

**PROGRAMME DEVELOPMENT
FOR FIRST YEAR ACCOUNTING
IN SOUTH AFRICAN HIGHER EDUCATION**

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PREFACE

King Solomon wrote in Ecclesiastes 12 verse 12 in the Bible that there will not come an end to the writing of many books, and that too much study exhausts the body. I hope that this research will assist lecturers to be the best lecturers they can be and that it will not be just another book about knowledge.

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KEY WORDS

Accounting education
Professional accountant
Teaching-Learning environment
Learners
Lecturer/facilitator
Milieu
Technical knowledge
Competencies
Soft skills
Teaching methodology
Board game

SLEUTELTERME

Rekeningkunde onderrig
Professionele rekenmeester
Onderrig-leeromgeving
Leerdere
Dosent/fasiliteerder
Milieu
Tegniese kennis
Vaardighede
Sagte vaardighede
Onderrigmetodologie
Bordspel

ABSTRACT

Programme development for first year accounting in South African Higher Education

There are various factors that accounting educators should consider when involved in accounting education. These include:

- A continuous changing business environment;
- A new generation of learners studying at universities;
- A lack of skills among learners;
- Accounting educators resisting changes in accounting education; and
- The requirements for continuing professional education.

From the literature it seems that much research has been done in the field of accounting education, but that it did not find practical application in the classroom. It is therefore necessary to think creatively in order to find practical solutions for the challenges facing both lecturers and facilitators.

In the study the following elements of the teaching-learning environment were identified:

- Learners;
- The lecturer/facilitator;
- The milieu;
- The subject content (including technical content and competencies); and the
- Teaching methodology.

Each of these elements were investigated during the research in order to identify factors from literature that could be included in an improved teaching plan. As part of the plan (methodology) a board game "Commercium™" was developed to meet the requirements of the teaching-learning environment.

The board game was evaluated by first year learners at the Potchefstroom Campus of the North-West University. The evaluation proved to be very positive. The learners indicated that technical skills, understanding of the roles of the accountant, soft skills as well as knowledge of the subject content improved as a result. What should especially be noted is their positive reaction due to the fact that the game simulated the business environment and linked theory to practice. They also enjoyed the social and group work aspects of the assignment. The learners further had a general positive attitude towards the game. The highest evaluated positive experiences were described as good, exciting and fresh. On the negative side words such as

unhappy, uncomfortable and tensed were recorded. The learners were thus required to move outside their comfort zones.

Learners were also required to summarise the project in one word. Two thirds of the remarks were positive, with the number one remark being the word "interesting". The largest negative comment was that the project was confusing at the start. This could, however, be addressed in future projects.

In conclusion it can thus be said the *Commercium*TM game meets the requirements of an effective teaching-learning environment by providing an effective teaching methodology. Lecturers now have an empirically proven effective teaching tool for introductory accounting, based on research of the requirements of the teaching-learning environment.

OPSOMMING

Programontwikkeling vir eerstejaar rekeningkunde in Suid-Afrikaanse Hoër Onderwys

Daar is verskeie faktore wat rekeningkunde onderriggeners dwing om steeds aandag te gee aan die professie van rekeningkunde onderrig. Dit sluit in:

- 'n Deurlopend veranderende besigheidsomgewing;
- 'n Nuwe geslag van leerders wat aan universiteite studeer;
- 'n Tekort aan vaardighede by leerders;
- Rekeningkunde onderriggeners wat verandering teenstaan; en
- Vereistes vir voortgesette professionele opleiding.

Uit die literatuur is dit duidelik dat die magdom navorsing oor rekeningkunde onderrig nie praktiese toepassing in die klaskamers vind nie. Dit is alles nodig om opnuut te dink aan praktiese oplossings vir die uitdagings wat dosente en fasiliteerders in die gesig staar.

In die proses is die elemente van die onderrig-leeromgewing geïdentifiseer as:

- Die leerder;
- Die dosent/fasiliteerder;
- Die milieu;
- Die vakinhoud (wat tegniese inhoud en vaardighede insluit); en
- Die onderrigmetodologie.

Elkeen van die faktore is ondersoek ten einde inligting uit die literatuur in te samel vir die daarstelling van 'n verbeterde onderrigplan. As deel van die plan is 'n bordspel "Commercium™" ontwikkel wat aan die vereistes van die onderrig-leeromgewing moes voldoen.

