An analysis of the perceived benefits of a case study-based competition in financial management

R van Hoepen

12581984

Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Magister Commercii* in Management Accountancy at the Potchefstroom Campus of the North-West University

Supervisor: Prof M Oberholzer

May 2015

ABSTRACT

Students from 24 participating regions take part in teams of four in the CIMA (Chartered Institute of Management Accountants) GBC (Global Business Challenge) annually. The GBC is in the form of a business competition which is based on a case study of a real company. The participants receive the case study on which they should submit a written report. Teams are shortlisted based on the reports, and the shortlisted teams have to prepare a presentation to a panel of judges.

This study explores whether participation in the GBC had any benefits for the participants in terms of exposure to various skills and the development of those skills. The skills included: technical skills and competencies, skills in roles of an accountant, soft skills, managerial accounting skills, financial management skills, strategic analysis skills, subject exploration, learning behaviour, practical application, and personal experience.

A questionnaire was given to participants whose teams managed to compete in the global final of the GBC 2013 that was held in South Africa. Questions were formulated to address exposure to and development of the abovementioned skills, and participants had to complete the questionnaire individually.

Relevant statistical analyses were done on the data collected in the questionnaire. These statistical analyses included a confirmatory factor analysis, calculation of the Cronbach alpha coefficients, descriptive statistics for the total group, independent t-tests for comparisons between two variables, ANOVAs (analysis of variances) for comparisons between more than two variables and Tukey's post-hoc tests.

Descriptive statistics for the entire group of participants are discussed, as well as comparisons made between various sub-classifications. The sub-classifications included a comparison between male and female participants, participants from different

regions, top six shortlisted teams and teams who were not shortlisted, and participants whose mother tongue is English and those whose mother tongue is another language.

The findings indicated that the students definitely perceived that they have been exposed to the mentioned skills as a result of taking part in the GBC. They also indicated that they are of the opinion that participation in the GBC enhanced those skills. The qualitative remarks were mainly positive, and indicated that the students enjoyed participation in the GBC.

The study concludes with recommendations to the core audience of future GBC participants, academic mentors and future students attempting the final CIMA examinations, which includes a framework of the most important skills. A recommendation is also made to the peripheral audience of CIMA and financial management lecturers.

KEYWORDS: case study, competition, managerial accounting skills, financial management skills, strategic analysis skills, soft skills

ACKNOWLEDGEMENTS

First and foremost I would like to thank my study leader, Professor Merwe Oberholzer. Thank you, Merwe, for being so much more than merely a study leader. You are a mentor to me in all aspects of being an academic. This mini-dissertation in its entirety is dedicated to you as acknowledgement of all the hours you put in to review my work and keep me motivated, as well as all the effort and time you put into various colleagues' development as academics.

To Nico van Hoepen, my best friend and almost husband, thank you! You are the calm place I can always come home to, and you make the best Rooibos tea. You are the love of my life!

I would like to extend my gratitude to my parents (André and Elsabé Louwrens) and grandmother (Ramona Verburgh) for their constant support and motivation, as well as to other family members and friends who inspire me.

I extend a final word of appreciation to Wilma Breytenbach and Marike Cockeran for their help with the statistical analysis, as well as Cecile van Zyl for the language editing.

Soli Deo Gloria!!

Table of contents

LIST OF TABLES AND FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

ACMA	Associate Chartered Management Accountant
ANOVA	Analysis of variance
CIMA	Chartered Institute of Management Accountants
d-values	Effect sizes
GBC	Global Business Challenge
IMF	International Monetary Fund
MSA	Measure of sample adequacy
N	Number of respondents
p-values	Statistical significance
PESTEL	Political, Economic, Social, Technological, Environmental, Legal
SAS	Statistical Analysis System
SWOT	Strengths, Weaknesses, Opportunities, Threats
t-test	Statistical test of comparing two means
UNDP	United Nations Development Program
WB	World Bank

CERTIFICATE OF LANGUAGE PRACTITIONER

Cecile van Zyl BA (PU for CHE); BA honours (PU for CHE); MA (NWU)
Language Practitioner
Cecile.vanzyl@nwu.ac.za
072 389 3450

To whom it may concern

RE: Language editing of master's dissertation (**An analysis of the perceived benefits of a case study-based competition in financial management)**

I hereby certify that I conducted the language editing of the abovementioned master's dissertation by Ms Rona Louwrens (student number: 12581984)

Please feel free to contact me should you have any queries.

Kind regards

Cecile van Zyl
Language practitioner

CHAPTER 1 – INTRODUCTION

1.1 Overview

1.1.1 Introduction

The Chartered Institute of Management Accountants (CIMA) is currently the world's largest professional body of management accountants, and one of their aims is to prepare people for a career in business (CIMA, 2012b). CIMA launched the CIMA Global Business Challenge (GBC) in 2009, and over five years it has grown from eight participating countries to 24. According to CIMA (2012a), by taking part in the CIMA GBC, students from all over the world get an opportunity to experience what being a business leader is like.

According to CIMA (2011), the GBC will enhance students' development as it allows them to gain practical business experience working on a case study that is based on a real company. Students will also enhance their career development by meeting potential employers and networking with the judges.

The importance of this study is to gain an understanding of the real benefits to students taking part in the GBC, to identify the skills that are developed or improved as a result of the GBC. It will also help future students attempting the competition with identifying the skills needed to successfully take part in the GBC.

By being aware of the crucial skills needed to be successful, a team can be selected that already has some of that skills. The GBC is in the same format as CIMA's final examination, as will be discussed later in this chapter, and future students attempting the examination would therefore also benefit from the outcome of this study. The core audience interested in the study will firstly be future competition participants and academic mentors, and secondly future students attempting the final CIMA examinations.

The peripheral audience will be CIMA and other financial management lecturers. CIMA will be interested in the outcome of this research, as they are in charge of organising this competition. The benefit to the financial management lecturers will be that the case study (or a part of the case study) can be used in lectures if it proves to enhance certain skills in students.

1.1.2 Background

The format of the GBC is based on a previous test of professional competence case study. The test of professional competence is the final examination to be written on their way to qualifying as an Associate Chartered Management Accountant (ACMA), and takes the form of a case study based on an actual company (BPP, 2011:4). The case study is divided into pre-seen material and unseen material. The pre-seen material consists of background information on the company, financial statements and other relevant data regarding the company. This is available a few months before the examination to allow the students to get an understanding of the company they are dealing with, and do some industry research. The unseen material is handed out on the day of the examination, and contains certain issues faced by the company.

In the final examination, students are required to write a report to the board of directors of the company, in which they prioritise, analyse and discuss the issues. For each issue, they need to list at least three possible alternatives to address the issue, make a recommendation based on the alternatives, and motivate the recommendation. They are also required to identify at least four ethical issues from the scenario, discuss the ethical issues, and recommend an appropriate course of action to management (BPP, 2011:13-14). In appendices to the report, the students are required to do a financial analysis and a strategic analysis of the company, including a SWOT analysis, Porter's Five Forces, PESTEL, Mendelow's Stakeholder Mapping and Ansoff's Growth Vector Matrix.

The CIMA GBC, being based on a previous test of professional competence, requires a report from the students in the same format. The difference is that the students work in teams of four, with an academic mentor. The case study (pre-seen material) and scenario with the issues (unseen material) are available to the team upon registration. Teams usually have a few months to work on the report before it is submitted to CIMA. After the submission date, the reports are evaluated by CIMA, and the teams who wrote the four best reports are chosen to present their reports before a panel of judges at the national final of their country.

The winning team from each of the countries participate against each other at a global final in order to determine which team would be the CIMA GBC global champions. The global final is also in the format of a presentation to a panel of judges, with a question-and-answer session after the presentation. The judges deliberate after all the teams' presentations and shortlist six teams, who receive additional material to prepare. Those teams do a presentation based on the additional material in order to compete for the title of the 2013 CIMA GBC champions.

The GBC global final was held in South Africa in 2013, and this presented the perfect opportunity to get the views of international students on the perceived benefits for them of taking part in the GBC.

In the 2013 global final, there were teams competing from the following 24 countries: Australia, Bangladesh, China, Ghana, Hong Kong SAR, India, Indonesia, Ireland, Malaysia, the Middle East, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Poland, Russia, Singapore, South Africa, Sri Lanka, Thailand, the United Kingdom, Vietnam and Zambia. The six shortlisted teams that competed in the final were: China, India, Indonesia, Poland, Russia and Singapore.

1.1.3 Literature Review

Previous research has been done on the value of case studies in the development of various skills and knowledge. A study was done on the effects that case studies have on the ethical perceptions of finance students. The students were exposed to a combination of a case study and class discussions, and their perceptions of business ethics before and after were compared (Cagle & Baucus, 2006:214). According to Cagle and Baucus (2006:221), the study found that there was an increase in the students' ethical standards and an awareness of what is ethical. They also concluded that the use of case study methods in teaching ethics is supported by the results of this research.

Another study was conducted on the students' perceptions of the usefulness of case studies in finance and accounting-related skills. This study allowed students to choose between the traditional teaching method and a case study-based approach, where they had to prepare two cases per week (Weil *et al*., 2001:128). The study found that the case studies enhanced students' learning, and listed exposing students to real-world complexity as one of the major benefits (Weil *et al*., 2001:138).

Russel *et al*. (2008:124) conducted research on business plan competitions in which prizes are offered, and they specifically focused on the business plan competitions in terms of tertiary institutions. Business plan competitions, as with the GBC, offer various learning opportunities, for example teamwork and networking. The research concluded that entrepreneurial education was enhanced by the business plan competition (Russel *et al*., 2008:136).

The value of using case studies in an undergraduate psychology course was evaluated by Razzouk (2011:4), where he integrated real-world case studies into the course. He found that the students exposed to the case studies scored higher in examinations and had a more positive attitude towards the course than students who were not exposed to case studies (Razzouk, 2011:96).

Although it seems that very little research has been done thus far regarding the use of case studies in financial management, Wolmarans (2006:353) made use of business simulations in financial management courses. The business simulation was done on a laptop, with a printer connected to print the results (Wolmarans, 2006:353). The study found that the students regarded the simulation as a positive learning experience.

As can be seen from the literature, case studies have been well received by both students and lecturers in various other disciplines. This implies that students' learning experience was enhanced or that they perceived learning by means of case studies as a positive learning experience.

A further discussion of the literature reviewed is included in Chapter 2.

1.2 Problem statement

Based on the research thus far, there is definitely a benefit for students in learning concepts in different fields by means of a case study and for lecturers teaching by means of case studies. It seems that very little research has been done thus far on the value of case studies in financial management, and none thus far on the value of the GBC for students. The gap identified in the literature is that it is unknown what the value in the use of case studies in financial management is, and specifically how the GBC can benefit the students who decide to take part.

The problem of the study can be aggregated in the following research question: Do the financial management case study-based GBC add value for the students taking part, and if it does, what is that value or benefits gained?

This study's focus is to determine whether the value to the students is more than purely academic. The question arises whether the students gain experience of teamwork, interpersonal communication, oral and written communication, using technology, etc. additional to any academic benefits.

By determining the value of taking part in the GBC, this study aims to also identify the critical skills needed to be successful in the competition. This can then, in turn, serve as guideline to future students of what skills are needed in order to be successful in the GBC.

As part of the problem statement formulated above, further comparisons were also done in terms of the demographics of the population. These comparisons are discussed in detail in Chapter 3, which deals with the research methodology and Chapter 4, which deals with the empirical study.

CIMA has indicated that they will be very interested in the outcome of this research, and would like to use it in the future structuring and marketing of the GBC (Kova, 2012).

1.3 Objectives

In order to answer the research question, the main objective of this study is to determine whether there were any benefits, academic or otherwise, for the students in taking part in a financial management case study-based competition. (The measuring of the perceived benefits will be discussed together with the research methodology).

This will be supported by the following secondary objectives:

- An analysis of the literature on the value of case studies.
- The identification of the skills developed by taking part in the competition.
- The development of a framework to assist future students and academic mentors who would like to take part in the GBC.
- Creating an awareness of the skills on which to focus when attempting the final CIMA examinations.

1.4 Research methodology

In order to achieve the objectives mentioned above, the study consists of a literature review and an empirical study. The literature review focused on available literature regarding the benefits of using case studies in teaching and developing various other skills. The literature review also touched on financial management as a subject discipline within the broader definition of accounting and the subjects taught in an accounting qualification.

In addition to that, it was important to determine whether the perceived benefits of using case studies are higher than the cost associated with the usage of those case studies. Although a full cost-benefit analysis can be done in future studies, for the purpose of this study, the literature was consulted in terms of the perceptions of other researchers regarding the costs associated with using case studies. The literature review also investigated the possibility that case studies might not have added value in certain cases.

The articles mention specific skills that were developed by taking part in case study-based competitions or case study discussions in class. These skills were identified and measured against the results obtained in the empirical study.

The empirical study consisted of a questionnaire to measure the perceived skills obtained and benefits of taking part in the CIMA GBC and to what degree those skills were developed. The questionnaire (please see Annexure A) was adapted from a questionnaire used in a PhD study that measured the benefits to students and their attitude towards learning certain accounting concepts by playing a board game (Fouché, 2006:10). The adaptation of the questionnaire was done with the aid of Statistical Consultation Services at the North-West University (Potchefstroom Campus).

The first part of the questionnaire (Part A) relates to biographical information, and the rest of the questionnaire is divided into a number of parts, each measuring the

perception of the students regarding certain skills that were developed. Part B lists a number of identified skills, and asks the students to rate the extent to which they believe those skills were developed on a five point-scale. Part C focuses on subject content, and the extent to which the relevant subject content has been addressed by taking part in the GBC. Parts D and E list sentences describing the GBC, assessed by a five point-scale. The questionnaire concludes with three open-ended questions regarding the CIMA GBC.

Examples of skills included in the questionnaire are:

- Managerial accounting skills
    - Short-term decision-making, for example relevant cost
    - Cost behaviour, for example fixed, variable and mixed costs
    - Cost-volume-profit analysis and determining a break-even point
    - Performing calculations on a spread sheet
- Financial management skills
    - Capital investment appraisal, including a net present value calculation and internal rate of return
    - Financial statement analysis, both calculations and interpretations
    - Sources of finance, for example debt or equity
    - Extracting information from a given scenario
- Strategic analysis skills
    - Understanding of a company's external environment using PESTEL
    - Evaluating the competitive environment using Porter's Five Forces
    - Mapping a company's stakeholders using Mendelow's Matrix
    - Deciding on a company's strategic direction using Porter's Generic Strategies and Ansoff's Growth Vector Matrix
    - Understanding a company's strengths, weaknesses, opportunities and threats, using a SWOT analysis
- Soft skills
    - Teamwork
    - Problem-solving

- Analytical abilities
- The use of technology
- Communication skills

The above list only serves as an example of the skills included in the questionnaire. As already mentioned, there is a space on the questionnaire for the students to add other skills that they feel are of importance.

According to Mouton (2009:144), the choice of research design depends on a number of factors to consider. A mapping was done for empirical versus non-empirical studies, making use of primary or secondary data. Empirical studies were further mapped on a grid, again taking the primary and secondary data into account, and also the degree of control. This study will be an empirical study, making use of primary data and requiring low control. A survey is therefore the best suited for this type of study (Mouton, 2009:153), and in this case, the survey took the form of a questionnaire to the students who are taking part in the GBC global final.

As previously mentioned, the students entered the competition in teams of four students, and four of those teams from universities in the respective countries were selected to do the presentation in their country's national final. The teams that won the national final of each country competed in the global final. Only teams that participated in the global final were approached to complete the questionnaire, as they had the added experience of preparing and conducting the presentation on the case study at both the local and global final.

Students were asked to complete the questionnaire individually, as that would give each student's perspective on the skills obtained by and benefits of taking part in the GBC. There are currently 24 countries taking part in the CIMA GBC. The 24 teams of four students each give a total of 96 students who were approached to complete the questionnaire.

The responses from the questionnaire were analysed statistically to be able to draw conclusions whether the students gained a benefit from taking part in the competition. The Statistical Consultation Services at the North-West University (Potchefstroom Campus) assisted with the statistical analyses. The statistical analyses included a confirmatory factor analysis, calculation of the Cronbach alpha coefficients, descriptive statistics for the total group, independent t-tests for comparisons between two variables, ANOVAs (analysis of variances) for comparisons between more than two variables and Tukey's post-hoc tests.

A more detailed discussion of the methodology used is included in Chapter 3.

1.5 Value of the study

This is a first attempt to better understand the benefits of case studies within a financial management context. The better understanding of the benefits and skills obtained in this specific financial management case study will add value to both the core audience and the peripheral audience.

