions will have on forecast profitability. You may utilize any of Excel’s functionality to provide useful information for Mr van der Merwe in respect of the budget you prepared.

(b) Write a formal report addressed to Mr van der Merwe (maximum 3,000 words) which contains the following:

1. A business risk assessment of African Manufacturers (Pty) Ltd that they can use as an input in the development of the company’s business strategy.
3. Calculation and discussion of the cost of capital.
4. A discussion of the external accounting implications (in terms of IFRS) of the new plant (not the consequences of production and sales) and the resulting calculation of the effects on the financial statements for the year ended 30 June, 2011 only.
5. A discussion and calculation of the income tax implications of the sale of the old plant.
6. A list of the main audit procedures the auditors will likely perform in respect of the new plant (PPE) for the year ended 30 June, 2011 (to allow Mr van der Merwe to prepare for the audit).
7. Analyze and interpret the company performance based on the information given under the heading ‘company performance’ in Mr van der Merwe’s email.

(Note: you may also submit any number of supporting calculations/schedules (e.g. in Excel) if you want and don’t worry about the number of extra words.)

(c) Prepare a 20-minute presentation where you will present the highlights of your findings in (a) and (b) above to Mr van der Merwe during your meeting with him.

(Note: You may use Microsoft PowerPoint for this purpose and every team member must participate in the presentation, e.g. team members may take turns to present different sections of the presentation).

(d) Prepare a list of questions you would like to ask Mr van der Merwe regarding any possible concerns you may have based on the given information and your analysis under (b)(7). During your meeting with him, you will be given three minutes to ask these questions and, based on his response, you then have to write a report of a maximum of 500 words addressed to any/all of the board committees (refer to top of first page).

Timing

Please e-mail your spreadsheet model (part (a)) and typed report (part (b)) to [email address] any time on/before [date]. Clearly indicate the student numbers of all team members. You do not need to submit a hard copy.

The meeting with Mr van der Merwe (and your presentation, part (c)) will occur on [date].

The report in terms of part (d) should be completed after the meeting and must also be e-mailed to the address stated above by [date] (500 words).

Important Notes

- This assignment is integrated across all modules and you may/must utilize principles from all modules covered during the 3-year CA degree course.
- You have to take all tax implications into account in every part of what is required.
• Please state and motivate (e.g. with reference to adequate sources on the internet) your assumptions clearly throughout your report.
• Tip: Delegating different sections of the assignment to different team members will reduce the work burden, as long as all team members are satisfied with the final product. However, all parts of what is required are inter-related and each section may use inputs from any other section(s).

Assessment Criteria

Marks Awarded By Lecturer:

- Technical and mathematical accuracy of discussions, calculations and conclusions 20
- Effective use of information technology 10
- Presentation and oral communication skills (part (c)) 10
- Formal report writing skills and language usage 10
- Evidence of research (for example market indicators and knowledge of the industry) 5
- Depth and breadth of understanding and linking theory with practice 8
- Completeness (addressing all matters evident from the case study) 9
- Relevance of discussions, calculations, findings and conclusions 8
- Structure, sequencing and presentation 5

Marks Awarded By Other Team Members:

- Teamwork: individual student’s contribution and performance as evaluated by other team members 15

TOTAL 100

(Note: A suggested solution template is also available from the author for any party that may be interested.)

Planning Material Not Seen By Students

Q&A Role Play Responses

Role Play Attitude

- Cloud the issue by referring to unrelated facts.
- Put the blame on somebody else without being too defensive.
- First try to be more evasive and if students keep on asking and you are cornered, confess a little bit more; but never let it sound like you are doing something wrong and never blatantly confess to the serious things.
- “It’s just business.”
- “But everybody does it.”
- To put an end to the discussion of a particular matter, use phrases like:
  o “That’s your opinion.”
  o “Well, I have nothing more to say/I said what I had to say.”
  o “I have no further comments/answers for you./That’s just the way it is.”
  o “Let’s not waste time discussing this trivial matter further.”
  o “That question is not even worth a response./I’m not even going to dignify your question with a response.”
  o “Well, I wasn’t aware of that requirement. Now I know… let’s move on.”
Planned Responses