Die bordspel is geëvalueer deur eerstejaarstudente aan die Potchefstroom-kampus van die Noordwes-Universiteit. Die evaluasie was uiters positief. Die leerders het aangetoon dat hul tegniese kennis en vaardighede, hul begrip van die rolle van die rekenmeester, hul sagte vaardighede sowel as die tegniese vakkennis deur die projek verbeter is. Wat veral uitgestaan het was hul positiewe reaksie omdat die projek (volgens hulle) die besigheidswêreld simuleer en dit vir hulle 'n verband tussen die praktyk en teorie verskaf het. Hulle het ook die sosiale en groepwerkaspekte van die opdrag geniet. Die leerders het ook 'n positiewe houding teenoor die spel getoon. Die mees positiewe ervaring was 'n gevoel dat die projek *goed, opwindend* en *vars* is. Ten opsigte van negatiewe gevoelens het woorde soos *ongelukkig, ongemaklik* en *gespanne* voorgekom. Die leerders moes duidelik buite hul gemaksones beweeg het tydens die projek.

Leerders is versoek om die projek met 'n enkele woord op te som. Twee derdes van die opmerkings was positief. Die nommer een opmerking was die woord *interessant*. Die grootste negatiewe kommentaar was dat die spel aan die begin effens deurmekaar/verwarrend was. Dit sou egter in toekomstige projekte aangespreek kon word.

Ter samevatting kan genoem word dat die spel *Commercium*TM tot 'n groot mate die vereistes van 'n effektiewe leeromgewing aangespreek het deur 'n effektiewe onderrigmetodologie daar te stel. Dosente het nou 'n empiries bewese effektiewe onderrighulpmiddel vir inleidende rekeningkunde, gebaseer op navorsing rondom die vereistes van die onderrig-leeromgewing.

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CHAPTER 1 - BACKGROUND, PURPOSE, SCOPE AND METHOD OF STUDY

1.1. INTRODUCTION

“All of us, as accounting educators, have been warned many times that accounting education must change if it is to be relevant and add value to our learners and community” (Albrecht & Sack, 2000:vii). Albrecht and Sack (2000:3) quoted from the then fourteen year old Bedford report, the following: “There is little doubt that the current content of professional accounting education, which has remained substantially the same over the past 50 years, is generally inadequate for the future accounting professional. A growing gap exists between what accountants do and what accounting educators teach. The Committee’s analysis of accounting practice has indicated that accounting education as it is currently approached required major adjustments between now and the year 2000.” Much research has been done since the Bedford committee, but in 2006 it seems that the warnings outlined in this report still apply today.

The eminent current demands are clearly stipulated in the next few paragraphs. As can be seen, the demands differ from institution to institution, country to country and professional body to professional body. Various similarities do, however, occur, indicating the urge for change. Five main areas of consideration were identified, namely the ever-changing corporate world (paragraph 1.1.1, page 1), the new generation of learners (paragraph 1.1.2, page 2), the lack of skills on the part of the learners (paragraph 1.1.3, page 3), the resistance to change from accounting educators’ side (paragraph 1.1.4, page 5) and the requirement of continuous improvement (paragraph 1.1.5, page 6) .

1.1.1. An ever-changing corporate world

“The new millennium has brought phenomenal changes to our world...” (Pretorius, 2001:74). According to Pretorius (2001:74) globalisation posts new challenges in the sphere of higher education. Higher education needs to prepare learners to address issues such as international relations, trade, national policies, the environment, technology, health care, human rights and urban and rural policies.

The manufacturing environment is characterised by change from hand labour to machine labour to computer-integrated manufacturing. This can be linked with a changing business environment, where in South Africa this environment is not protected anymore, but is becoming a strongly competitive environment. In addition, an increasing technological advanced environment as well as competition on the global market, creates a need for a change in management's perspective if they want to be successful (Visser *et al.*, 2001:1). This also applies to professional accountants.

Albrecht and Sack (2000:6) also indicated the major change in the business environment related to technological developments, globalisation and the concentration of power in certain market investors such as mutual funds. The need for wider skilled accountants also stems from the large international audit firms diversifying into various fields outside the auditing and tax field.

The rapid changes in the technological and competitive business environment thus pose serious challenges to accounting education. Johnson (2005) goes as far as saying that the lightning-quick rate of technological innovation could turn the accountant into a "dinosaur" in no time.