The core audience, which consists of the future participants, academic mentors and future students attempting the CIMA final examinations, will have a framework of the most important skills needed in order to be successful in either the GBC or the final examinations. The competition participants can start developing those skills as soon as they decide to enter the GBC, and thereby increase their chances of success in the competition. Academic mentors can choose a team that consists of individuals who might already have some of the identified skills, and in that way add value to the team.

The peripheral audience, which consists of CIMA and other financial management lecturers, will be aware of the benefits of the case study in developing the mentioned skills. CIMA can use the identified benefits in marketing the competition to prospective future participants. The value for financial management lecturers will be that, if this study proves that there is indeed a benefit to students working through this case study,

they will have an additional way of ensuring that students understand the academic content of the subject better. Future students attempting the final CIMA examinations will have a chance to work on the most important skills while studying, and also increase their chances of success in the examinations.

1.6 Possible limitations

According to Mouton (2009:153), data obtained by means of a questionnaire can be sample or context specific. In this case, it relates to the fact that students taking part in a competition such as the GBC are normally top students who are clever and hard-working, and they might provide different answers than the average or even below average students.

There is also a risk of non-response from the students, or a lack of seriousness when completing the questionnaire. This risk will be mitigated by personal contact with the students, and by explaining the aims and content of the questionnaire before completion.

Another possible limitation is the fact that the students' skills are not tested before the study, and no questionnaire will be distributed to them regarding their current level of the mentioned skills before taking part in the GBC. This limitation will be addressed as far as possible by wording the questions in a manner that clearly asks the students whether they are of the opinion that their skills mentioned in the questionnaire improved as a result of taking part in the GBC.

1.7 Chapter division

The chapter division for this study is as follows:

Chapter 1: Introduction

This chapter is an introduction to the study and provides a brief overview of the research that will be conducted. It includes a background on CIMA, the CIMA GBC and other similar competitions. It also discusses the problem statement, aims and objectives, as well as the research methodology briefly. As this chapter forms the introductory chapter of the study, the chapter division is also provided for ease of reference.

Chapter 2: Literature study

The second chapter focuses on available literature regarding this research and relevant previous research done. This chapter is mainly divided into a section on benefits of case studies and a section on skills needed in accounting graduates. These benefits and skills are related to the relevant questions in the questionnaire. The background of the literature was valuable in order to ensure that the questionnaire covered the relevant benefits and skills.

Chapter 3: Research methodology

This chapter deals with the definition of research and the different paradigms associated with research. As this research was conducted by a combination of a literature study and empirical research, this chapter discusses both methods. It provides an overview of how the literature was obtained, and how the data was acquired for the empirical research. The methods of the statistical analysis are also discussed briefly.

Chapter 4: Empirical study

The data obtained from the questionnaires are discussed in detail in this chapter, and analysed by means of the relevant statistical methods. Tables are used to present the statistical data, followed by a discussion of each of the tables. The statistical analyses included a confirmatory factor analysis, calculation of the Cronbach alpha coefficients, descriptive statistics for the total group, independent t-tests for comparisons between two variables, ANOVAs (analysis of variances) for comparisons between more than two variables and Tukey's post-hoc tests.

Chapter 5: Summary and conclusion

The study is summarised in terms of the initial objectives stated. Conclusions are also discussed, and, where appropriate, recommendations made. In addition, a framework was developed that should benefit academic mentors, future GBC participants and students attempting the final CIMA examination. This chapter also includes a discussion of the value of the study, possible limitations and potential future research.

CHAPTER 2 – LITERATURE STUDY

2.1 Overview

A review was done of available literature in order to gain a thorough understanding of previous research done, as well as to focus the research of this project to ensure that it adds value. This chapter provides an overview of the literature that was consulted. The discussion of the literature reviewed is by no means an exhaustive summary of all the relevant literature ever published on the subject. The decision was made to focus on more recent literature that could add value to the study, as well as older literature that seemed to be applicable to the goals of this study.

It is, however, still of importance to include a review of literature to focus the attention of the reader on the information that was used in adapting the questionnaire. The literature review will also flow into Chapter 3, where the compiling of the questionnaire was discussed.

The review of the literature was done with three main focus areas in mind. The first area was looking at financial management as subject discipline within the wider subject area of accounting. The second area was the benefits of case studies to students, and this included case studies in various fields outside accounting as well. The third focus area was the skills that prospective accountants would need in business, and the development of those skills. The literature in these areas was used to adapt the questionnaire to ensure that it measures the applicable benefits and skills.

As part of the literature review, the questions included in the questionnaire that relate to that specific portion of the literature are discussed. It is important to note that there are overlaps of questions that might fit with other portions of the literature as well. This is bound to happen, as the study is an integrated study with an integrated questionnaire, as well as the fact that the questionnaire was adapted from a previous questionnaire

used in a PhD study (Fouché, 2006:10). For ease of reference for the reader, the questions were included where they fit the best.

The questionnaire is included in Annexure A, directly after Chapter 5. The main portions of the questionnaire were technical skills and competencies (B1, B4, B6, B8, B13, B18), skills in roles of an accountant (B3, B7, B9, B11, B16), soft skills (B2, B5, B10, B12, B14, B15, B17, B19), managerial accounting skills (C1, C4, C5, C10), financial management skills (C2, C7, C8, C12), strategic analysis skills (C3, C6, C9, C11, C13), subject exploration (D5, D6, D7, D11, D12), learning behaviour (D1, D2, D3, D4), practical application (D8, D9, D10), and personal experience (E1, E2, E3, E4, E5).

2.2 Financial management as subject discipline

2.2.1 Introduction to financial management

Although the act of financial management has been around for hundreds of years, financial management as a subject discipline evolved as a result of the need for managers to take various financial decisions on a daily basis. With the increasing pressure on managers to decide which assets to invest in and how that assets should be financed a subject discipline that offered guidance and decision making models proved to be of value (Brigham & Houston, 2011:5). Financial management also filled the knowledge and skills gap left by traditional accounting techniques when those techniques progressively focussed more on external reporting and complying with financial reporting standards (Brigham & Ehrhardt, 2013:3).

Recent events in the global markets, for example the sub-prime crisis, the global financial crisis and scandals of large multinational companies that fail, have placed the focus on the importance of financial management as subject area (Brigham & Ehrhardt, 2013:3). Correia, *et al.* (2011:5) adds to that by emphasising the changed business environment in terms of globalisation, increased competition and greater public scrutiny.

As a result of the abovementioned factors, the need for responsible financial management is evident. Moyer, *et al*. (2005: 3) drew the connecting line between the need for responsible financial management and supplying the managers with the skills needed. Although there are various short courses on financial management available in the market, the argument can definitely be made for developing the needed skills at university level.

2.2.2 Teaching financial management

Historically financial management has been taught from textbooks, in a manner which required students to study the concepts without necessarily understanding the underlying principles. Wynn-Williams (2008:113) goes as far as calling the way in which accounting has been taught in the past sterile and artificial.

Various articles and reports have called for a change in the teaching approaches followed in accounting degrees (Hall, *et al*., 2004:489). Van der Merwe (2013: 1139) also noted that current ways of teaching disciplines within the wider subject area of accounting, which would include financial management, do not sufficiently prepare students for the workplace.

Lecturers became increasingly more aware of the need to find creative ways to teach accounting-related subjects, as well as to integrate various disciplines within accounting qualifications (Van der Merwe, 2013:1137). Washbush and Gosen (2001:283) also commented on the fact that instructors are making use of business simulations without knowing if the simulation contributes to learning.

Lecturers often find it challenging to incorporate alternative ways of teaching into business-related courses presented at universities. According to Dwerryhouse (2001:153) they are however aware of the benefits that can be obtained by making use of simulations, case studies and business games. Wolmarans (2005:121) was also of the opinion that financial management lecturers do not make use of simulations often

enough, especially keeping in mind the value that can be added by making use of alternative teaching approaches.

2.3 Benefits of case studies

2.3.1 Background to using case studies

According to the BusinessDictionary.com (2014), a case study is defined as follows: “Documented study of a specific real-life situation or imagined scenario, used as a training tool in business schools and firms”. For the purpose of this study, the stated definition of a case study was applied in a broad sense to the literature review. It will be noted that case studies, business simulations, action-oriented learning, etc. are all included in the discussion regarding the use of case studies.

Fouché (2006:15) discussed the role that a facilitator or lecturer should play in case studies or simulations in great detail, and lists various attributes that he deems to be of importance. These include factors such as enthusiasm, frequent feedback, fairness, subject knowledge, etc. The overarching attributes that are important from all of the factors listed seem to be the fact that the facilitator or lecturer should truly be a facilitator of the process and that the focus should be on effective learning.

Even though the teachers or lecturers were not as actively involved in the GBC as the students, they were part of the entire process and could play a defining role in a team’s success. If the case study is used in a classroom situation, the lecturer would be involved on an even greater scale. It is therefore important to look at a lecturer’s role when using case studies, as discussed in the literature.

To enable a conclusion regarding the mentor’s (lecturer’s) role in the GBC, and to determine the role that the lecturer should play in the classroom, questions B18 (effective learning) and D3 (lecturer / teacher was a facilitator) were included in the questionnaire. Please refer to Annexure A for the questionnaire.

2.3.2 Benefits of using case studies

Elias and Purcell (2004:70) found that graduates believe they are using various skills that they developed at university level in their current jobs. The development of relevant skills is therefore an important factor to keep in mind when developing courses at university level.

According to Wolmarans (2005:122), there are various possibilities in using technology-based business simulations in educational courses. He argues that the positive aspects and capabilities of technology can be used to assist students in applying previous knowledge. In his research, he also used the element of competition between teams, as he believed that this adds to the simulation of reality.

Bryant and Hunton (2000:148) agree with the fact that students should be exposed to the use of technology, as well as theoretical concepts packaged in a technological format. They are of the opinion that students learn while they are physically engaged with a concept, and technology can be used with great success to get students more involved.

As the GBC leans heavily on the participants' ability to use technology, specifically word processing programs for the report and slideshow programs for the presentation, the students would have been exposed to using technology in preparation for the GBC final examination. If this case study is used in the classroom, it would also provide the students the chance to prepare a report and a presentation using the appropriate computer programs, thereby teaching them skills that are regularly used in practice.

The abovementioned aspects translated into questions B6 (being able to use technology), C5 (performing calculations on a spread sheet) and D9 (made use of multi-media and technology). Please refer to Annexure A for the questionnaire.

The literature further stresses that a major benefit of using case studies is that it provides a holistic overview of subject content and business processes (Wolmarans, 2005:124). Lecturers often see that students fail to perceive the bigger picture if their academic content is divided into subjects. When using a case study, it would aid integration between the subjects.

Adler and Milne (1997:210) add that action-oriented learning tasks ensure that students do reach stated outcomes of certain subjects and manage to develop learning attributes that lead to continued learning. They also stress the holistic benefits of using action-oriented research in developing a wider range of skills in addition to the technical competencies.

In order to test the integration between subjects and the holistic overview, the following questions were seen as relevant: B8 (theoretical competencies over various fields), D2 (was not always subject content based, but broad-based) and D11 (helped me obtain a holistic perspective of the subject field). Please refer to Annexure A for the questionnaire.

To conclude this portion of the literature study, the reader's attention is drawn to the benefits of using case studies that were discussed in Chapter 1 under the heading of Literature Review. A short summary here would suffice to say that various authors found the implementation and usage of case studies very beneficial over various subject fields (Cagle & Baucus, 2006:214; Weil *et al.,* 2001:138; Russel *et al.*, 2008:136; Razzouk, 2011:96).

2.4 Costs and drawbacks associated with case studies

Various authors report that the costs of using case studies can be quite high in terms of infrastructure needed. Inevitably, case studies require more inputs from various parties, and can be more time consuming. Unfortunately, lecture halls are seldom equipped to handle group discussions (Adler & Milne, 1997:192).

When looking at two PhD studies conducted on the use of case studies or simulations, the conclusion was drawn that the main costs or drawbacks associated with case studies are the additional investments in terms of time needed and the infrastructure that are not geared towards group work and simulations (Razzouk, 2011; Fouché, 2006). This is confirmed by Van der Merwe (2013), and he also states that the development of his integrated case study would be of practical value in the time saved by other lecturers.

Despite the higher input required by using case studies, as well as the lack of infrastructure, it seems that the benefits of using case studies outweigh the additional input and trouble with infrastructure. All the authors mentioned in the previous portion were very positive about the use of case studies.

2.5 Skills for accountants

2.5.1 Wider focus on skills

The pressure is increasing to ensure that students obtain the relevant professional skills before entering the workplace (Gevers & Lubbe, 2013:43; Van der Merwe & Visser, 2013:44). Further to that, Andrews and Higson (2014:269) have conducted a study to determine whether university courses on business and management suitably equip students to meet the demands of the working environment. Their findings are that currently a great deal is being done, but that there is still room for expansion and improvement (Andrews & Higson, 2014:283).

Andrews and Higson (2008:419) agreed with that, and stressed the fact that technical knowledge is not enough. In their study, they found that employers are increasingly looking for graduates who display soft skills, such as business acumen and efficient communication.

Extensive research has been done on what the critical skills are, and how to develop them at university level. If the GBC case study proves to be beneficial to the students taking part, it can aid in developing skills that are seen as critical at different universities.

It was important to determine whether the students believed that the GBC exposed them to the development of the skills needed in practice, and therefore questions D6 (included practical experiences that made learning relevant and interesting, and simulated reality), D7 (it focussed on the competencies I require for my profession), D12 (took into consideration my previous knowledge and competencies), E2 (participating in the CIMA GBC broadened my view on the role of the accountant) and E3 (the CIMA GBC made it easy for me to link theory and practice) were included in the questionnaire. Please refer to Annexure A for the questionnaire.

As already mentioned, the skills needed for graduates tend to shift to a balance between technical skills and softer skills. Tucker *et al.* (2000:331) identified it as the need for training business graduates in emotional intelligence. They believe that lecturers need to find ways of incorporating those skills into business courses.

Dwerryhouse (2001:159) supports the argument, and adds that students need to be exposed to skills that they would use when running a company. They should be able to take responsibility for solving problems in an ethical and practical manner.

The following questions related to the skills mentioned in the articles discussed above: B15 (evaluation of ethical considerations within the company), B17 (having high values and respect for society) and B19 (cultural and ethnic sensitivity). Please refer to Annexure A for the questionnaire.

Ganda *et al.* (2013:45) were also of the opinion that present students do not learn accounting concepts efficiently, as they use their short-term memory instead of making use of their long-term memory for deep learning. Research conducted found that

students who are required to do independent research and study concepts on their own had a better understanding of accounting fundamentals (Ganda *et al.*, 2013:45).

This was supported by Hall *et al.* (2004:490) who explored various ways of ensuring deep learning in accounting students. The conclusion was drawn that group activities, solving of exercises within the group and hands-on experience from students facilitated deep learning within the groups of students.

Questions included in the questionnaire that related to the above were: D1 (had unstructured learning opportunities), D5 (required self-study and work in the participant's own time) and D10 (occurred in a logical manner). Please refer to Annexure A for the questionnaire.

2.5.2 Important skills for graduates

Andrews and Higson (2008:413) placed a strong emphasis on the importance of teamwork, as well as the ability to interact with fellow students. Wolmarans (2005:131) also noted that students perceived the teamwork aspect to be very positive when taking part in the business simulation.

Teamwork often exposes students to different personalities, circumstances and relationships (Washbush & Gosen, 2001:293), which simulate a business environment and simulate the roles that graduates would have to fulfil when entering the formal employment sector.

To determine whether the aspect of teamwork came to the fore in the GBC, the following questions were included in the questionnaire: B12 (effective functioning in group work (team building)), D4 (there was active participation from team members), D8 (provided the opportunity for learning from peers) and E4 (I enjoyed the social aspects of the CIMA GBC). Please refer to Annexure A for the questionnaire.

From literature consulted by Andrews and Higson (2014:272), the following skills were extracted as being important for graduates entering the workplace: Strategic thinking and ability to plan; self-management and responsibility; communication skills; coping with uncertainty; teamwork and the ability to interact with others; etc. The summary made of these skills emphasises a number of the skills previously mentioned.

The skills discussed in the previous paragraph culminated in the following questions: B1 (critical problem solving), B2 (personal attributes like motivation, self-management, etc.), B10 (being able to adapt to change), B14 (effective interpersonal communication) and E5 (I was motivated by my participation in the CIMA GBC). Please refer to Annexure A for the questionnaire.

As can be seen from the discussion regarding the required skills for accountants, the focus is less on “number crunching” and more on a holistic perspective of business and strategy. This was confirmed in research done by Shewell and De Beer (2011:50) on the finance function that is moving away from the traditional accounting function to business partnering. They came to the conclusion that the traditional technical skills are still of importance, but that strategic and business partnering is growing to greater prominence.