<table>
<thead>
<tr>
<th>Possible Issues Students Could Raise</th>
<th>Possible Responses</th>
</tr>
</thead>
</table>
| Disagreement between Mr van der Merwe and the previous financial manager about three years ago, which led to the resignation of the financial manager. What was the disagreement? | • Our personalities clashed.  
• We did not have the same political views.  
• I had bigger aspirations for the company and he didn’t see the purpose of bending the rules just a little bit to get there. |
| Mr van der Merwe is the only senior employee with day-to-day involvement in the finances of the company (lack of segregation of duties). | • I am more than competent in running the business and believe I am doing a good job as the company is profitable and my role in securing the iPhone export contract was fundamental.  
• I would never do something to cause harm to the company!  
• OK, we need more people, but we haven’t yet managed to find a new financial manager suitable for the job. We need a visionary. |
| Lavish lifestyle: Ferrari, Lamborghini, Mauritius holiday. | • I don’t believe I am earning more than other CEOs of companies this size.  
• It’s my money and I work hard for it; I can do with it what I want. |
| From 2012, the company is making use of Mr van der Merwe’s wife’s electronics company to supply the hard drives in the iPhones. The hard drives cost 20% more than what the company paid the previous supplier in 2011. | • It is just coincidence that my wife’s company was the most suitable supplier.  
• The new hard drives are of a higher quality and therefore the price increase is justified.  
• No inflationary increases will be imposed up until 2014, so we will even save a lot over the longer term.  
• No, I haven’t disclosed my interest in the contract to the other board members; I’m sure they know anyway and nobody appeared to have a problem with it.  
• My wife is very strict with her money; she won’t give me a cent! |
| Company’s increased use of temporary employees. Pay temporary employees outside of the payroll system. Ratio analysis: increased labor costs. (All these are indicative of a fraud risk as Mr van der Merwe may be creating fictional temporary employees and pay the amounts to himself outside the payroll system because he is the sole check signatory and his lavish lifestyle is probably not justified) | • Temporary labor in this industry is more expensive, but it is much more flexible because we can easily replace workers who are not performing or appoint new workers through the employment agency.  
• It is common for any business to use temporary employees.  
• I would never defraud the company! I also have something to lose because I’m a shareholder.  
• No, nobody else approves the payments. |
| Ratio analysis: increased salaries & bonuses (negative effect on profitability) (Fiduciary risk as Mr van der Merwe could be paying/influence the payment of excessive bonuses to himself) | • But the company is still profitable, so what’s the problem?  
• Revenue is down due to poor performance of other industries and this is the main reason for decreased profitability.  
• We foresee a phenomenal increase in company performance for the next few years following the acquisition of the right to produce Apple iPhones.  
• The spike in labor costs is only temporary.  
• The amount of my salary & bonus is confidential, but I can assure you it is market-related for a CEO of this type and size of company.  
• A special resolution by the shareholders approved the basis of remuneration for all directors. No, not the actual amounts, but the basis on which the bonuses are calculated as per new Companies Act requirements.  
• No the other directors or board committees are not involved in authorizing my bonus because the shareholders already authorized the basis. |
| **Mr van der Merwe is the sole check signatory and EFT approver. What about the other directors; why are they not also check signatories?** | • We are short on senior staff and don’t have a financial manager at the moment.  
• Surely you must understand that one cannot trust just any employee with such an important responsibility!  
• Other directors are too busy and they don’t have a background in finance. |
|---|---|
| **Mr van der Merwe’s apparent close relationship with both suppliers and customers (could receive kick-backs, etc.)** | • I have been the CEO for a long time and have built up good relationships with the customers and suppliers, but I can assure you they are strictly professional.  
• I am loyal to them and they are loyal to me; one hand washes the other…  
• I would never defraud the company! |
| **Mr van der Merwe’s existing shareholding in the company (10% as per forum on blog)** | • It is very common for directors to hold shares in their companies and this is only a small percentage.  
• No, it wasn’t approved by special resolution in terms of the Companies Act requirements because I bought these shares before the new Act became effective. |
| **Mr van der Merwe does not know a lot about IFRS (and perhaps tax) – lack of competence** | • That’s why I have you guys to give me advice. |
| **Whole family going to Mauritius on company’s expense? Declared fringe benefit to SARS?** | • I work very hard for this company; they owe me!  
• The cost of this holiday was small change for the company.  
• My personal tax affairs are of no interest to you or the company. |
| **Negative attitude towards audit/auditors.** | • Everybody dislikes auditors; they are a nuisance and we tolerate them only because of the legal audit requirement. You can ask anybody; they will agree with me.  
• What the auditors don’t pick up won’t hurt them. |
| **Negative attitude toward SARS; what exactly was the ‘disagreement’ Mr van der Merwe had with SARS regarding his personal tax return?** | • My personal tax affairs are of no interest to you or the company. |

**Examples Of Technical Questions The CEO May Ask The Groups During Their Presentations**

- “What is this ‘deferred tax’ you’re talking about; is tax not just tax?”
- “What do you mean with ‘discounting to present value’?”
- “What is a recoupment and why does SARS tax me on it?”
- “Why is residual value deducted to calculate depreciation?”
- “Why didn’t you choose the revaluation model for the plant? Would it be appropriate to use the revaluation model for the plant if you had fair value information available?”