Accounting scandals such as Enron, WorldCom and Tyco (Palmer *et al.*, 2004:890) and Parmalat and Vivendi (Gonzalo & Garvey, 2004:460) bring forth a possible crisis for accounting education. Diller-Haas (2006) also emphasises that recent events in the business environment make it crucial to respond to the environment in which accountants operate.

The accounting education environment therefore needs to adapt to these changes and will need to keep up with even more changes in the future.

1.1.2. Educating a new generation

The current generation who enrol at tertiary institutions is often referred to as the Millennials or Generation Y (born between 1981 and 1999) as referred to by Lancaster and Stillman (2002) in the journal *Pediatrics* (Anon., 2005:314). According to the article the previous generation, called generation X, was born between 1965 and 1980 (Anon., 2005:314). Generation Y is also referred to by Anderson (2004:59) as generation Z. According to Anderson (2004) generation Z has been given cell phones and search engines to guide the way, whereas the previous generation X was self-motivated to find their own inner voices. She continues to say that Generation Z will need a wake-up call to get them involved and free them from their state of boredom.

Greene (2003) identified 5 matters to take into account when considering generation Y:

- They grew up with computers and rapid-fire communication;
- They like to do things together with their parents compared to a cynical generation X, who prefer not to spend time with their parents;
- They have multicultural interest due to their global exposure;
- A greater sense of competition exists between them; and
- They are brand sensitive.

This generation was also born in the television age. Researchers have recognised that watching television occupies a larger amount of these childrens' time than does any other single activity (Shin, 2004:367). According to Shin (2004:368-381) this results in children spending less time doing homework, studying and reading for leisure. These children also tend to be more impulsive, resulting in an eventual decrease in academic performance.

Dinet *et al.* (2003:538) found that adolescents with a high Web experience became more critical, less confident and less enthusiastic than their counterparts with less Internet exposure.

Educators dare not ignore the demographics of the generation of learners in front of them. These generations change and what was best practice ten years ago may not be the case anymore today. Each generation seems to have their own preferences and needs, and educators need to be aware of and take these into account during their educational activities.

1.1.3. A lack of skills among learners

The changing business environment demands changes in the skills required from new accountants entering the workplace. Evans and Foster (1997:232) address the narrow focus of traditional accounting, which focused on technical and fragmented treatment of knowledge. This favoured only a basic understanding of conceptual and critical elements.

The American Institute of Certified Public Accountants advocated that accounting education should incorporate oral and written communication skills, critical problem solving skills, use of technology, interpersonal skills, business and professional ethic considerations and team building skills (Cooper, 1997:183). Cooper (1997:53) further supports this argument by stating that only CPA's (Certified Professional Accountants) who are willing and able to adapt to the new management environment will have a chance to survive.

According to Rowlands *et al.* (1998:235) traditional accounting education with the emphasis on a “transfer of body of knowledge” approach, is inadequate for today's accountant and manager. This may be because they are required to do more than replicate knowledge. The United Nations recommended in 1993 that: “Today's professional accountant, in addition to acquiring accounting skills and knowledge, has to be an entrepreneur, financial analyst, global competitor, market analyst, and public relations specialist, as well as a general manager” (Rowlands *et al.*, 1998:235). Furthermore Visser (2000:10) refers to the South African Qualification Authority's (SAQA's) critical outcomes to be addressed in each education program and recommends that it must be reflected in future training and should be applied to improve management training. The assumption can be made that a paradigm shift in the training of accountants as managers may be necessary to accommodate the requirements mentioned above. This paradigm shift is needed among trainers (facilitators) and learners.

With further reference to SAQA, it highlights critical outcomes such as problem solving, leadership, use of technology, entrepreneurship, effective learning, development of careers, improvement of citizenship. All these elements should be addressed in the education and training of accountants (Visser, 2000:10). This leads to the search for improved teaching methods, which are also important in terms of having high training and education standards and complying with regulations.

Collett (2000:67) said that the need for accounting learners to have multi-disciplinary skills, applicable in practice has long been realised. He continues to say that learners, in many instances, find that they need to apply their knowledge from other disciplines shortly after entering the job market. As if all these requirements are not enough, the following is noted: "To be successful in accounting and finance today, you must have more than solid technical, communication, and analytical skills. You must be committed to becoming a peak performer - someone who is recognised for consistently maintaining high productivity levels and going above and beyond expectations" (Messmer, 2001:8).