Dwerryhouse (2001:159) agreed with that, and added that students seldom see the holistic picture of the business environment. He is of the opinion that it is important to expose students to an environment that is bigger than their individual subject content in silos. Brozik and Zapalska (2006:132) added that the lack of entrepreneurial skills in graduates is often a cause of concern. They developed an entrepreneurial game to expose students to the improvement of those skills.

Questions B3 (being a general manager), B5 (problem solving (in terms of society’s needs)), B7 (being a global player), B9 (being an entrepreneur), B11 (being a market analyst), B16 (being a salesperson) and E1 (my interest in accounting and strategy has been enhanced by my participation in the CIMA GBC) were included to focus on the

wider perspective of the finance function. Please refer to Annexure A for the questionnaire.

Andrews and Higson (2008:413) compiled a list of important skills that graduates would need upon entering the market, and aspects regarding oral and written communication skills played an integral part in the mentioned list. This was confirmed by Van der Merwe (2014:112) in a study regarding accounting students. The students' written and oral communication skills are generally of a low standard, and it is important that ways are found to improve those skills.

The questions relating to the oral and written communication skills were: B4 (oral and written communication), B13 (analytical ability, logical argument and summarising) and C8 (extracting information from a given scenario). Please refer to Annexure A for the questionnaire.

The questions relating to the subject content (Part C) were compiled from the author's experience as mentor in the GBC, as well as discussions with fellow mentors. The author has been involved with the GBC since 2010, and has mentored teams ever since. This also facilitated multiple networking opportunities with fellow mentors from different universities.

The main reason for not consulting literature in compiling the questions regarding the subject content was that these questions relate specifically to the subject content covered in the GBC. As no previous research has been done on the benefit of taking part in the GBC, the subject content was not defined in literature.

The open-ended questions in Part E were also not taken from the literature, and only minor adaptations were made from the PhD questionnaire. The reason for that is the nature of the open-ended questions included in Part E – they deal with a student's personal experience in terms of participation in the GBC. Please refer to Annexure A for the questionnaire.

2.6 Summary

The literature highlighted definite benefits of using case studies, action-oriented learning and simulations. Various aspects where value could be added by exposing students to practical aspects were mentioned by various authors. Although the costs associated with using case studies might be high in terms of time invested and lack of infrastructure, the benefits seem to outweigh the costs. The skills that graduates need before entering the marketplace were also discussed from the literature. Those skills were related to the skills included in the questionnaire.

The main aim of this chapter was to provide an overview of relevant literature in order to adapt the questionnaire efficiently and to conduct the rest of the study. The information discussed in this chapter relates to Chapter 3 in terms of the development of the questionnaire and to Chapter 4 in terms of the responses to the questionnaire.

CHAPTER 3 – RESEARCH METHODOLOGY

3.1 Overview

3.1.1 Introduction

This chapter deals with the concept of research and the research methodology that was followed. The chapter starts by defining various terms that are used when doing research in order to demonstrate an understanding of the concept and process of research. This is followed by a discussion of research paradigms, which also define the research paradigm in which this study would fall. The chapter concludes with a discussion on research design, as well as the research design and methodology that were followed in conducting this study.

It is important to include the discussion of the research methodology, as it allows the reader to attain a thorough understanding of how the research was conducted. Just as it would be fruitless to embark on a research project without a plan on how the research will be conducted, it would also be very difficult to follow the strain of the research project without a discussion on the methodology followed.

The main aim of this chapter is therefore to ensure that the way in which the research was done is explained and communicated. This chapter forms the plan or “roadmap” that was followed in conducting this research project.

3.1.2 Background to research

According to Mouton (2009:55), it is important to understand the meaning of the terms used in research before embarking on a research project. As already mentioned, one of the aims of this chapter is to discuss the meaning of research design, research methodology and other important research terms. This chapter will also provide an

overview of the research design, development of the questionnaire and how the data were obtained.

Research is broadly defined as a search for knowledge, with a focus on humans' instinctive inquisitiveness (Kothari, 2004:1). Kothari (2004:1) formally defines research as "a scientific and systematic search for pertinent information on a specific topic". This means that it is important that research is done in a way that can be scientifically motivated, and in an orderly or logical fashion.

Coldwell and Herbst (2004:2) emphasised that research should be done systematically. Decisions based on common sense are discussed in contrast to decisions based on systematic research, and the authors are of the opinion that systematic research would lead to better decision-making (Coldwell & Herbst, 2004:2).

Kumar (2011:8) also agrees with the fact that research consists of accumulating, scrutinising and interpreting information. He identified and defined certain characteristics that a process should have in order for the process to qualify as research. The characteristics identified by Kumar (2011:8) are discussed below:

- Control: The effect that other factors might have on the outcome of the study should be minimised or quantified.
- Rigorous: The procedures followed should be relevant, and the researcher should be able to justify the chosen procedures.
- Systematic: The logical order of procedures is of importance to ensure that the correct flow of those procedures is obtained.
- Valid and verifiable: The integrity of conclusions drawn is of importance, as other researchers should be able to verify conclusions drawn.
- Empirical: The data from which conclusions are drawn should be obtained from observations that can be classified as hard evidence.
- Critical: Research, both the process followed and conclusions drawn, should be valid when subjected to critical analysis.

From the definitions of research discussed above, it is important to note that all of the definitions deal with the gathering of information, and the systematic handling of the research process. The research process followed in this study with regard to the respective definitions and characteristics identified above is discussed in detail further in this chapter.

Research design is defined as the framework or structure within which the research will be conducted (Kothari, 2004:14). Coldwell and Herbst (2004:36) define research design as the 'strategy for the study', including the planned way of conducting the study in line with the chosen strategy. Research design therefore mainly deals with planning the method or process by which the research will be done, in order to ensure that the research question is answered at the end of the research project.

Babbie (2013:4) defines methodology as "the science of finding out". Markauskaite *et al.* (2011:29) agreed with the definition above, and added that the term methodology can be used to describe the process of investigation. It is important to note that both of these definitions deal with the process and procedures that should be followed in obtaining the data, analysing it and drawing conclusions from that data.

An interesting metaphor is drawn between building a house and the definitions of research design and research methodology, and Mouton (2009:55) emphasises the importance of understanding that difference. He likens the term research design to the architectural design of the house; therefore, the planning of how the research will be done. The term research methodology is likened to the construction process of the house, and incorporates the methods and techniques used (Mouton, 2009:56).

The research design and methodology of this research project were therefore discussed in terms of the planning of the research project, the methods used to obtain the information and the general scientific approach followed.

The research was conducted in conformance with the abovementioned definitions and in order to address the main and secondary objectives. As mentioned in Chapter 1, the main objective of this study is to determine whether there were any benefits for the students in taking part in a financial management case study-based competition. The secondary objectives are discussed in Chapter 1.

3.2 Framework and research paradigms

Two main research paradigms are discussed by Kumar (2011:14), namely the positivist approach and the naturalistic approach. He states that the positivist approach mainly springs from the physical sciences, and lists the following synonyms for the positivist approach: systematic or scientific. The synonyms for the naturalistic approach are: qualitative, ethnographic or ecological (Kumar, 2011:14).

Markauskaite *et al.* (2011:31) agree with Kumar regarding the fact that the research paradigm of positivism would fit into the physical sciences, as the research purpose of positivism is to discover laws and explanations that are based on causal laws. The other approach (the naturalistic approach) identified by Kumar is called interpretative by Markauskaite *et al.* (2011:31), and the research purpose is mainly to understand the social meaning within context. The explanations within this context are based on description, can be verified through people being studied and the values of this research is relativistic to the values of the participants. In addition to the paradigms discussed above, two additional paradigms are identified, namely critical science and constructivism. In the critical science paradigm, the research purpose is to liberate or empower, and the values of the research contains a moral-political dimension. The research purpose of constructivism is to understand and change, and the knowledge obtained can be a catalyst for change (Markauskaite *et al.,* 2011:31).

The research in this project would fall into the interpretive paradigm, as the research purpose is to understand the perceived benefits to students in taking part in the GBC. The perceptions of the students when answering the questionnaire would definitely

influence the results of this study. It is also clearly not based on the physical sciences with causal laws and explanations, neither is the research purpose to liberate or empower, nor to understand and change. The other paradigms discussed would consequently not be applicable to this research project.

Mouton's (2009:137) approach to research questions is summarised in his Three Worlds framework. He identified three contexts (or worlds) within which research questions can be classified. The three worlds are as follows (Mouton, 2009:138):

- World One: The world of everyday life and lay knowledge. This world is where the majority of humans spend the greatest part of their lives. The questions and challenges in this world consist of the everyday challenges of real life, and lay knowledge and experience are used to cope with everyday life.
- World Two: The world of science and scientific research. In this world, a research problem is formulated in order to solve questions arising in World One. The characteristics of research discussed earlier form an important part of the search for answers and reliable knowledge in this world.
- World Three: The world of meta-science. The main aspect of this world is reflection. This critical reflection includes various philosophical paradigms such as positivism, interpretivism, realism and phenomenology.

From the perspective of the Three Worlds framework, this research mainly fits into World Two. A question is taken from an aspect of World One, and researched in order to obtain reliable knowledge. The research problem is formulated and researched within various guidelines in order to reach the main and secondary objectives for this research project.

Various authors discuss various paradigms, contexts or frameworks. It is, however, important to take note of the fact that all the paradigms discussed have value, and the choice of paradigm or framework is influenced by the type of research done and the goal of the research (Kumar, 2011:14). Markauskaite *et al.* (2011:32) also agree with

this, and are of the opinion that research should be flexible and accommodate more than one paradigm.

3.3 Research design

In order to facilitate the planning and strategising process of the research, a literature review was done. Mouton (2009:87) confirms the importance of doing a literature review as part of an empirical study, and states a number of reasons for doing the literature review. The reasons could be summarised as ensuring an understanding of previous research done and a way of identifying gaps in the current knowledge. The literature review would also aid the researcher in connecting the initial research question to the implementation of the research.

Kumar (2011:32), Kothari (2004:28) and Coldwell and Herbst (2004:31) all agree with Mouton on the importance of doing a literature review to gain an in-depth understanding of the relevant knowledge already in the field. They are also of the opinion that the literature review is valuable in terms of using it as a guideline in designing the empirical portion of the research.

The literature review was mainly done by searching databases containing academic journals; the databases included EBSCOHost, Emerald and Google Scholar. The searches of the databases were executed by means of various relevant keywords. The findings of the literature review were discussed in detail in Chapter 2.

In deciding on the method of the empirical portion of the research, guidance was sourced from textbooks written on research methodology as well as similar previous studies. The textbooks provided an overview of what method to use in which circumstances, while the literature from the previous studies was mainly used to determine what worked in practice.

As mentioned in Chapter 1, Mouton (2009:153) suggests that a survey should be used to gather data for this type of research. This research falls into the category where primary data will be obtained by means of an empirical study. The primary data would be in the form of the answers from GBC participants who completed the questionnaire.

The discussion of the methodology used in a selection of previous studies is by no means meant as an exhaustive summary of the methodology used in all the previous studies that concerned the use of case studies or case study-based competitions. The methodology used in a few previous studies was only used as guidance on which method to use to gather the data, and which method previous studies concluded added value to the study. A more detailed discussion of the literature that was reviewed is included in Chapter 2.

Wolmarans (2006:352) did a study on using business simulations in financial management courses, and more specifically asked various questions to the students regarding the value and learning experience of the business simulation. He made use of written feedback on a number of structured questions by means of a Likert scale (Wolmarans, 2006:360). In an earlier study, he also mentioned that he believes that a written debriefing is an effective method to use, as it can add to the learning experience of students (Wolmarans, 2005:126).

Although focus group discussions could have been used in addition to the questionnaires to gain an in-depth understanding of the participants' view of the benefits of the GBC, it was not practical in these circumstances. Out of the 96 participants, 92 were international students who were in South Africa for less than a week. The participants were on a tight schedule to fit all the CIMA and GBC activities into the few days that they were here, and could not spare time for focus groups. The questionnaire took less time to complete, and could therefore be fitted into their programmes without the risk of rushing the completion of the questionnaire.

Kothari (2004:101) also supports the use of a questionnaire in cases where it is difficult to reach some of the respondents, as was the case with the international students as mentioned above. The participants had enough time to complete the questionnaires without it encroaching on their busy schedules.

3.4 Research methodology

3.4.1 Population and respondents

The participants in the global final of the CIMA GBC were approached to complete the questionnaire. As briefly discussed in Chapter 1, these participants were selected as they had the added experience of participating on a global level. The population for this research consisted of a team of four students from each of the 24 participating countries. The total target population consisted of 96 participants.

Unfortunately, three students became ill during the competition, and were sent home on earlier flights by CIMA. This resulted in only 93 out of the 96 participants included in the population completing the questionnaire. This was not seen as a problem, as the response rate on the questionnaire was still 97%. For the purpose of this study, the 93 students who completed the questionnaire are defined as the study population or study sample.

The use of the terms study population and study sample interchangeably can be explained by the fact that no sample was drawn out of the total population. The questionnaires were distributed to all of the participants in the GBC (96), and filled in by the remaining participants after those who became ill returned home (93).

The participating countries were: Australia, Bangladesh, China, Ghana, Hong Kong SAR, India, Indonesia, Ireland, Malaysia, the Middle East, Myanmar, Nepal, New Zealand, Pakistan, Philippines, Poland, Russia, Singapore, South Africa, Sri Lanka, Thailand, the United Kingdom, Vietnam and Zambia. The demographics of the

participants, as well as the breakdown into the different categories that were compared, are included in Annexure B.

CIMA limits the participation of students to undergraduate or equivalent students (CIMA, 2013), which effectively means students can take part up to their fourth year of studies. Within an international context, many of the business degrees include a fourth year, which is similar to an honours degree in terms of the South African context. The students participating in the GBC were therefore students within their first four years of studying towards their first degree, or as within the South African context, their first honours qualification.

The main reason for choosing these participants as the population for the study is that they are in the process of completing various academic degrees. They would therefore be able to offer an opinion on their perception of the benefits that they obtained by participating in the CIMA GBC. As a note on the side line, it is worth mentioning that students in this part of their academic careers were the only possible respondents in this study, as the participation of students in the GBC is regulated by the rules of the competition.

As mentioned in both Chapter 1 and again above, only the students who participated on a global level were approached to complete the questionnaire. Future studies could be expanded to include students who participated in the national finals, as well as students who only submitted reports. This would enable a comparison between the learning experiences at different stages of the competition.

3.4.2 Questionnaire and statistical analysis

As the questionnaire is the main method of gathering data in this study, the design of the questionnaire and formulation of the questions are very important. The questionnaire was used to determine whether the students believe that their participation in the GBC had various mentioned benefits for them.

CIMA was contacted beforehand, and it was arranged with the CIMA representatives that the questionnaire can be distributed at the global final of the CIMA GBC. The participants completed the questionnaire in the debriefing room after each team's presentation. The introduction to the questionnaire states that all responses would be treated confidentially, and this was again stressed to the students before the questionnaires were handed out.

The questionnaire was adapted from a questionnaire used in a PhD study conducted by Fouché (2006:297), which had similar objectives to this study. The adaptation was done with the assistance of Statistical Consultation Services at the North-West University. The questionnaire is included in Annexure A.

In the process of adapting the questionnaire, some guidelines discussed by Kothari (2004:101) were taken into account. The questionnaire consisted of structured questions, with mostly closed questions where respondents had to choose from a number of answers provided. The questions were put in a logical order to ensure the questionnaire allowed for a smooth flow in answering the questions. The questions were also adapted with the help of Statistical Consultation Services to ensure that the meaning of each question was clear.

After adaptation of the questionnaire, it was given to colleagues to complete to ensure that the meaning of all of the questions is clear. Feedback received from the colleagues was taken into account, and the questionnaire was finalised for distribution to the students.

As mentioned, the majority of the questions were closed questions, with the response drafted on a five-point Likert scale. The questionnaire ended with three open-ended questions where the respondents had to write their answers in.

Although the questionnaire was adapted from a previous study conducted as part of a PhD, the reliability and validity of the constructs in the questionnaire were measured.

This was done to ensure that the questionnaire is a reliable and valid measuring instrument to determine the perceived benefits to participants of taking part in the CIMA GBC.

The term validity refers to the ability of the questionnaire to measure the aspects that it is intended to measure (Maree, 2010:216). The validity of the constructs in the questionnaire for the study population was confirmed by making use of a confirmatory factor analysis (Anastasi & Urbina, 1997), as the constructs were already defined. The results of the factor analysis are included and discussed in Chapter 4 as part of the results of the empirical analysis.

The constructs identified by Fouché (2006:297) were used in this questionnaire for Parts B, C and E, and a confirmatory factor analysis was done. The confirmatory factor analysis is discussed in more detail in the paragraph that deals with the validity of the questionnaire. A brief discussion is, however, included here for clarity and to ensure that the reader would be able to follow the reasoning behind the constructs identified.