Davidson *et al.*(2000:53) noted that accounting and auditing firms called for changes in accounting education that would make new accountants more capable of meeting the challenges presented by the modern-day working environment. The largest accounting firms started referring to themselves as professional or consulting firms (Whitson, 2002:3). According to Gabbin (2002) one of the early warning signs of major changes in accounting education came when major CPA firms changed from public accounting firms to professional service providers. This step inevitably led to a broader set of competencies being required. Gabbin (2002) continues to say that the decrease in the initial salaries of accounting majors (relative to other majors) may reflect marketplace expectations about their skills, knowledge and abilities.

Diller-Haas (2006) also indicates that memorising technical knowledge leaves little time for developing the skills that employers seek from accountants. Cooper *et al.*(2005:380) also indicate that accounting educators are distanced from the immediate concerns of recruiters and work managers.

Johns and Strand (2000:319) conclude that business learners should be exposed to situations in which they receive experience in approaching and analysing disagreement and ethical dilemmas. According to Palmer *et al.*(2004:890) accounting scandals such as Enron, WorldCom and Tyco damaged public perceptions on various trust and competency issues of accountants and auditors. According to Gonzalo and Garvey (2004:431) accounting learners thus need to be trained to face ethical dilemmas during their professional careers.

To equip learners with the technical knowledge and skills is clearly not sufficient anymore. Much more is required of them, and the onus rests on the accounting educator to address this or at least guide the learner in obtaining the necessary skills.

1.1.4. Educators resisting change in accounting education

Adler and Milne (1997b:191) claim that during the last decade accounting education has come under increased scrutiny and criticism for not delivering the type of entrants demanded by the requirements set for the accounting profession of the future. The report on this matter had two consistent themes (Adler & Milne, 1997b:191), namely:

- The failure of accounting educators to cope with a wider and more general knowledge base; and
- The failure to promote learners' communication, problem solving and interpersonal skills.

They concluded that the fruits of enhanced learning are clear, but that in many instances the educational regime appears to be locked into their old ways. This tendency stagnates learning among learners.

Lecturers themselves face similar challenges to broaden their skills in order to assist learners in doing the same. More so, they also face the difficulty to facilitate learners in the process of acquiring these skills in such a manner that they could apply it in the real world. However, this could be a major obstacle, as many accounting educators at tertiary level have a professional accounting background and not a formal education background. These professionals may have an integrated knowledge of the accounting disciplines. However transferring it to others may be more of a challenge. This is especially the case where the mentioned accountants were not taught all these skills themselves.

Boyd *et al.* (2000:36) say that educators resist change, because adapting to change is time consuming, difficult and in many instances opposite to what is believed and known. It seems as if the only way around this criticism is for accounting educators to start implementing the recommendations instead of stopping research on the issue. Gabbin (2002) notes that the outflux of the best learners from accounting to other areas exposes the deeper problem of the academic community resisting major curriculum shifts.

A survey by Diller-Haas (2006) of accounting programs in the New York City Metropolitan area indicated that 71% of them still followed a traditional curriculum. She continues to indicate that this may well be the reason for declining accounting majors in the United States.

It thus seems that accounting educators themselves may well be one of the biggest threats to the accounting profession.

1.1.5. Continuing professional education (CPE)

To have a competitive advantage in organisations and be able to perform with the required competency, managers and accountants need to keep up to date with the most recent developments in a broad field of expertise. These may exceed their own study field. Kaizen is the Japanese term for continuous improvement and may well be the keyword for this needed proficiency (Fouché, 2001:4).

Professional associations around the world have placed substantial emphasis on continuing professional education (Rahman & Velayutham, 1998:287). The rapid changes in the professional environment have led to a call for a shift towards andragogy as mentioned by Rahman and Velayutham (1998:288) while they also refer to the studies of Velayutham and Perera (1993) and Adler and Milne (1995).

According to Sharma (1997:143) better quality accounting learners can be produced by discouraging reproduction orientation and encouraging meaning orientation. Morgan (1997:94) refers to Wilson (1992) stating that the continuous development of accounting requires a major shift from a technical orientation to a broad-based, multi-disciplinary orientation.

Gonzalo and Garvey (2004:432) indicate that accounting standards are “temporal answers” influenced by perceived economic realities that change over time. If these standards were to remain unchanged over time it would lose its effect (Gonzalo & Garvey, 2004:432). An

accountant's knowledge base should therefore always be expanded and new standards continuously be developed and studied. Hall *et al.* (2004:490) also support this statement, stating that a fundamental concern for accounting education is to establish a base for accounting graduates to develop life-long learning.

1.1.6. Summary

The above provides an overview of the turmoil the average accounting lecturer and learner faces. The Public Accountants and Auditors Board of South Africa's report on the future of accounting education in South Africa (FAESA) (PAAB, 1994) already addressed many of the above-mentioned matters in 1994. Still, the research unit of the South African Institute of Chartered Accountants (SAICA) again addressed the urgency of the matter in 2001. Several of the previous statements are echoed in a report published by the Institute (Dempsey & Stegman, 2001). From the literature, even in 2006, the call for changes in accounting education still echoes around the globe, Albrecht and Sack's statement (2000:1) that accounting education may not survive the future is more of a reality with every year passing.

1.2. PROBLEM STATEMENT

The **demands** on both educators and learners in the accounting field are constantly increasing. This stems from factors such as the ever-changing corporate world (paragraph 1.1.1, page 1), a new generation of learners who enrol at universities (paragraph 1.1.2, page 2), learners lacking various skills (paragraph 1.1.3, page 3), educators resisting calls for change in accounting education (paragraph 1.1.4, page 5) and the need for continuing professional education (paragraph 1.1.5, page 6). The increase in **criticism** indicates that the current accounting teaching practices are still not fulfilling the needs of the profession.

Much research has been done in the field of improved methodology, subject content, and needed skills. Responses from both the business world and the profession indicate that this research has not found much **practical application**. This is also substantiated by Dempsey and Stegman (2001:11) and Albrecht and Sack (2000:3). It is thus necessary to develop an improved methodology for accounting education, addressing the shortcomings and criticism in a practical manner, and keeping the whole teaching-learning environment in mind. This environment encompasses lecturers/facilitators, prescribed course content and learner profiles.

1.3. BASIC HYPOTHESIS

The hypothesis tested in this study can be formulated as follows:

Teaching accounting skills and the various required soft skills required of accountants should become more effective if a creative methodology that simulates reality, is implemented.

1.4. OBJECTIVES

The *primary objective* of this study is to:

Develop a board game and support material that will assist learners and lecturers in obtaining more of the required soft skills and technical knowledge required by the contemporary accounting environment in an effective and fun way. This should increase the interest in the subject of accounting and therefore advocate life-long learning in the subject field. In line with this, the board game and support material will be evaluated and recommendations on the use thereof will also be made.

The *specific objectives* required to achieve the primary objective are:

- 1) Identify and discuss the variables involved in the teaching-learning environment that may influence effective learning (see chapter 2);
- 2) Identify the requirements on professional accountants regarding the basic technical knowledge and skills, generally acknowledged and required internationally (see chapter 3);
- 3) Identify existing teaching methodologies which address these required skills from literature (see chapter 4);
- 4) Develop a board game as part of the improved methodology, that could assist in more effective learning, incorporating the skill requirements and variables of the teaching-learning environment (see chapter 5) and
- 5) Evaluate the board game to be used in the teaching of introductory accounting (see chapter 6); and
- 6) Come to conclusions and make recommendations on enhancing the teaching of introductory accounting by using the board game (see chapter 7).

1.5. SCOPE OF THE STUDY

According to Mladenovic (2000) research shows that introductory accounting learners have many negative stereotypical perceptions of accounting. These negative perceptions are often created or reinforced in introductory accounting courses. Diller-Haas (2006) is also of the opinion that most business learners form their perception of accounting during their first accounting course. Changes in the accounting methodology should thus already start at introductory (first year accounting) or earlier (school) level.

The study focuses on introductory accounting courses for professional accounting education at tertiary level. The evaluation of the improved methodology will be tested at the Potchefstroom Campus of the North-West University.

1.6. RESEARCH METHODOLOGY

In realising the objectives of the study, both published and unpublished literature will be examined. The evaluation of the suggested intervention will be done by means of surveys to participants. As such, quantitative research techniques will be used.

1.6.1. Literature study

The basis for specific research objectives 1 to 3 (paragraph 1.4, page 8) will be a literature study of the numerous recent research in the accounting field. This will be used to identify applicable skills and knowledge of the various variables applicable to the learning process. Published books, reference works, conference proceedings, periodicals, unpublished papers, reports, electronic media and other publications will be used in developing a theoretical background for the study.