As already stated, the constructs were identified by Fouché (2006:297). As this study adapted the questionnaire, the identified constructs were used in a confirmatory factor analysis. A confirmatory factor analysis is done when constructs were identified by the author of the questionnaire, and the goal of the statistical analysis is to confirm that the constructs do indeed yield only one factor. When the constructs do yield only one factor, it confirms that the questions that were grouped into the constructs are questions that form a central idea.

Contrary to that, an exploratory factor analysis is done when questions are not already grouped into constructs, and the goal of the statistical analysis is to group the questions into constructs. This analysis was not used, as the constructs were identified from the questionnaire that was adapted.

Although it is sometimes believed that the size of a study sample should be at least 100 data points in order to yield a meaningful factor analysis, the fact that this study sample had a maximum of 96 data points were discussed with two separate statisticians. The entire study population consisted of a possible number of respondents of 96, and declined to 93 when three of the students were sent home on earlier flights. According to the statisticians a confirmatory factor analysis can indeed be done with less than 100 data points.

The nature of the confirmatory factor analysis lends itself towards extracting meaningful data even though the number of respondents might be less than 100. As stated previously, a confirmatory factor analysis confirms the existence of constructs identified by previous studies. In this case the constructs were identified by the study that developed the questionnaire, and confirmed by the confirmatory factor analysis done in this study.

Part D, however, yielded more than one factor in the confirmatory factor analysis and it was decided to refine the constructs in Part D. The details of the refinement of the constructs in Part D are discussed in Chapter 4 as part of the results of the empirical analysis. Table 3.1 includes the refined and renamed constructs for Part D.

All of the questions, including Part D, were consequently included in the confirmatory factor analysis. The fact that Part D yielded more than one factor prompted the further analysis that is discussed in Chapter 4. As the refined constructs are used further in this study, it is included in Table 3.1 as the refined and renamed constructs.

Both the original identified constructs, as well as the refined constructs were tested for reliability as part of the Cronbach alpha statistical analysis. The results of the Cronbach alpha coefficients are discussed in Chapter 4.

Table 3.1: Summary of constructs identified in questionnaire

Nr	Part	Construct	Number	Summary of question
1	Part B	Technical skills and competencies	B1	Critical problem-solving
			B4	Oral and written communication
			B6	Being able to use technology
			B8	Theoretical competencies over various fields (subject fields)
			B13	Analytical ability, logical argument and summarising
			B18	Effective learning
2	Part B	Skills in roles of an accountant	B3	Being a general manager
			B7	Being a global player
			B9	Being an entrepreneur
			B11	Being a market analyst
			B16	Being a salesperson
3	Part B	Soft skills	B2	Personal attributes such as motivation, self-management, etc.
			B5	Problem solving (in terms of society's needs)
			B10	Being able to adapt to change
			B12	Effective functioning in group work (team building)
			B14	Effective interpersonal communication
			B15	Evaluation of ethical considerations within the company
			B17	Having high values and respect for society
			B19	Cultural and ethnic sensitivity
4	Part C	Managerial accounting skills	C1	Short-term decision-making (for example identifying relevant costs and revenues)
			C4	Cost-volume-profit analysis and determining the break-even point
			C5	Performing calculations on a spread sheet
			C10	Cost behaviour (for example fixed, variable and mixed costs)
5	Part C	Financial management skills	C2	Financial statement analysis, including calculations and interpretation of ratios
			C7	Capital investment appraisal, including a net present value analysis
			C8	Extracting information from a given scenario
			C12	Sources of finance (debt versus equity)

Nr	Part	Construct	Number	Summary of question
6	Part C	Strategic analysis skills	C3	Understanding of a company's external environment (for example PESTEL)
			C6	Deciding on a company's strategic direction (for example Porter's Generic Strategies or Ansoff's Growth Vector Matrix)
			C9	Evaluating the competitive environment, using Porter's Five Forces
			C11	Understanding and mapping a company's stakeholders (for example Mendelow's Matrix)
			C13	Understanding a company's strengths, weaknesses, opportunities and threats, using a SWOT analysis
7	Part D	Subject exploration	D5	Required self-study and work in the participant's own time
			D6	Included practical experiences that made learning relevant and interesting and simulated reality
			D7	It focused on the competencies I require for my profession
			D11	Helped me obtain a holistic perspective of the subject field
			D12	Took into consideration my previous knowledge and competencies
8	Part D	Learning behaviour	D1	Had unstructured learning opportunities
			D2	Was not always subject content based but broad based
			D3	Lecturer / teacher was a facilitator
			D4	There was active participation from team members
9	Part D	Practical application	D8	Provided opportunity learning from peers
			D9	Made use of multi-media and technology
			D10	Occurred in a logical manner
10	Part E	Personal experience	E1	My interest in accounting and strategy has been enhanced by my participation in the CIMA GBC
			E2	Participating in the CIMA GBC broadened my view on the role of the accountant
			E3	The CIMA GBC made it easy for me to link theory and practice
			E4	I enjoyed the social aspects of the CIMA GBC
			E5	I was motivated by my participation in the CIMA GBC

Within this context, the term reliability refers to the ability of the questionnaire to yield consistent responses if it is used again in future (Maree, 2010:215). The reliability of the constructs in the questionnaire for the study population was confirmed by making use of

Cronbach alpha coefficients (Nunnally & Bernstein, 1994:295). These results are also included and discussed in Chapter 4 as part of the results of the empirical analysis.

The data collected from the questionnaires were analysed by making use of SAS (Statistical Analysis System) as operated by the statistician of Statistical Consultation Services (SAS Institute Inc., 2011). Descriptive statistics were used to analyse the outcome of the participants' answers on the questionnaire.

Comparisons were made between different categories within the study sample to determine whether various factors impacted on the participants' perception of the benefits derived from the GBC. Comparisons were made between male participants (N = 52) and female participants (N = 41), participants whose mother tongue is English (N = 16) and those whose mother tongue is not English (N = 75), teams who were shortlisted as the top six teams (N = 24) and those teams not shortlisted (N = 69), as well as participants from countries with different economic classifications. Please see Annexure B for the categories in which the participants were divided.

The countries were classified in terms of a few leading reports. As this study does not focus on the classification of countries or the rationale behind certain classifications, the available reports were merely used as a guideline in classifying the regions that took part in the GBC.

The United Nations Development Programme (UNDP), the World Bank (WB) and the International Monetary Fund (IMF) annually publish country classifications based on their level of development (United Nations, 2014; The World Bank, 2014; International Monetary Fund, 2014). While the metrics used are not identical, Nielsen (2011) analysed the classifications and summarised it as follows:

Table 3.2: Summary of the classification of countries

Classification	IMF	UNDP	WB	Referred to as
Classified as "developed countries"	Advanced countries	Developed countries	High-income countries	High
Classified as "developing countries"	Emerging and developing countries	Developing countries	Low- and middle-income countries	Middle
Subcategories of "developing countries"	(1) Low income developing countries, (2) Emerging and other developing countries	(1) Low human development countries, (2) Medium human development countries, (3) High human development countries	(1) Low-income countries, (2) Middle-income countries	Low

Source: Nielson (2011)

In order to conduct the abovementioned comparisons, various statistical methods were used. Where two categories were compared to each other, independent t-tests were used. Where more than two categories were compared, ANOVAs were used. The statistical analysis and results are discussed in more detail in Chapter 4.

As part of the discussion of the results in Chapter 4, p-values were reported for the sake of completeness. Because random sampling was not done, interpretations were done by making use of Cohen's effect sizes (Cohen, 1988), i.e. the d-values.

3.5 Summary

This chapter provided an overview of the research methodology used. It started by defining various terms that are relevant when embarking on a research project. This was followed by a discussion of the methodology that will be used in this research

project. The remaining part of the chapter dealt with the respondents and questionnaire, as well as the statistical analysis that was done.

As this chapter was classified as the plan or ‘roadmap’ to conduct the research, Chapter 4 offers the execution of the empirical study. The research methodology discussed here was executed, and the results are provided in Chapter 4. The importance of planning a research project will flow through to the rest of the chapters by means of the discussion of the results and the recommendations made.

CHAPTER 4 – EMPIRICAL STUDY

4.1 Overview

This chapter deals with the statistical results of the reliability and validity tests, as well as the descriptive statistics of the responses to the questionnaire. The results are discussed under the main headings of “Validity and reliability” and “Descriptive statistics”, with appropriate sub-headings. The discussions in this chapter should be read in conjunction with the methodology in Chapter 3.

As discussed in Chapter 3, the research paradigm followed in this study is the interpretive paradigm. The study aims to understand the perceived benefits of the GBC, and the perceptions of the students will influence the results. The research will mainly be done in World Two, as identified by Mouton (2009:137). This encompasses a research problem that is investigated by means of a research process, in order to reach the research objectives.

The importance if this chapter is that it presents the results of the empirical study that was done, and facilitates conclusions to be drawn in the following chapter. The aim of this study was to investigate certain variables and it is therefore important that the results are clearly reflected. These results will, in turn, be used to determine whether the goals of this study were reached when the conclusion is drawn in Chapter 5.

For ease of reference, the results were presented in separate tables in as far as it was possible. The results that are included in the tables, are the results drawn from the statistical analyses. The results contained in each table are also discussed.

4.2 Validity and reliability

4.2.1 Validity

As mentioned in Chapter 3, the validity of the questionnaire was determined by a confirmatory factor analysis. The constructs were defined by the questionnaire that was used in the PhD study, and a confirmatory factor analysis was done on those constructs. The results of the confirmatory factor analysis are provided in Table 4.1 below, and then subsequently discussed.

The constructs identified by Fouché (2006:297) for Parts B, C and E were used for the confirmatory factor analysis. A confirmatory factor analysis is done when constructs were identified by the author of the questionnaire, and the goal of the statistical analysis is to confirm that the constructs do indeed yield only one factor. When the constructs do yield only one factor, it confirms that the questions that were grouped into the constructs are questions that form a central idea.

As was mentioned in Chapter 3, and are discussed in more detail below, Part D yielded more than one factor in the confirmatory factor analysis. The decision was made to refine Part D further into three constructs. Table 3.1 in Chapter 3 provides the summary of the constructs identified in the questionnaire, including the refined and renamed constructs for Part D. Although the names of the constructs are provided in each of the tables below, the reader is referred to Table 3.1 for details on the questions that were included in each of the constructs.

The fact that more than one factor was retained for Part D by the confirmatory factor analysis, prompted the refinement of Part D. The three factors that were retained were renamed, and used as separate constructs in the rest of the study. It is important to note that all of the questions were included in the confirmatory factor analysis that was done.

Table 4.1: Results of the confirmatory factor analysis

Nr	Construct	Number of factors retained	% Variance explained	MSA	Communalities
1	Technical skills and competencies (B1, B4, B6, B8, B13, B18)	1	47%	0.74	[0.31 ; 0.58]
2	Skills in roles of an accountant (B3, B7, B9, B11, B16)	1	47%	0.76	[0.35 ; 0.64]
3	Soft skills (B2, B5, B10, B12, B14, B15, B17, B19)	1	40%	0.79	[0.24 ; 0.55]
4	Managerial accounting skills (C1, C4, C5, C10)	1	54%	0.75	[0.49 ; 0.60]
5	Financial management skills (C2, C7, C8, C12)	1	55%	0.70	[0.41 ; 0.65]
6	Strategic analysis skills (C3, C6, C9, C11, C13)	1	60%	0.81	[0.48 ; 0.69]
7, 8, 9	Part D * (D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12)	3	59%	0.79	[0.42 ; 0.78]
10	Personal experience (E1, E2, E3, E4, E5)	1	52%	0.69	[0.40 ; 0.61]

* The decision was made to define Part D into three constructs: subject exploration, learning behaviour, practical application.

Kaiser's measure of sampling adequacy (MSA) was used to determine whether a factor analysis was appropriate, as it provides an indication of inter-correlations between variables (Tabachnick & Fidell, 2001; Kaiser, 1974). The range of the index is between 0 and 1, with a value of 1 indicating that each variable is completely predicted by the other variables. Hair *et al.* (1998) provided guidelines to interpret MSA values, and stated that the value should exceed 0.6.

As can be seen from Table 4.1 above, all the MSA values are higher than 0.6, indicating that the sample was adequate. These values also support the ability of the data to be factored.

The number of factors retained for all the constructs (apart from Part D) was 1. This indicates that the questions that were grouped together in the questionnaire measured the same construct. The confirmatory factor analysis therefore confirmed retaining one construct per group of questions.

Part D, however, measured three constructs. The decision was made to define and refine Part D into three separate constructs, as the questions clearly measured separate aspects. The refined constructs are subject exploration (B5, B6, B7, B11, B12), learning behaviour (B1, B2, B3, B4) and practical application (B8, B9, B10).

The combination between the MSA values and the number of factors retained is therefore an indication of the questionnaire's validity. The MSA values all exceeded 0.6, and (apart from Part D) only one factor was retained for each of the constructs.

4.2.2 Reliability

As already mentioned, the Cronbach alpha coefficients measure the reliability of each of the constructs, and consequently the reliability of the questionnaire. In order to indicate the reliability of the constructs in the questionnaire, the Cronbach alpha values should be equal to or above 0.7 (Field, 2005). The Cronbach alpha values in Tables 4.2 and 4.3 will be discussed below.

The Cronbach alpha values were firstly calculated for the constructs that retained only one factor in the confirmatory factor analysis. This includes all the constructs, except for the three constructs included in Part D. The results of the Cronbach alpha coefficients for the constructs that retained only one factor are provided in Table 4.2 below.

Table 4.2: Cronbach alpha coefficients of constructs (excluding Part D)

Nr	Construct	N	Cronbach Alpha
1	Technical skills and competencies (B1, B4, B6, B8, B13, B18)	92	0.76
2	Skills in roles of an accountant (B3, B7, B9, B11, B16)	90	0.71
3	Soft skills (B2, B5, B10, B12, B14, B15, B17, B19)	90	0.78
4	Managerial accounting skills (C1, C4, C5, C10)	93	0.71
5	Financial management skills (C2, C7, C8, C12)	92	0.72
6	Strategic analysis skills (C3, C6, C9, C11, C13)	93	0.82
10	Personal experience (E1, E2, E3, E4, E5)	91	0.75

The N-value in Table 4.2 indicates how many responses were analysed. The number of respondents was 93, and that is therefore the maximum number of responses that could have been analysed. A few of the students did not answer some of the questions, and these responses were consequently excluded from the relevant constructs to calculate the Cronbach alpha coefficients for those constructs. This explains why some of the N-values are below 93.

In the case of the Cronbach alpha analysis, if there was a single question not answered, all the answers of those participants were excluded from the Cronbach alpha coefficients. The number of respondents for the Cronbach alpha coefficient could therefore be less than 93. For the rest of the statistical analyses, only the questions that were not answered were excluded from the relevant analysis. The number of respondents was therefore 93 for each of the constructs, with the single question statistically excluded.

As can be seen in Table 4.2, all of the Cronbach alpha values for these original constructs are above the suggested value of 0.7, and therefore indicates the reliability of the construct.

Table 4.3: Cronbach alpha coefficients of constructs in Part D

Nr	Construct	N	Cronbach Alpha
7	Subject exploration (D5, D6, D7, D11, D12)	89	0.76
8	Learning behaviour (D1, D2, D3, D4)	93	0.70
9	Practical application (D8, D9, D10)	89	0.70

As already mentioned, the Cronbach alpha values were calculated separately for the refined constructs within Part D. This was done as the questions in Part D grouped into three constructs, which were refined and renamed as part of the confirmatory factor analysis. Each of these constructs also yielded a value of equal to or above 0.7, as indicated in Table 4.3. Therefore, the values in the table that are equal to or higher than 0.7 indicate reliability of the constructs.

4.3 Descriptive statistics

4.3.1 Entire study population

With the assistance of Statistical Consultation Services, descriptive statistics were compiled from the responses received from the participants. The results are included in Table 4.4 below, and subsequently discussed.

The descriptive statistics were compiled for the constructs, and not for the individual questions. The main reason for that was the fact that the questions that tested similar aspects were grouped together into constructs. The grouping of the questions into the constructs was confirmed by the confirmatory factor analysis. As the constructs had a number of related questions included in each construct, the decision was made to report the descriptive statistics per construct and not per individual question.

In Table 4.4, the means were calculated as all the respondents' answers to all of the questions in that specific construct. The standard deviation was also calculated and

offers an indication of how the responses are distributed around the mean. The standard deviation therefore aids the interpretation of the reliability of the mean.

The minimum value was calculated as the average of the lowest values for each of the questions within that construct. The lowest value for each question was therefore taken, and included in the calculation of the number of times that it occurred. This explains why the minimum numbers in Table 4.4 are not discreet numbers, even though the options on the Likert scale on the questionnaire only consisted of discreet numbers.

The maximum value was also calculated as the average of the highest value for each of the questions within that construct. As all of the questions had at least one respondent that chose the number 5 option on the Likert scale, all of the maximum values for all of the constructs are 5.

Table 4.4: Descriptive statistics for all of the participants

Nr	Construct	N	Mean	Standard deviation	Minimum	Maximum
1	Technical skills and competencies	93	4.16	0.54	2.33	5.00
2	Skills in roles of an accountant	93	3.89	0.60	1.80	5.00
3	Soft skills	93	4.28	0.46	3.13	5.00
4	Managerial accounting skills	93	4.07	0.63	2.25	5.00
5	Financial management skills	93	4.33	0.58	2.75	5.00
6	Strategic analysis skills	93	4.36	0.60	2.40	5.00
7	Subject exploration	93	4.34	0.55	2.80	5.00
8	Learning behaviour	93	3.78	0.78	1.50	5.00
9	Practical application	93	4.26	0.57	3.00	5.00
10	Personal experience	93	4.41	0.50	3.00	5.00

As can be seen from the table above, the group of participants felt that the GBC enhanced all of the skills mentioned in the questionnaire, as all of the means are above 3. The Likert scale that was used was a 5-point scale, and a mean of above 3 therefore indicates that the leaning is more towards the positive side.

It should, however, be noted that in some instances the minimum is below 3, which indicates that there were a few participants who did not feel that their skills were developed or enhanced by participating in the GBC. The means are, however, all above 3, which is an indication that even though some participants did not feel their skills were enhanced, the group as a whole felt that they are.

For the results of Part B of the questionnaire, participants rated enhancing their soft skills (4.28) the highest, closely followed by their technical skills and competencies (4.16). It is interesting that participants ranked enhancing their skills in roles of an accountant (3.89) the lowest. A possible explanation for that could be that, as they are students, they are unaware of the different roles that an accountant can fulfil in practice, and did not identify the different roles while participating in the GBC.

As already mentioned, in Part C of the questionnaire, the questions were divided into three of the main subject areas of the CIMA qualification, managerial accounting, financial management and strategic analysis. Participants felt that the GBC addressed all of the abovementioned subject content. The mean of the managerial accounting subject content (4.07) is slightly lower than those of the financial management (4.33) and strategic analysis (4.36) subject content. The subject content of the final CIMA examination differs from year to year, and it might have been that the examination on which this case study was based had a slightly lower coverage of managerial accounting.

In Part D of the questionnaire, there were also two of the constructs with means slightly higher (subject exploration (4.34) and practical application (4.26)), and one of the constructs with a mean slightly lower (learning behaviour (3.78)) when compared to

each other. The mean for learning behaviour was lower, and it might be as a result of different behavioural patterns between different teams. It could be that the specific behaviour mentioned in the questionnaire was not present in the specific team.

Part E of the questionnaire was not divided into different sub-divisions, and only covered the participants' personal experience of the GBC. As can be seen, this construct also had a high mean (4.41).

4.3.2 Comparisons between groups

As mentioned in Chapter 3, comparisons were made between different variables within the group of participants. Each of these comparisons will be discussed below. The generic interpretation of the statistics, as well as the explanation of the values, will be clarified here, but relates to all of the tables below.

Where only two variables are compared, independent t-tests were used. The results are interpreted by means of effect sizes (d-values). Cohen (1988) provided guidance for the interpretation of the effect sizes, and therefore the d-values: if d equals 0.2, the effect size is small; if d equals 0.5, the effect size is medium; and if d is equal to or greater than 0.8, the effect size is large and practically significant. The d-values are indicative of the practical significance of the comparison between different variables.

The calculation of the d-values is not discussed here, as it relates to advanced statistical calculations. The d-values were calculated by the statistical program used by Statistical Consultation Services. What is important in this study is not the calculation of the d-values, but the interpretation thereof. The guidance on the effect sizes as discussed in the previous paragraph were consequently used to interpret the calculated d-values.

Where more than two variables are compared, ANOVAs (analysis of variances) were used. These results were also interpreted by means of the effect sizes (d-values).

Cohen's (1988) guidance as explained above was also applied to the effect sizes of the ANOVAs. As mentioned in Chapter 3, the p-values are only reported for the sake of completeness, but not interpreted. The reason for this is the fact that the study population was not randomly selected into a study sample.

The comparisons were made between the following variables:

- Participants from shortlisted teams versus participants from teams that were not shortlisted;
- Participants whose mother tongue is English versus participants whose mother tongue is not English;
- Male participants versus female participants; and
- Participants from countries classified in terms of income and development.

The tabled results, as well as the discussion of the comparisons made are discussed under separate headings.

4.3.3 Shortlisted versus not shortlisted

As already mentioned, out of the teams that competed in the GBC, six teams were shortlisted to compete in the final round. These teams did a further presentation in front of the judges, and the winners were chosen out of the shortlisted teams. The teams shortlisted in the 2013 global final of the GBC were India, Russia, China, Indonesia, Poland and Singapore.

The purpose of comparison was that these shortlisted teams had the added experience of an additional presentation in order to compete for the title of the GBC winners. They were also clearly defined from the rest of the teams by the fact that they were shortlisted.

Table 4.5: Descriptive statistics and effect sizes for comparison between participants included in shortlisted teams and those not shortlisted

Nr	Construct	Group	N	Mean	Standard deviation	p-value	d-value
1	Technical skills and competencies	Shortlisted	24	4.29	0.49	0.13	0.34
		Not	69	4.11	0.54		
2	Skills in roles of an accountant	Shortlisted	24	4.01	0.50	0.21	0.26
		Not	69	3.85	0.63		
3	Soft skills	Shortlisted	24	4.40	0.38	0.12	0.32
		Not	69	4.25	0.48		
4	Managerial accounting skills	Shortlisted	24	4.32	0.47	0.01	0.53*
		Not	69	3.98	0.66		
5	Financial management skills	Shortlisted	24	4.49	0.41	0.07	0.33
		Not	69	4.28	0.63		
6	Strategic analysis skills	Shortlisted	24	4.54	0.39	0.04	0.37
		Not	69	4.30	0.65		
7	Subject exploration	Shortlisted	24	4.48	0.51	0.17	0.31
		Not	69	4.30	0.56		
8	Learning behaviour	Shortlisted	24	3.70	0.93	0.60	0.12
		Not	69	3.81	0.73		
9	Practical application	Shortlisted	24	4.24	0.66	0.86	0.04
		Not	69	4.27	0.54		
10	Personal experience	Shortlisted	24	4.50	4.60	0.28	0.24
		Not	69	4.38	0.52		

* Medium effect in practice

Managerial accounting skills are the only construct that yielded a medium effect as indicated in Table 4.5. A possible reason for this could be that the shortlisted teams put in additional reading to interpret the case study or additional analysis of financial aspects of the case study. In this additional reading and analysis, it is possible that they were more exposed to managerial accounting skills than teams who did not do any additional work, and therefore did not manage to be shortlisted.

Another possible explanation could be that they were exposed to additional managerial accounting skills during their preparation for their final presentation in front of the judges. The material given to teams for the final presentation was given to them on the

same day as the presentation to the judges. This would have resulted in the other teams not having that additional exposure.

4.3.4 English versus not English

The questionnaire asked participants what their mother tongue is, and the majority of participants indicated that their mother tongue is not English. As the case study is only available in English, and both the report and the presentation had to be done in English, a comparison was made between the opinions of participants whose mother tongue is English and participants whose mother tongue is not English.

Table 4.6: Descriptive statistics and effect sizes for participants whose mother tongue is English and those whose mother tongue is not English

Nr	Construct	Group	N	Mean	Standard deviation	p-value	d-value
1	Technical skills and competencies	English	16	3.82	0.67	0.04	0.58*
		Other	75	4.21	0.47		
2	Skills in roles of an accountant	English	16	3.71	0.75	0.32	0.27
		Other	75	3.92	0.56		
3	Soft skills	English	16	4.16	0.43	0.27	0.30
		Other	75	4.29	0.46		
4	Managerial accounting skills	English	16	3.72	0.61	0.02	0.67*
		Other	75	4.13	0.62		
5	Financial management skills	English	16	3.95	0.62	0.01	0.72*
		Other	75	4.40	0.55		
6	Strategic analysis skills	English	16	3.94	0.73	0.02	0.69*
		Other	75	4.44	0.53		
7	Subject exploration	English	16	4.13	0.59	0.12	0.44
		Other	75	4.38	0.54		
8	Learning behaviour	English	16	3.72	0.91	0.73	0.09
		Other	75	3.80	0.77		
9	Practical application	English	16	4.06	0.53	0.13	0.40
		Other	75	4.30	0.58		
10	Personal experience	English	16	4.27	0.62	0.37	0.24
		Other	75	4.42	0.47		

* Medium effect in practice

Although the main focus of this study is not on the language of the participants, the comparison yielded interesting results. Literature was consulted to aid the interpretation of the statistical results, and will be included in the general discussion of the results.

From Table 4.6 above, it should be noted that all of the constructs that yielded medium effects had a higher mean for students whose mother tongue is not English than for students whose mother tongue is English. The possible reasons will be included in the discussion regarding Table 4.6. The higher mean for students whose mother tongue is not English ties in with the possible reasons discussed.

The technical skills and competencies between the participants whose mother tongue is English and those whose mother tongue is not English yielded a medium effect. The questions included in this construct relate to oral and written communication, as well as analytical ability, logical argumentation and summarising, among others. The reason for this difference could be that the participants whose mother tongue is not English were more exposed to the skills that relate to communication and language as a result of the fact that the case study was not in their mother tongue.

Managerial accounting skills, financial management skills and strategic analysis skills also yielded medium effects. It is unclear why these specific constructs yielded medium effects. One can maybe speculate that the participants whose mother tongue is not English were confronted with both the technical content of the case study as well as the possible language barrier. All of these constructs relate to exposure of the participants to technical subject content by participation in the GBC, and therefore by the case study.

The fact that language can be a barrier to students who are assessed in a language other than their mother tongue was confirmed in a study done by Ungerer *et al.* (2011: 89). It was found that students have a greater chance of success if they are assessed in their mother tongue. As the ‘assessment’ of the GBC is in the form of a report and a

presentation, the students whose mother tongue is not English would have had to put in effort to overcome the language barrier during their participation in the GBC.

Coetzee *et al.* (2014:518) also came to the conclusion that it can prove challenging to students to learn in a second language. This can add to the possible explanation of the perceived difference between participants whose mother tongue is English and those whose mother tongue is not English.

4.3.5 Gender

For interest sake, a comparison was made between male and female participants. As there are no gender-specific aspects of the GBC, the expectation was that this comparison would not yield major differences.

Table 4.7: Descriptive statistics and effect sizes for the comparison between male participants and female participants

Nr	Construct	Group	N	Mean	Standard deviation	p-value	d-value
1	Technical skills and competencies	Male	52	4.11	0.54	0.30	0.21
		Female	41	4.22	0.51		
2	Skills in roles of an accountant	Male	52	3.82	0.65	0.22	0.23
		Female	41	3.98	0.52		
3	Soft skills	Male	52	4.21	0.47	0.07	0.36
		Female	41	4.38	0.43		
4	Managerial accounting skills	Male	52	4.09	0.62	0.68	0.09
		Female	41	4.04	0.64		
5	Financial management skills	Male	52	4.29	0.57	0.47	0.15
		Female	41	4.38	0.60		
6	Strategic analysis skills	Male	52	4.29	0.63	0.19	0.26
		Female	41	4.45	0.56		
7	Subject exploration	Male	52	4.32	0.59	0.54	0.12
		Female	41	4.39	0.50		
8	Learning behaviour	Male	52	3.68	0.70	0.19	0.25
		Female	41	3.90	0.88		
9	Practical application	Male	52	4.21	0.57	0.30	0.22
		Female	41	4.33	0.58		
10	Personal experience	Male	52	4.34	0.52	0.17	0.28
		Female	41	4.49	0.48		

The expectation was not that there would be a significant difference between male and female participants, as participation in the GBC does not include any gender-specific aspects. Teams are also allowed to be mixed between male and female participants. Please see Annexure B for the number of male and female participants in each team.

There was no medium effect size for any of the constructs between male and female participants, as can be seen in Table 4.7. The conclusion drawn here is that the male and female students as a group did not perceive participation in the GBC differently.

The fact that male and female participants did not perceive participation in the GBC differently offers an indication that the case study can be used for mixed classes as well. Both male and female students should benefit from doing the case study as a class example.

4.3.6 Classification of countries

The comparison was made between the different countries as classified in Chapter 3 in terms of development and income. This was the only test where more than two variables were compared, and ANOVAs were therefore used. The results are tabled in Table 4.8 below.

Table 3.2 in Chapter 3 provides an indication of the classification of the countries, and it would benefit the reader to refer back to Table 3.2. For ease of reference, a brief summary is provided here before the results are provided in Table 4.8.

The classification of ‘high’ refers to countries that have a high income, as well as a high level of development (developed countries). The classification of ‘middle’ refers to countries that have an average income, as well as an average level of development. The classification of ‘low’ refers to countries that have a low income, as well as a relatively low level of development (developing countries).

Table 4.8: Descriptive statistics and effect sizes for the comparison between different classifications of countries

Nr	Construct	Classification *	Mean	Std. Dev.	N	Classification	d-Value		
							High	Middle	Low
1	Technical skills and competencies	High	3.79	0.57	20	**High**	-	0.88***	0.79**
		Middle	4.29	0.45	46	**Middle**	0.88***	-	0.11
		Low	4.24	0.49	19	**Low**	0.79**	0.11	-
2	Skills in roles of an accountant	High	3.50	0.64	20	**High**	-	0.94***	0.62**
		Middle	4.10	0.48	46	**Middle**	0.94***	-	0.42
		Low	3.89	0.49	19	**Low**	0.62**	0.42	-
3	Soft skills	High	4.04	0.46	20	**High**	-	0.77**	0.69**
		Middle	4.39	0.41	46	**Middle**	0.77**	-	0.08
		Low	4.36	0.42	19	**Low**	0.69**	0.08	-
4	Managerial accounting skills	High	3.80	0.46	20	**High**	-	0.90***	0.06
		Middle	4.29	0.55	46	**Middle**	0.90***	-	0.65**
		Low	3.84	0.70	19	**Low**	0.06	0.65**	-
5	Financial management skills	High	3.90	0.53	20	**High**	-	1.22***	0.67**
		Middle	4.55	0.39	46	**Middle**	1.22***	-	0.25
		Low	4.37	0.70	19	**Low**	0.67**	0.25	-
6	Strategic analysis skills	High	3.77	0.64	20	**High**	-	1.28***	1.05***
		Middle	4.59	0.40	46	**Middle**	1.28***	-	0.24
		Low	4.44	0.60	19	**Low**	1.05***	0.24	-
7	Subject exploration	High	4.08	0.63	20	**High**	-	0.57**	0.50**
		Middle	4.44	0.50	46	**Middle**	0.57**	-	0.08
		Low	4.40	0.54	19	**Low**	0.50**	0.08	-
8	Learning behaviour	High	3.63	0.85	20	**High**	-	0.28	0.07
		Middle	3.86	0.84	46	**Middle**	0.28	-	0.36
		Low	3.57	0.58	19	**Low**	0.07	0.36	-
9	Practical application	High	4.16	0.46	20	**High**	-	0.12	0.61**
		Middle	4.23	0.64	46	**Middle**	0.12	-	0.35
		Low	4.46	0.49	19	**Low**	0.61**	0.35	-

Nr	Construct	Classifi-cation *	Mean	Std. Dev.	N	Classifi-cation	d-Value		
							High	Middle	Low
10	Personal experience	High	4.09	0.54	20	**High**	-	0.77**	0.74**
		Middle	4.51	0.46	46	**Middle**	0.77**	-	0.04
		Low	4.49	0.50	19	**Low**	0.74**	0.04	-

* High = High Income/Developed, Middle = Middle income/Average development, Low = Low income/Developing

** Medium effect in practice

*** Large effect in practice and practically significant

Literature was also consulted to aid in the explanation of the medium and large effect sizes. Although the differences between countries were not the main objective of this study, the comparison yielded interesting results. The discussion of the literature and possible reasons are included in the discussion regarding the results in Table 4.8.

The comparison between high-income (developed) countries and middle-income (average development) countries yielded large effect sizes in terms of the following constructs: technical skills and competencies, skills in roles of an accountant, managerial accounting skills, financial management skills and strategic analysis skills. It yielded medium effect sizes in terms of the following constructs: soft skills, subject exploration and personal experience.