1.6.2. Developing the board game

In reaching specific research objective 4 (paragraph 1.4, page 8) a board game will be developed and applied. This will be done by incorporating the various applicable methodologies already identified. It will be incorporated in the Financial Accounting I course (mainly consisting

of learners enrolled for the CA, CIMA and SAIPA programmes). The respondents will all be learners enrolled for this course at the Potchefstroom Campus of the North-West University.

1.6.3. Evaluation, conclusions and recommendations

After implementing the proposed programme (the board game) learners' experience of the board game will be evaluated by predominantly using quantitative research techniques. Solomon's four-group design will be used for this. Research data will be utilised to improve the game and make recommendations on an environment of continuous improvement. This will facilitate the achievement of specific research objectives 5 and 6 (paragraph 1.4, page 8).

1.7. OVERVIEW OF CHAPTERS

The chapters are divided as follows:

1.7.1. Chapter 1 - Background, purpose, scope and method of study

In chapter one an introduction is given on the turmoil regarding the need for changes in accounting education. Five factors leading to the turmoil are discussed, namely:

- An ever-changing corporate world;
- Educating a new generation;
- Learners lacking various skills;
- Educators resisting change; and
- Continuing professional education (CPE).

The reasons for searching for practical solutions (problem statement) are explained. The hypothesis, research methodology and scope are discussed.

1.7.2. Chapter 2 - The teaching-learning environment

The variables of the teaching-learning environment, namely the lecturer/facilitator, learner, subject content, teaching methodology and place setting are identified in chapter 2. The physical variables of the learner, lecturer/facilitator and place setting are also considered in this chapter. It is necessary to understand these variables in order to develop the board game.

1.7.3. Chapter 3 - Content of the teaching-learning environment for professional accountants

Challenges facing accounting education and criticism against traditional accounting education are discussed as introduction to chapter 3. Attention is also given to the skills (technical, soft and personal) required from professional accountants. These skill requirements are identified from literature. A summary will be provided to be used in the development of the board game.

1.7.4. Chapter 4 - Teaching methodologies

The available methodologies for teaching accounting are identified from literature. These include groupings of self-paced modular methods, experience-based methods, cooperative learning and methods that have to do with different teaching aids as well as other innovations. The matter of retention and application is also addressed. The knowledge compiled in this chapter is also used to find workable practical solutions to incorporate in the board game.

1.7.5. Chapter 5 - Board game and support material development

Firstly the use of a board game is motivated. The previous use of board games in accounting education in the past is also discussed. The game design, including the requirements for the board game, mechanics, dynamics and aesthetics of the board game are furthermore discussed.

1.7.6. Chapter 6 - Evaluation of the implemented methodology

In chapter 6 research methodology, including the purpose of the study and data collection techniques, design of the questionnaire, definition of the population and sample, the empirical research and ethical issues are addressed. The survey results are also presented. Finally a summary of the evaluation of the board game is provided.

1.7.7. Chapter 7 - Conclusions and recommendations

An overall summary of the research findings is provided in line with the research objectives. It is shown to what extent the objectives were reached. A conclusion is reached regarding the

hypothesis. The effectiveness of using the board game to improve the teaching of introductory accounting is thus discussed. Recommendations are also made regarding the possible improvement of the game and support material. Further applications of the game in subject areas other than financial accounting are also discussed. Finally, recommendations are made regarding possible future research on the subject.

CHAPTER 2 - THE TEACHING-LEARNING ENVIRONMENT

2.1. INTRODUCTION

In this chapter the variables involved in the overall learning environment are identified, in order to address research objective 1 of the study (paragraph 1.4, page 8). Three of the variables, namely lecturer/facilitator, learner and the learning environment (classroom) are discussed in this chapter.

In order to promote effective learning, the lecturer/facilitator needs to understand the overall teaching-learning environment. According to Booth *et al.* (1999:279) previous research showed that the learning environment has an influence on the approach to learning, which in return, influences the quality of the learning outcome. It is further underlined that the high surface learning approach scored by accounting learners highlights the need for changes in the learning environment to alter learners' apparent perceptions that studying accounting is learning a set of rules (Booth *et al.*, 1999:296). The Regional Educational Laboratory (2006) also states that the classroom environment encompasses the relationship between learners, lecturers/facilitators, norms for learning and behaviour. They concluded that a positive classroom environment is associated with a range of important outcomes for learners. Hall *et al.* (2004:1) suggested that accounting educators could, through changes in the learning environment, influence the learning approaches adopted by learners.