The comparison between middle-income (average development) countries and low-income (developing) countries yielded no large effect sizes in terms of any of the constructs. It did, however, yield one medium effect size in terms of managerial accounting skills.

The comparison between high-income (developed) countries and low-income (developing) countries yielded a large effect size for strategic analysis skills. It yielded medium effect sizes in terms of the following constructs: technical skills and

competencies, skills in roles of an accountant, soft skills, financial management skills, subject exploration, practical application and personal experience.

As the classification of the countries is influenced by a magnitude of variables, it is extremely difficult to provide possible reasons for medium and large effect sizes. It is recommended that this is explored further in future studies. There is a great potential for meaningful discussions and comparisons if the underlying variables that influence the medium and large effect sizes are isolated, identified and explored.

When considering the constructs that yielded large and medium effect sizes, it is, however, clear those students from high-income (developed) countries, middle-income (average development) countries and low-income (developing) countries perceived aspects of the GBC differently.

Coetzee *et al.* (2014:506) conducted a study on the communication apprehension of accounting students, and specifically investigated the influence of culture and language. As part of their conclusion regarding the effect of culture and language, it is stated that, in their opinion, culture is a multifaceted construct that should be researched further (Coetzee *et al.*, 2014:506). This supports the view presented above regarding the underlying variables that could have an effect on the students' perceptions in this study.

This is confirmed by a previous study by Merino and Sartorius (2011:38) on cross-cultural complexities in South Africa's higher education accounting sector. It was found that various cultural factors influenced students' performance when confronted by integrated analytical and language skills. The expectation was therefore that there would be a difference between students from different countries and cultures, and would definitely be of value to explore further.

Table 4.9 below provides the results of Tukey's post-hoc test, which should be read in conjunction with the effect sizes yielded by the ANOVAs. This was also done, as there are three variables that are compared with each other.

Table 4.9: Statistically significant comparison at 0.05 level according to Tukey's post-hoc tests

Nr	Construct	Classification*
1	Technical skills and competencies	High-middle High-low
2	Skills in roles of an accountant	High-middle
3	Soft skills	High-middle
4	Managerial accounting skills	High-middle Middle-low
5	Financial management skills	High-middle High-low
6	Strategic analysis skills	High-middle High-low
7	Subject exploration	High-middle
8	Learning behaviour	-
9	Practical application	-
10	Personal experience	High-middle High-low

* High = High income/developed, Middle = Middle income/Average development, Low = Low income/developing

When considering Tukey's post-hoc test, similar results can be seen. The significant differences are indicated in Table 4.9 above. Again, in this limited study, it would be fruitless to speculate about possible reasons for the significant differences. It is recommended that further studies be undertaken to explore the reasons for different perceptions between students from different countries.

4.4 Open-ended questions

As previously mentioned, the questionnaire concluded with three open-ended questions. Participants were asked to describe the CIMA GBC in one word, list one positive and one negative aspect of the CIMA GBC, and list any other benefits that participation in the GBC might have had.

Although the open-ended questions were not the main focus of the questionnaire or this study, it was seen as beneficial to allow participants to express their own views regarding participation in the GBC. Views expressed by participants might also yield unexpected answers, which can be used in future studies.

Answers were grouped together into similar words, phrases or themes that emerged from participants' own answers to the open-ended questions. A summary is provided of the top three responses of each in the table below.

Table 4.10: Top three responses on open-ended questions

Question	Responses
Describe the CIMA GBC in one word	Exciting
	Learning
	Fun
List one positive aspect of the CIMA GBC	Opens up new horizons
	Fun way of learning
	Teamwork
List one negative aspect of the CIMA GBC	Time consuming
	Only in English
	Hard work
If you feel that participation in the GBC had other benefits, please list that benefits	Presentation skills
	Conflict resolution
	Work-based skills

As can be seen from Table 4.10 above, the majority of the responses to the open-ended questions were positive. Describing the GBC as "exciting" and "fun" may have much to do with the fact that these teams were competing in a different country and enjoyed the traveling. Whatever the reason may be, the experience of the GBC was exciting and fun to the participants. It is also very positive that many participants used the word "learning" to describe the GBC, as that indicates that they also derived academic benefit from participation.

The positive aspects of "fun way of learning" and "opens new horizons" relate to the words that the participants used to describe the GBC. It is an indication that they enjoyed the experience of participation, but (as already stated) derived academic

benefits from the experience. The fact that many participants listed “teamwork” as a positive aspect relates to one of the skills that can be developed through the use of case studies in groups, as also discussed in Chapter 2.

Unfortunately, the GBC is very “time consuming” and “hard work”, especially for teams who made it to the final of the competition. It is hoped, however, that the benefits derived from participation in the GBC would make up for the hard work and time spent. The fact that “only in English” is listed as a negative aspect relates to the discussion of the outcome of the comparison between participants who spoke English as mother tongue and those who do not. Language can definitely be a barrier to students whose mother tongue is not English. It can even be a benefit, as participants are exposed to English, which is widely regarded as the language of business, early on in their studies.

The other benefits of “presentation skills”, “conflict resolution” and “work-based skills” were all positive aspects in terms of preparing students for a career in business. All of these skills listed would benefit them in real-life business situations.

4.5 Summary

This chapter related the statistical results of the empirical tests done on the responses from the participants. The tests done on the questionnaire yielded the results, which confirmed the validity and reliability of the constructs within the questionnaire. This was followed by descriptive statistics, which were discussed for each test done.

From the descriptive statistics, it could be seen that participants overall found that the GBC added value, and that certain skills were developed through participation in the GBC. The comparison in terms of language, shortlisted teams and countries yielded differences, where the comparison in terms of gender did not yield significant differences.

The answers to the open-ended questions were also mainly positive, and confirmed the value of the GBC to the students. Further skills that were developed (such as presentation skills, conflict resolution and work-based skills) were listed by the participants.

The results presented in this chapter will be used to aid the conclusions drawn in Chapter 5. The results definitely confirmed the value of the GBC to the participants, and will support the conclusions in the following chapter.

Chapter 5 – Summary and conclusion

5.1 Overview

This chapter aims to conclude the study, as it forms the final chapter of this study project. It starts with the conclusion to each of the aims of the research projects, which were discussed in Chapter 1. Recommendations are then made to the core audience and the peripheral audience, as well as a discussion on the value and limitations of the research. The chapter concludes with areas for further research and a final summary.

No research project would be complete without settling the questions that were asked at the start of the project and addressing the aims of the research. This chapter will serve as the final conclusion, and will provide answers to the questions that were asked in Chapter 1. All the previous chapters are therefore flowing into Chapter 5 as a culmination of this project.

5.2 Summary of chapters

5.2.1 Summary of Chapter 1

Chapter 1 dealt with the formulation of the research problem in order to determine the starting point for this research project. To support the formulation of the research problem, Chapter 1 included a preliminary literature review, which was expanded in Chapter 2. The preliminary literature review indicated that various authors believed that case studies do have benefits to graduates. It also included a brief discussion of the proposed methodology to be followed, which was expanded in Chapter 3.

Chapter 1 indicated that the research problem of the study could be aggregated in the following research question: Do the financial management case study-based GBC add value for the students taking part, and if it does, what is that value or benefits gained?

This research question translated into the main objective of the study, which was to determine whether there were any benefits, academic or otherwise, for the students in taking part in a financial management case study-based competition.

As stated in Chapter 1, the main objective was supported by the following secondary objectives:

- An analysis of the literature on the value of case studies.
- The identification of the skills developed by taking part in the competition.
- The development of a framework to assist future students and academic mentors who would like to take part in the GBC.
- Creating an awareness of the skills on which to focus when attempting the final CIMA examinations.

5.2.2 Summary of Chapter 2

Chapter 2 dealt with the literature regarding the benefits of case studies and certain skills that accounting graduates should have before entering the job market. The first portion of this chapter discussed the benefits of case studies, and related it to the relevant questions in the questionnaire. The second portion of this chapter discussed the skills that accounting graduates should have or be exposed to, and related it to the relevant questions in the questionnaire. The main aim of this chapter was to provide an overview of relevant literature in order to adapt the questionnaire efficiently and conduct the rest of the study.

The literature highlighted definite benefits of using case studies, action-oriented learning and simulations. Various aspects where value could be added by exposing students to practical aspects were mentioned by various authors. The skills that graduates need before entering the marketplace were also discussed from the literature. It seems that technical knowledge is not sufficient anymore, and graduates should have the opportunity to develop a wider set of skills.

5.2.3 Summary of Chapter 3

This chapter provided an overview of the research methodology used. It started by defining various terms that are relevant when embarking on a research project. This was followed by a discussion of the methodology that was used in this research project. The research paradigm that was used was the interpretive paradigm. The reasoning behind that was the fact that the study's main objective was to understand the perceived benefits of participation in the GBC for the students. The perceptions of the students would also influence the results, and consequently the interpretive paradigm was classified as the most appropriate research paradigm for this study.

In terms of Mouton's (2009:137) classification of the possible "worlds" in which research could be done, this study was classified as research in World Two. The reason for that is the fact that a research problem was identified, and the research was structured to reach the research objectives that supported the main objective of the research.

The remaining part of the chapter dealt with the respondents and questionnaire, as well as the statistical analysis that was done. The respondents consist of the participants in the GBC who competed in the global final. More detail regarding the respondents is included in Annexure B. The questionnaire was adapted from a previous PhD study, and the constructs were tested for validity and reliability.

5.2.4 Summary of Chapter 4

Chapter 4 related the statistical results of the empirical tests done on the responses from the participants. The validity of the constructs in the questionnaire was confirmed by means of a confirmative factor analysis. The reliability of the constructs within the questionnaire was confirmed through the calculation of Cronbach alpha coefficients. This was followed by descriptive statistics, which were discussed for each test done.

From the descriptive statistics, it could be seen that participants were of the opinion that the GBC added value, as the means for all of the constructs were above 3. They also felt that the mentioned skills were developed by participation in the GBC. The answers to the open-ended questions were also mainly positive, and confirmed the value of the GBC to the students. The participants listed other skills (such as presentation skills, conflict resolution and work-based skills) that were also developed.

The comparison in terms of language, shortlisted teams and countries yielded differences. Possible reasons for the differences in terms of language and shortlisted teams were discussed. It was also recommended that the differences in terms of countries should be explored further. The comparison in terms of gender did not yield significant differences.

5.3 Conclusions to objectives

5.3.1 Conclusion to main objective

The main aim of the study was to determine whether the GBC added value to the participants, and therefore whether a financial management case study-based competition adds value to the participants. This research problem was investigated with further secondary aims in mind. The conclusion to the main aim will be discussed first, followed by the conclusions of the secondary aims.

In order to refresh the reader's mind, the secondary objectives are listed below:

- An analysis of the literature on the value of case studies.
- The identification of the skills developed by taking part in the competition.
- The development of a framework to assist future students and academic mentors who would like to take part in the GBC.
- Creating an awareness of the skills on which to focus when attempting the final CIMA examinations.

In Chapter 3, the research methodology was discussed. The research methodology included a literature study, aimed at flowing into the rest of the research project. The questionnaire that was adapted from a PhD study was adapted in terms of the aspects highlighted by the literature review. The questionnaire was distributed to students to ascertain their perception of the value of participation in the GBC.

In Chapter 4, the results were discussed, and each of the constructs yielded a mean of above 3, with most of the constructs above 4. The constructs with the highest means were personal experience (4.41), strategic analysis skills (4.36), subject exploration (4.34) and financial management skills (4.33). This indicated that the participants perceived the GBC to have added value to them in terms of the development of the skills mentioned in the questionnaire.

The greatest contribution of the GBC seems to be in terms of applying theoretical knowledge, as indicated by the strategic analysis, subject exploration and financial management skills constructs. It is also notable that the personal experience construct yielded the highest mean, and indicates the value to participants. The value to the participants lies in the fact that, if they did not take part in the GBC, they might not have had exposure to the mentioned skills. The development of these skills would stand them in good stead going forward into further studies or the workplace.

The paragraph above also ties in with the research methodology that was followed, as discussed in Chapter 3. The interpretive research paradigm enabled the researcher to understand the perceived benefits of participation in the GBC. It also contributed to the comprehension of the way in which the participants' perceptions influenced the results.

The open-ended questions were answered positively, which indicates that the participants' own opinions also reflected the perceived value of their participation. The top three responses to the question of the positive aspects of the GBC were that it opens new horizons, it is a fun way of learning, and the teamwork aspect. These

responses tied in with the outcome of the empirical study with the responses to the questionnaire.

It can therefore be concluded that a financial management case study-based competition can be of benefit to the participants. It would also be beneficial to use the case study in a classroom situation, in order for all the students to gain from participation, even though the participation would not be in the actual GBC.

5.3.2 Literature review

One of the secondary aims was to conduct a review of available literature on the value of case studies. This was documented and discussed in detail in Chapter 2. The authors whose work was discussed in Chapter 2 were all of the opinion that case studies do indeed add value.

Some of the factors mentioned regarding the value of case studies included that it assists in applying knowledge, it facilitates practical application of theoretical concepts, and simulates reality. Case studies also provide a holistic overview of subject content, and assist students in learning while they are physically engaged with a concept.

The conclusion of the literature review is that case studies have added value in the past, and that this was proved by various studies. It can therefore be concluded that case studies do add value. This conclusion is in line with the conclusion made regarding the main aim. Case studies do add value in terms of practical application of theoretical concepts, assisted the students in learning while they were physically engaged with concepts, and provided a holistic overview.

5.3.3 Identification of skills developed

As part of the descriptive statistics, the skills that the participants perceived to have developed were identified. The identification of the skills developed through participation in the GBC was discussed in Chapter 4 as part of the results.

All of the skills mentioned in the questionnaire were rated high, with most of the constructs' means above 4. The relevant skills are discussed in detail in Chapters 2 and 4. It should, however, be noted here that the constructs with the highest means were personal experience (4.41), strategic analysis skills (4.36), subject exploration (4.34) and financial management skills (4.33).

The constructs into which the questions, and thus the mentioned skills, were divided referred to specific skills identified in the literature review. All of these skills were deemed to be of importance to accounting graduates due to various reasons. The fact that the respondents believed that those skills were developed through participation in the GBC further highlights the value of the GBC.

Suffice to conclude here that participants did indeed develop all the skills mentioned in the questionnaire, please see the discussion in Chapter 2 for all the questions, where it was included and which skills it referred to. The participants also added various skills developed as answer to the open-ended questions, of which the top three were included and discussed in Chapter 4. For completeness sake, the top three answers to the open-ended questions are included here: presentation skills, conflict resolution and work-based skills.

The conclusion for this portion is therefore that participants developed skills such as teamwork, oral and written communication, self-management, applying theoretical concepts in practice, etc. This case study can therefore be used with great success within a context where similar business skills of students have to be developed.

5.3.4 Framework for participants and mentors

In order to assist students and mentors for participation in future in the GBC, one of the secondary aims is to develop a framework of the skills that are needed when attempting the GBC. This would enable the teams to ensure that they have the correct skills set in their team before commencing on the GBC journey, and if some of the skills are lacking, they could be developed early on in the competition.

The methodology followed here ties in with the methodology followed to address the main objective. This was taken one step further by identifying the skills that yielded the highest means, including those skills in the proposed framework discussed below.

The main focus that came out of the previous paragraphs was the application of theoretical concepts in practice. The GBC is the type of competition where technical skills would play a major part in analysing the case study, writing the report and preparing the presentation. It is consequently very important to have team members who have a strong technical basis from which to progress through the practical application.

Other skills that also ranked high were softer skills such as oral and written communication, presentation skills, teamwork, etc. From this can be seen that the focus is not only on the technical side, and that the soft skills are important too. Even though team members should have a strong technical grounding, they should also be able to function efficiently within a team and be able to communicate their findings.

Figure 5.1: Hierarchy of important skills

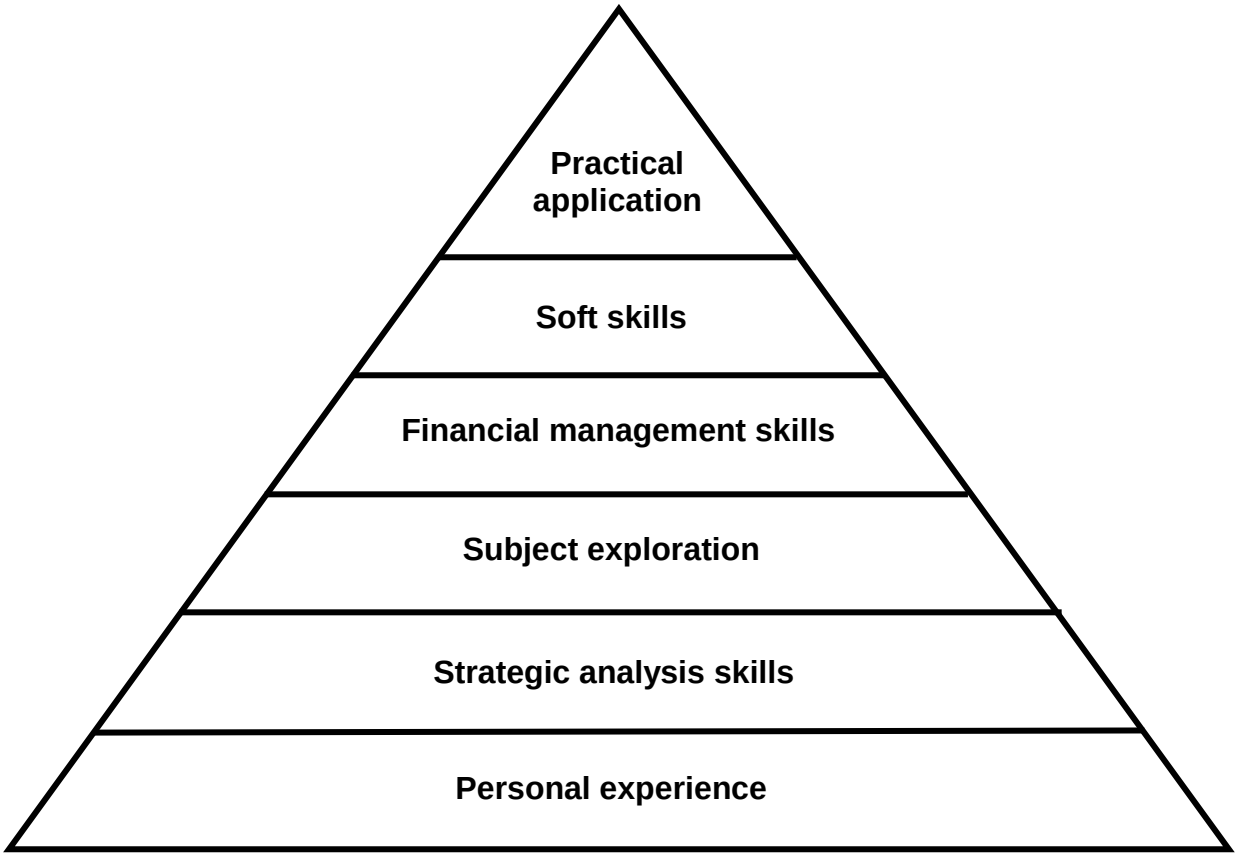

Figure 5.1 above is a hierarchical illustration of the framework of the perceived skills that participants should have in order to be successful in the GBC. The foundation is the personal experience of participation in the GBC that was ranked the highest. From there the strategic analysis skills, subject exploration and financial management skills builds forth, to culminate in the soft skills and practical application of theoretical concepts.

The conclusion drawn here is that a balance between strong technical skills and well-developed soft skills would greatly benefit a team that would like to attempt the CIMA GBC. The recommendation here is to select a few potential team members based on their technical competence, and then ask them to prepare a brief report followed by a small presentation. This would enable mentors to select a team that is competent on the technical side, as well as in the softer skills.

5.3.5 Skills for final examination

The same methodology that applied to the rest of the study was also followed to reach this objective. The skills needed for the final examination flows from the previous conclusions to the secondary objectives. The reader is reminded of the fact that the GBC is based on a previous CIMA examination, and the skills for participation for the GBC can therefore also be applied to the final examination.

The skills needed to attempt the final examination would be very similar to the skills needed in a team to be successful in the competition, apart from the teamwork and presentation skills. Candidates attempting the final examination would only have the report writing portion, and not the presentation.

Strong technical skills should therefore be combined with what is known as business acumen. The term business acumen includes skills such as report writing, communication skills, time management, etc. Candidates attempting the final examination would benefit from developing the business acumen skills as part of their examination preparation, as that would set a strong technical student apart from the rest.

5.4 Recommendations

5.4.1 Core audience

The recommendations are structured in order to focus on what would be important for the core audience and what would be of value to the peripheral audience. The core audience consists of future participants in the GBC, academic mentors and future students attempting the final CIMA examinations. The peripheral audience consists of CIMA and other financial management lecturers.

As stated earlier in this chapter, future participants in the GBC should ensure that the team members have a strong technical knowledge, as well as the ability to work efficiently in a team and be able to communicate verbally and by means of a written report. If these attributes are not present in the team, they should focus on the early development of those attributes.

Flowing forth from the recommendation to the future participants is a similar recommendation to future academic mentors. A team should be selected with the attributes mentioned in the previous paragraph, and if those attributes are not present, the academic mentor should ensure that the team members get the relevant exposure to developing those skills. The mentor should guide teams in the right direction, while keeping the important attributes and technical requirements in mind.

Future students attempting the final CIMA examinations need to focus on all the mentioned skills, apart from the verbal, presentation and teamwork aspects. It is important that they develop their time management, report writing, etc. before attempting the examination, as it is too late to incorporate something into an examination that was not practised and developed beforehand. In all this, students should not lose focus of the critical technical knowledge needed to pass the examination.

5.4.2 Peripheral audience

As mentioned, the peripheral audience consists of CIMA and other financial management lecturers. CIMA is interested in the outcome of the research, as they would like to use it in marketing material. CIMA can definitely use the outcome of this research in marketing material, as participation in the GBC proved to be of value to the participants. CIMA can also use the results of this study to include in the briefing document that is sent to participants, as it will assist them in preparing for the competition.

The recommendation focused on financial management lecturers is to definitely use the GBC case study in teaching financial management to students. The students would gain valuable technical application skills, as well as skills needed in business. The case study can be presented in the same format as for the GBC competition, just without the physical participation in the GBC. This would ensure that more students in the classroom benefit from the experience, which would otherwise only be available to a few selected teams.

5.5 Limitations of the study

As already mentioned in Chapter 1, possible limitations of this study include the fact that responses to a questionnaire can be context or sample specific, there could be a low response rate to the questionnaire and participants' perceptions were only tested after participation in the GBC. The risk of context- or sample-specific responses to the questionnaire would always be a risk in this case, as the students participating in the final of the GBC would most likely be top students. Their responses might differ from average or below average students. This limitation is addressed by the fact that the study population is clearly defined, and readers of this study would know what type of respondents was dealt with.

The possible low response rate did not turn out to be a limitation of this study, as 93 of the 96 respondents completed the questionnaire. The fact that perceptions of participants were only tested after participation was addressed in wording the questions in order for participants to make the assessment of their exposure to certain of the concepts and skills as a result of participation in the GBC.

Unfortunately, the questionnaire only tested the perceptions of the students, and not hard evidence of actual skills development. It would have been nearly impossible to test the skills of international students before and after such a competition, and it is also not known beforehand which of the teams would be competing in the global final. This limitation was mitigated by the fact that the students could gain a thorough

understanding of the value added due to the timespan of the competition, as they would have had lectures and examinations in between participation in the GBC. Their responses to the questionnaire would therefore be a true reflection of the perceived benefits of their participation in the GBC.

Two additional limitations identified are that the questionnaire did not provide an extensive list of all the possible skills that the GBC could have developed and that the differences between the countries that the participants came from were not explored further. The limitation regarding the list of skills mentioned on the questionnaire was addressed by the open-ended question, as it is nearly impossible to develop a questionnaire that encompasses a complete list of potential skills that can be developed. The participants made use of the space provided to list additional skills developed, and those skills are discussed in Chapter 4.

As the differences between countries can be as a result of many underlying factors, this is included under areas for future research. A study could be done in future that only investigates the reason for different perceptions between participants from different countries.

5.6 Value of the research

The outcomes of this research project can be of value to the core and peripheral audience in terms of the recommendations made. It provided a framework for future participants and academic mentors, as well as future students attempting the final CIMA examinations. It also generated information for CIMA to use in marketing material and briefing documents. In addition, it confirmed that this case study can be used in a classroom situation to develop certain skills in accounting graduates. These aspects are discussed under the recommendations given.

A further value of the study would be that it contributed to the available body of knowledge in terms of the value of case studies and skills development of accounting

graduates. The findings of this study could assist future researchers with projects that they plan on attempting.

5.7 Areas for further research

As already mentioned, this study did not explore the reason why there were different perceptions between students from different countries. The exploration of the reasons behind these differences and the underlying variables concerned could evolve into an interesting research project.

This study included only teams that competed in the global final of the GBC, but future studies could include more of the participants. This would enable comparison between skills developed at different levels of the competition. A comparison should be made between teams who only submitted reports, teams who competed in their country's final, and teams who competed in the global final.

Although this research only focussed on one business competition, there are various different business competitions in which students can participate. Some of the more well-known competitions with a business, management or accounting basis include Shell Ideas360, Fordham Business Challenge, London Summer School Challenge, Fresh Connection APICS Global Student Challenge, IDC Business Plan Competition and the EY Young Tax Professional of the Year.

In future, a comparison between these different business competitions could be done. This would broaden the scope of research on business competitions, and provide information to interested parties regarding differences and similarities of the business competitions. The comparison between different business competitions would also identify skills developed by each of the business competitions, and discuss overlaps between different business competitions. A study such as this would quantify the focus of each of these business competitions, as well as provide an indication to lecturers of which one to use in the classroom if they want to develop certain skills.

5.8 Scientific review of the study

As mentioned in Chapter 3, Kumar (2011:8) identified and defined certain characteristics that a process should have in order for the process to qualify as research. For the sake of completeness the characteristics are listed below:

- Control: The effect that other factors might have on the outcome of the study should be minimised or quantified.
- Rigorous: The procedures followed should be relevant, and the researcher should be able to justify the chosen procedures.
- Systematic: The logical order of procedures is of importance to ensure that the correct flow of those procedures is obtained.
- Valid and verifiable: The integrity of conclusions drawn is of importance, as other researchers should be able to verify conclusions drawn.
- Empirical: The data from which conclusions are drawn should be obtained from observations that can be classified as hard evidence.
- Critical: Research, both the process followed and conclusions drawn, should be valid when subjected to critical analysis.

This study that was conducted will be reviewed in terms of each of the characteristics identified by Kumar (2011:8). In order to determine whether the study adhered to the characteristics as identified, each one will be applied to the research process followed in order to complete this research project.

Control implies that other factors that might have an effect on the outcome of the study are minimised or quantified. The main aspect that might have an effect on the outcome of the study is the possible limitation of context-specific data. This relates to the fact that students participating in the GBC might be above average students, who might have a different perception of exposure to skills. This was discussed in detail in the paragraph that dealt with the possible limitations.

Rigorous implies that the process followed is relevant and the researcher is able to justify the chosen procedures. The research methodology was discussed in detail in Chapter 3, including a justification of the process followed. The research process was determined by taking the relevant literature into account, as well as the objectives of the research process.

Systematic deals with the logical order of procedures to ensure that the correct flow of those procedures is obtained. This research project started with the identification of the objectives, followed by a literature review. The research methodology was discussed in the next chapter, and applied to the empirical study, which yielded the results.

The terms valid and verifiable deal with the integrity of conclusions drawn, as other researchers should be able to verify the conclusions drawn. The conclusions in this study are supported by both the literature review and the results of the empirical study. The literature review is discussed in Chapter 2, and the results of the empirical study are discussed in Chapter 4. Other researchers would be able to follow these discussions and verify the conclusions.

Empirical refers to the fact that the data from which conclusions are drawn should be obtained from observations that can be classified as hard evidence. The results of the data obtained, which are discussed in Chapter 4, were obtained from questionnaires handed out to participants of the GBC. The data were captured from the returned questionnaires and analysed statistically.

The characteristic of critical is analysed by means of a conclusion to this portion of the discussion. In terms of the critical characteristic research, both the process followed and conclusions drawn should be valid when subjected to critical analysis. The above discussion critically analysed the process followed and conclusions drawn in terms of the other characteristics of research. This study adhered to Kumar's (2011:8) characteristics of research.

5.9 Summary

This chapter concluded the study, and provided recommendations to the core and peripheral audience. It also discussed possible limitations of the study and offered concepts for possible future studies. This addressed the goal of the chapter to resolve the research problem formulated at the beginning of the research project.

This study was conducted in terms of the interpretive paradigm, as it was a study to understand the perceived benefits of participation in the GBC and the perceptions of the students influenced the results. It was also classified as research conducted in World Two, as the research problem prompted a research process to be followed in order to reach the objectives of the research project.

The statistical analysis that was done consisted of a confirmatory factor analysis to confirm the validity of the constructs and a calculation of the Cronbach alpha coefficients to confirm the reliability of the constructs in the questionnaire. Descriptive statistics were discussed for the total group of participants, after which comparisons were made between different categories within the total group.

Independent t-tests were used to make a comparison between shortlisted teams and teams not shortlisted, participants whose first language is English and those whose first language is not English, as well as male and female participants. The comparison based on shortlisting and language yielded differences that were discussed in Chapter 4, while the comparison based on gender did not yield differences.

ANOVAs were used to make a comparison based on the countries from which the participants came. This also yielded differences that were discussed in Chapter 4. These differences were also included in the recommendations made for future research, as it can be explored further.

The overall results showed that participants perceived participation in the GBC to be of value to them. It added value to the participants in terms of the skills that they developed. It was expected that participants would perceive the GBC to add value, as the literature study confirmed that case studies have definite benefits.

The skills that are important for future participants and mentors were identified, and a framework was compiled to assist future participants and mentors. The GBC case study could also be used by financial management lecturers to expose students to important skills that they would need when entering the workplace. The recommendations made addressed the main and secondary objectives of this study that were formulated in Chapter 1.

As discussed, the objectives of the study were addressed by the conclusions drawn in terms of each of the objectives, as well as the recommendations made to the core and peripheral audiences. The final conclusion to this study is that participation in the GBC added value to the participants in terms of their perceptions.

Annexure A – Questionnaire

Dear GBC Participant

The following questionnaire is part of my master's degree studies in Management Accounting. The purpose of this questionnaire is to determine the value that participation in the CIMA Global Business Challenge (GBC) had for you as a participant and university student. Your input is therefore very important and valuable.

You are requested to complete the questionnaire honestly and to the best of your ability. All the information obtained from this questionnaire will remain confidential, and will not be traced back to individual students. Please circle each option that you agree with, and in case of a blank space, please write your answer in the blank space.

Your participation is appreciated.