It seems that any study about effective learning and teaching should thus incorporate knowledge of the overall learning environment, as all learning takes place within a certain environment. There may be factors that lecturers/facilitators have little control over, but they must take control over those matters they can control. In paragraph 2.2, below, it is attempted to identify the elements of the learning environment and to discuss them over the course of following paragraphs and also in chapter 3 and 4. This knowledge will be incorporated in designing the board game, which will be discussed in chapter 5.

2.2. VARIABLES OF THE TEACHING-LEARNING ENVIRONMENT

In the first instance it is necessary to identify the variables involved in the overall teaching-learning environment. According to Booth *et al.* (1999:280) learning cannot be viewed in isolation, but is also influenced by factors such as **curriculum, assessment, teaching modes**

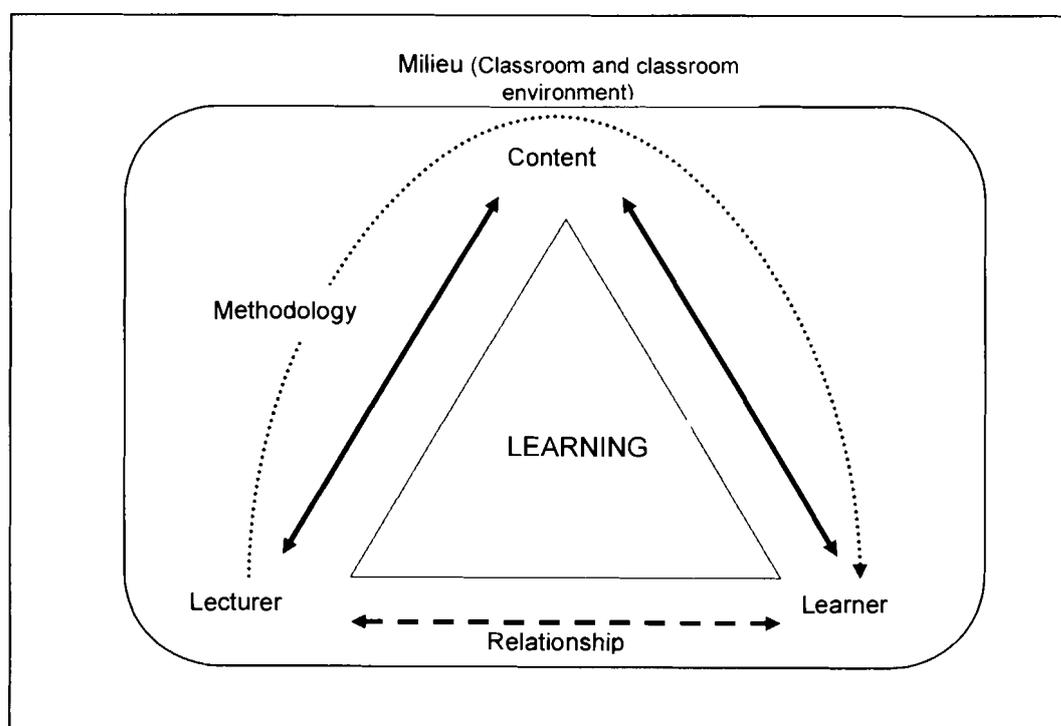
and learners' prior experiences and perceptions. This was also previously noted in Ramsden's model of the "learner learning in context" (Ramsden, 1992:83).

Rebele *et al.* (1991:221) urged accounting education researchers to consider more relevant variables such as the learner and lecturer/facilitator characteristics as well as assessment methods. Ramsden (1992:65) defines the educational environment as consisting of assessment methods, curricula and teaching methods, and to a lesser extent the atmosphere of the course, program or institution.

Wilkinson (1992:27) again identifies speaker (communicator), subject (content) and learner (class) as part of his learner model. Wilkinson also indicates the effect that lecturers'/facilitators' expectations have on the success of learning. Hendricks (1987:112) indicates that matters such as unfavourable room temperature could distract learners in the learning process. He also states that teaching should be heart to heart and thus includes one's intellect, emotions and will (Hendricks, 1987:120).