Kind regards,
Miss Rona Louwrens **ACMA, CA(SA)**
Programme Leader: Management Accountancy
North-West University – Potchefstroom Campus

	PART A		
	Complete the following biographical information:		
1	My gender is:	**Male**	**Female**
2	My mother tongue is:		
3	I am from the following participating region:		

	PART B					
	Participating in the CIMA GBC enhanced the following in me:					
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	Critical problem solving	1	2	3	4	5
2	Personal attributes like motivation, self-management, etc.	1	2	3	4	5
3	Being a general manager	1	2	3	4	5
4	Oral and written communication	1	2	3	4	5
5	Problem solving (in terms of society's needs)	1	2	3	4	5
6	Being able to use technology	1	2	3	4	5
7	Being a global player	1	2	3	4	5
8	Theoretical competencies over various fields (subject fields)	1	2	3	4	5
9	Being an entrepreneur	1	2	3	4	5
10	Being able to adapt to change	1	2	3	4	5
11	Being a market analyst	1	2	3	4	5
12	Effective functioning in group work (team building)	1	2	3	4	5
13	Analytical ability, logical argument and summarising	1	2	3	4	5
14	Effective interpersonal communication	1	2	3	4	5
15	Evaluation of ethical considerations within the company	1	2	3	4	5
16	Being a salesperson	1	2	3	4	5
17	Having high values and respect for society	1	2	3	4	5
18	Effective learning	1	2	3	4	5
19	Cultural and ethnic sensitivity	1	2	3	4	5

	PART C					
	Participating in the CIMA GBC effectively addressed the following subject content:					
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	Short-term decision-making (for example identifying relevant costs and revenues)	1	2	3	4	5
2	Financial statement analysis, including calculations and interpretation of ratios	1	2	3	4	5
3	Understanding of a company's external environment (for example PESTEL)	1	2	3	4	5
4	Cost-volume-profit analysis and determining the break-even point	1	2	3	4	5
5	Performing calculations on a spread sheet	1	2	3	4	5
6	Deciding on a company's strategic direction (for example Porter's Generic Strategies or Ansoff's Growth Vector Matrix)	1	2	3	4	5
7	Capital investment appraisal, including a net present value analysis	1	2	3	4	5
8	Extracting information from a given scenario	1	2	3	4	5
9	Evaluating the competitive environment, using Porter's Five Forces	1	2	3	4	5
10	Cost behaviour (for example fixed, variable and mixed costs)	1	2	3	4	5
11	Understanding and mapping a company's stakeholders (for example Mendelow's Matrix)	1	2	3	4	5
12	Sources of finance (debt versus equity)	1	2	3	4	5
13	Understanding a company's strengths, weaknesses, opportunities and threats, using a SWOT analysis	1	2	3	4	5

	PART D					
	Participating in the CIMA GBC can be described as follows:					
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	Had unstructured learning opportunities	1	2	3	4	5
2	Was not always subject content based but broad based	1	2	3	4	5
3	Lecturer / teacher was a facilitator	1	2	3	4	5
4	There was active participation from team members	1	2	3	4	5
5	Required self-study and work in the participant's own time	1	2	3	4	5
6	Included practical experiences that made learning relevant and interesting and simulated reality	1	2	3	4	5
7	It focused on the competencies I require for my profession	1	2	3	4	5
8	Provided opportunity learning from peers	1	2	3	4	5
9	Made use of multi-media and technology	1	2	3	4	5
10	Occurred in a logical manner	1	2	3	4	5
11	Helped me obtain a holistic perspective of the subject field	1	2	3	4	5
12	Took into consideration my previous knowledge and competencies	1	2	3	4	5

	PART E					
		Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	My interest in accounting and strategy has been enhanced by my participation in the CIMA GBC	1	2	3	4	5
2	Participating in the CIMA GBC broadened my view on the role of the accountant	1	2	3	4	5
3	The CIMA GBC made it easy for me to link theory and practice	1	2	3	4	5
4	I enjoyed the social aspects of the CIMA GBC	1	2	3	4	5
5	I was motivated by my participation in the CIMA GBC	1	2	3	4	5

1	Describe the CIMA GBC in one word	

2	List one positive and one negative aspect of the CIMA GBC	

3	If you feel that participation in the GBC had other benefits, please list those benefits:	

Annexure B – Division of categories

Region	N	Gender	Position	Mother tongue	Classification of region *
India	4 Respondents	3 Male 1 Female	Shortlisted	3 Hindi 1 Punjabi	Middle income Average development
Russia	4 Respondents	3 Male 1 Female	Shortlisted	3 Russian 1 Armenian	Middle income Average development
China	4 Respondents	2 Male 2 Female	Shortlisted	3 Mandarin 1 Chinese	Middle income Average development
Indonesia	4 Respondents	2 Male 2 Female	Shortlisted	4 Indonesian	Middle income Average development
Poland	4 Respondents	4 Male	Shortlisted	4 Polish	Not classified **
Singapore	4 Respondents	3 Male 1 Female	Shortlisted	2 Mandarin 1 English 1 Chinese	High income Developed
Middle East ***	4 Respondents	1 Male 3 Female	Not Shortlisted	1 Malayalam 1 Urdu 1 Hindi 1 Telugu	Middle income Average development
Philippines	4 Respondents	3 Male 1 Female	Not Shortlisted	2 Filipino 2 Tagalog	Middle income Average development
New Zealand	4 Respondents	3 Male 1 Female	Not Shortlisted	4 English	High income Developed
Myanmar	4 Respondents	1 Male 3 Female	Not Shortlisted	4 Myanmar	Low income Developing
Vietnam	4 Respondents	1 Male 3 Female	Not Shortlisted	4 Vietnamese	Not classified **
Ghana	4 Respondents	4 Male	Not Shortlisted	2 English 2 Not stated	Low income Developing
Thailand	4 Respondents	4 Female	Not Shortlisted	4 Thai	Middle income Average development
Zambia	4 Respondents	2 Male 2 Female	Not Shortlisted	2 Bemba 1 Tonga 1 Lozi	Low income Developing
South Africa	4 Respondents	1 Male 2 Female	Not Shortlisted	3 English 1 Serbian	Middle income Average development
Bangladesh	4 Respondents	2 Male 2 Female	Not Shortlisted	4 Bengali	Low income Developing
Australia	4 Respondents	3 Male 1 Female	Not Shortlisted	2 Chinese 1 English 1 Bengali	High income Developed
Malaysia	4 Respondents	4 Female	Not Shortlisted	3 Malay 1 Mandarin	Middle income Average development
Nepal	3 Respondents	2 Male 1 Female	Not Shortlisted	3 Nepali	Low income Developing

Region	N	Gender	Position	Mother tongue	Classification of region
United Kingdom	4 Respondents	3 Male 1 Female	Not Shortlisted	3 Czech 1 English	High income Developed
Pakistan	2 Respondents	2 Male	Not Shortlisted	2 Urdu	Middle income Average development
Ireland	4 Respondents	3 Male 1 Female	Not Shortlisted	4 English	High income Developed
Sri Lanka	4 Respondents	1 Male 3 Female	Not Shortlisted	4 Sinhalese	Middle income Average development
Hong Kong	4 Respondents	3 Male 1 Female	Not Shortlisted	4 Cantonese	Middle income Average development

* ”Average development” refers to a conflation of IMF “Emerging and other developing countries” and UNDP “Medium to High Human Development Countries”

** “Not classified” refers to countries not falling into a clearly defined developmental classification

*** The Middle East region includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. Developmental classification is according to the group as a whole.

**** Classified in terms of the classifications by the United Nations Development Program, The World Bank and the International Monetary Fund (United Nations, 2014; The World Bank, 2014; International Monetary Fund, 2014)

BIBLIOGRAPHY

ADLER, R.W. & MILNE, M.J. 1997. Improving the quality of accounting students' learning through action-oriented learning tasks. *Accounting Education,* 6(3): 191-215. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 15 December 2014].

ANDREWS, J. & HIGSON, H. 2014. Is Bologna working? Employer and graduate reflections of the quality, value and relevance of business and management education in four European Union countries. *Higher Education Quarterly,* 68(3): 267-287. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 16 December 2014].

ANDREWS, J. & HIGSON, H. 2008. Graduate employability, "soft skills" versus "hard business knowledge: A European study. *Higher Education in Europe,* 33(4): 411-422. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 15 December 2014].

ANASTASI, A. & URBINA, S. 1997. Psychological testing. 7th ed. New York: Prentice Hall Inc. 721 p.

BABBIE, E. 2013. The Practice of Social Research. Canada: Cengage Learning. 584 p.

BPP – See BPP LEARNING MEDIA

BPP LEARNING MEDIA LTD. 2011. CIMA Professional Competence Level Paper T4 Test of Professional Competence in Management Accounting. United Kingdom: BPP Learning Media Ltd. 560p.

BRIGHAM, E.F & EHRHARDT, M.C. 2013. Financial Management: Theory and Practice. 13th ed. United States: Cengage South-Western. 1184 p.

BRIGHAM, E.F. & HOUSTON, J.F. 2011. Fundamentals of Financial Management. 11th ed. United States: Thomson Learning Inc. 712 p.

BROZIK, D. & ZAPALSKA, A. 2006. Entrepreneurial decision making in a dynamic environment. *Journal of East-West Business,* 12(2-3): 131-169. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 14 August 2014].

BRYANT, S.M. & HUNTON, J.E. 2000. The use of technology in the use of instruction: Implications for accounting educators and accounting researchers. *Issues in Accounting Education,* 15(1): 129-162. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 19 December 2014].

BusinessDictionary.com. 2014. WebFinance Inc. [Date of access: 15 December 2014].

CAGLE, J.A.B. & BAUCUS, M.S. 2006. Case studies of ethical scandals: Effects on ethical perceptions of finance students. *Journal of Business Ethics*, 64: 213-229. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 12 October 2011].

CHARTERED INSTITUTE OF MANAGEMENT ACCOUNTANTS. 2011. Competition hots up in the Global Business Challenge. *Financial Management*, 13, June.

CHARTERED INSTITUTE OF MANAGEMENT ACCOUNTANTS. 2012a. CIMA and the GBC [Web:] http://www.cimaglobal.com/Events-and-cpd-courses/globalbusinesschallenge/CIMA-and-the-Global-Business-Challenge/ [Date of access: 22 April 2012].

CHARTERED INSTITUTE OF MANAGEMENT ACCOUNTANTS. 2012b. Why CIMA? [Web:] http://www.cimaglobal.com/About-us/Why-CIMA-is-different/ [Date of access: 22 April 2012].

CHARTERED INSTITUTE OF MANAGEMENT ACCOUNTANTS. 2013. Competition Rules [Web:] http://www.cimaglobal.com/Events-and-cpd-courses/globalbusinesschallenge/How-to-take-part/rules-of-the-competition/ [Date of access: 17 August 2014].

CIMA – See CHARTERED INSTITUTE OF MANAGEMENT ACCOUNTANTS

COETZEE, S.A., SCHMULIAN, A. & KOTZE, L. 2014. Communication apprehension of South African accounting students: The effect of culture and language. *Issues in Accounting Education,* 29(4): 505-525. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 15 December 2014].

COHEN, J. 1988. Statistical power analysis for the behavioural sciences. 2nd ed. Hillsdale. NJ. Erlbaum. 567 p.

COLDWELL, D. & HERBST, F. 2004. Business research. Cape Town: Juta. 148 p.

CORREIA, C., FLYNN, D., ULIANA, E. & WORMALD, M. 2011. Financial Management. Cape Town: Juta. 796 p.

DWERRYHOUSE, R. 2001. Real work in the 16-19 curriculum: AVCE business and Young Enterprise. *Education and Training,* 43(3): 153-161. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 14 August 2014].

ELIAS, P. & PURCELL, K. 2004. Is mass higher education working? Evidence from the labour market experiences of recent graduates. *National Institute Economic Review,* 190: 60-74. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 15 December 2014].

FIELD, A. (2006). Discovering statistics using SPSS. 2nd ed. London: Sage.

FOUCHE, J.P. 2006. Programme development for first year accounting in South African higher education. Potchefstroom: North-West University. (Thesis – Doctor of Philosophy). 321 p.

GALLUCCI, K.K. 2007. The case method of instruction, conceptual change, and student attitude. North Carolina State University. (Dissertation – Doctor of Philosophy). 181 p.

GANDA, F, NGWAKWE, C.C. & AMBE, C.M. 2013. Independent research and deep learning of accounting concepts: Students' view. (*In* The challenge of responsible accountancy academic citizenship: The quest to balance teaching, research and academic leadership: Paper delivered at the Southern African Accounting Association International Conference. Cape Town)

GEVERS, J. & LUBBE, I. 2013. Effective teamwork design, implementation and assessment: addressing the need for the acquisition of pervasive skills by undergraduate accounting students. (*In* The challenge of responsible accountancy academic citizenship: The quest to balance teaching, research and academic leadership: Paper delivered at the Southern African Accounting Association International Conference. Cape Town)

HAIR, J.R., ANDERSON, R.E., TATHAM, R.L. & BLACK, W.C. (1998). Multivariate data analysis. New Jersey, Prentice Hall Inc. 730 p.

HALL, M., RAMSAY, A. & RAVEN, J. 2004. Changing the learning environment to promote deep learning approaches in first-year accounting students. *Accounting Education,* 13(4): 489-505. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 15 December 2014].

INTERNATIONAL MONETARY FUND. World Economic and Financial Surveys. 2014. World Economic Outlook. Washington D.C.

KAISER, H. 1974. An index of factorial simplicity. *Psychometrika,* 39:31-36.

KOTHARI, C.R. 2004. Research Methodology – Methods and techniques. 2nd ed. New Delhi: New Age International (P) Ltd. 401 p.

KOVA, A. 2012. Verbal communication to author at the CIMA University Forum. Johannesburg.

KUMAR, R. 2011. Research methodology: A step-by-step guide for beginners. 3rd ed. London: SAGE Publications. 415 p.

MAREE, K. 2010. First steps in research. Pretoria: Van Schaik Publishers. 336 p.

MARKAUSKAITE, L., FREEBODY, P. & IRWIN, J. 2011. Methodological choice and design. London: Springer. 311 p.

MERINO, A. & SARTORIUS K. 2011. Cross cultural complexities in South Africa's higher education accounting sector. (*In* Accounting education's role in enhancing sustainable business driven by professional and ethical business leaders: Paper delivered at the Southern African Accounting Association International Conference. George)

MOUTON, J. 2009. How to succeed in your master's and doctoral studies: A South African guide and resource book. Pretoria: Van Schaik Publishers. 280 p.

MOYER, R.C., MCGUIGAN, J.R. & RAO, R.P. 2005. Contemporary Financial Management Fundamentals. USA: Thomson South-Western. 586 p.

NIELSEN, L. 2011. Classifications of countries based on their level of development: How it is done and how it could be done. IMF Working Paper.

NUNNALLY, J & BERNSTEIN, IH. 1994. Psychometric theory. 3rd ed. New York: McGraw-Hill Inc.

RAZZOUK, R. 2011. The effects of case studies on individual learning outcomes, attitudes toward instruction, and team shared mental models in a team-based learning environment in an undergraduate educational psychology course. The Florida State University College of Education. (Dissertation – Doctor of Philosophy). 152 p.

RUSSEL, R., ATCHISON, M. & BROOKS, R. 2008. Business plan competitions in tertiary institutions: encouraging entrepreneurship education. *Journal of Higher Education Policy and Management*, 30(2):
SAS INSTITUTE INC. 2011. The SAS System for Windows Release 9.3 TS Level 1M0 Copyright by SAS Institute Inc. Cary, NC, USA.

SHEWELL, P. & DE BEER, M. 2011. Defining a business partnering role for the finance function. (*In* Accounting education's role in enhancing sustainable business driven by professional and ethical business leaders: Paper delivered at the Southern African Accounting Association International Conference. George)

SKOLNICK, R. 2009. Case study teaching in high school biology: effects on academic achievement, problem solving skills, teamwork skills, and science attitudes. TUI University. (Dissertation – Doctor of Philosophy). 168 p.

TABACHNICK, B.G. & FIDELL, L.S. 2001. Using multivariate statistics. 5th ed. Boston, MA: Pearson Education.

TERRY, D.R. 2007. Using the case study teaching method to promote college students' critical thinking skills. State University of New York. (Dissertation – Doctor of Philosophy). 176 p.

THE WORLD BANK. 2014. World Development Indicators. Washington D.C.

TUCKER, M., SOJKA, S., BARONE, F. & MCCARTHY, A. 2000. Training tomorrow's leaders: Enhancing the emotional intelligence of business graduates. *Journal of Education for Business,* 75(6): 331-338. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 16 December 2014].

UNGERER, M., SWART, O., BECKER, A.I., WILCOCKS, J.S., NIEUWOUDT, M.J. & MASENGE, A. 2011. (*In* Accounting education's role in enhancing sustainable business driven by professional and ethical business leaders: Paper delivered at the Southern African Accounting Association International Conference. George)

UNITED NATIONS. United Nations Development Programme. 2014. Human Development Report. New York. Statistical Annex.

VAN DER MERWE, N. 2013. An evaluation of an integrated case study and business simulation to develop professional skills in South African accountancy students. *International Business and Economics Research Journal,* 12(10): 1137-1156.

VAN DER MERWE, N. & VISSER, S. 2013. Solving the professional skills development conundrum: Introducing an integrated accountancy case study and business simulation assignment. (*In* The challenge of responsible accountancy academic citizenship: The quest to balance teaching, research and academic leadership: Paper delivered at the Southern African Accounting Association International Conference. Cape Town)

VAN DER MERWE, N. 2014. Ameliorating chartered accountants' training at a South African university: Interventions for reform. Potchefstroom: North-West University. (Thesis – Doctor of Philosophy). 284 p.

VAN DER WALT, E.J. 2006. Quoting sources. Potchefstroom: North-West University. 75p.

WASHBUSH, J. & GOSEN, J. 2001. An exploration of game-derived learning in total enterprise simulations. *Simulation and Gaming,* 32(3): 281-296. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 15 December 2014].

WEIL, S., OYELERE, P., YEOH, J. & FIRER, C. 2001. A study of students' perceptions of the usefulness of case studies for the development of finance and accounting-related skills and knowledge. *Accounting Education,* 10(2): 123-146. [In EBSCOHost: http://search.ebscohost.com] [Date of access: 12 October 2011].

WOLMARANS, H.P. 2005. Business simulations in financial management courses: Are they of value to learners? *Meditari Accountancy Research,* 13(1): 121-133. [In Sabinet: http://search.sabinet.co.za] [Date of access: 20 August 2014].

WOLMARANS, H.P. 2006. Business simulations in financial management courses: Implications for higher education. *South African Journal of Higher Education,* 20(2): 352-366. [In Sabinet: http://search.sabinet.co.za] [Date of access: 2 July 2012].

WYNN-WILLIAMS, K., WHITING, R.H. & ADLER, R.W. 2008. The influence of business case studies on learning styles: An empirical investigation. *Accounting Education: An International Journal.* 17(2): 113-128. [In Sabinet: http://search.sabinet.co.za] [Date of access: 20 August 2014].