From the above an attempt is made to illustrate the variables identified in the overall teaching-learning environment by the following diagram (diagram 2.1):

DIAGRAM 2.1 - The overall teaching-learning environment



(Source: Own research)

The lecturer/facilitator, learner and content are set in a specific environment and thus influenced thereby. For learning to take place there must be a lecturer/facilitator, a learner and subject content irrespective of the environment (atmosphere, institution). The interaction between lecturer/facilitator and learner is primarily via the content (the lecturer/facilitator teaching the content and the learner learning it). There is, however, also a non-content based relationship (expectations, perceptions and motivation) between the lecturer/facilitator and learning that may influence the learning process. The interaction between learner and lecturer/facilitator via the content (curriculum, course, and program) takes place by way of the methodology (which includes the teaching methodology and assessment methods).

In the following paragraphs of this chapter the variables in the teaching-learning environment identified above are investigated:

- Lecturer/facilitator (including lecturer/facilitator characteristics) (paragraph 2.3, below);
- Learner (including learner characteristics) (paragraph 2.4, page 37); and
- Environment and atmosphere (paragraph 2.5, page 44).
- Content (including subject or curriculum, soft skill requirements) is addressed in chapter 3. Teaching methodologies are discussed in chapter 4.

2.3. THE LECTURER/FACILITATOR

The lecturer/facilitator is the first element of the teaching-learning environment to be discussed. The lecturer/facilitator may be the most important element as he/she may have the control over most of the other elements such as the content, methodology and to a limited extent the environment.

In the next paragraph matters related to the attributes of an effective and efficient lecturer/facilitator are discussed. From these attributes identified from literature, the most important one will be investigated in more detail.

2.3.1. Attributes of “good”/effective lecturers/facilitators

Various authors gave different views on what the attributes of effective lecturers/facilitators are. Different research studies also indicated various different attributes. A list of the various attributes, that influenced the perspective that learners have of good lecturers/facilitators, listed by various researchers were compiled. To be able to analyse these, the factors to be considered were classified under the following headings:

- 1) Assessment;
- 2) Atmosphere;
- 3) Curriculum design and content;
- 4) General lecturer/facilitator's characteristics;
- 5) Matters outside the classroom;
- 6) Presentation and lecturing; and
- 7) Soft skills.

The list is provided in Table 2.1, page 17, providing a reference between the quality and the various research findings. It was attempted to find similarities between the different authors and to focus on those similarities.

TABLE 2.1 – Lecturer/facilitator characteristics

Characteristic	Dyson and Godfrey (1997) as recorded by Xiao and Dyson (1999: 350) ³	Xiao and Dyson (1999: 354)	Johnson Foundation (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly <i>et al.</i> ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
ASSESSMENT (The way the lecturer/facilitator assesses the learners)											
The instructor should be fair and the quality of examinations and assignments should be good.	X	X							X		
The lecturer/facilitator should have a positive approach by having high expectations of the learners.			X	X				X			X
The lecturer/facilitator should provide good, quality and frequent feedback.	X		X				X				X
The lecturer/facilitator should consider different forms of evaluation and assessment.						X					
The lecturer/facilitator should compliment learners on doing things right.								X			
The lecturer/facilitator should celebrate victories, good performances.								X			
The lecturer/facilitator should address the cognitive learning aims at different levels (knowledge, insight, application at 1st year level, analysis, and synthesis at 2nd year and evaluation at 3rd year.)											X
The lecturer/facilitator should be a facilitator.											X

¹ Original source: Crawford, C.C. 1928. Defects and difficulties in College Teaching. School and Society. XXVIII. 17 October 1928. p497-502.

² Original source: Oliver, G. 1997. What is education? [WEB] www2.waikato.ac.nz/education/edustudies/oliver/educato.htm (10 March 1999) – Not available anymore

³ Original source: Dyson, J.R. & Godfrey, A.J. 1997. The characteristics of Good Teaching as Perceived by Accounting Learners in New Zealand. Working paper, Heriot-Watt University, UK

TABLE 2.1 – Lecturer/facilitator characteristics (continued)

Characteristic	Dyson and Godfry (1997) as recorded by Xiao and Dyson (1999:350) ³	Xiao and Dyson (1999:354)	Johnson Foundation (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly <i>et al.</i> ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
OUTSIDE THE CLASSROOM PERCEPTIONS (Perception of who the lecturer/facilitator is outside the physical classroom)											
The lecturer/facilitator should prepare for and organise the course well.	X	X			X				X	X	
The lecturer/facilitator should be productive and do research in related activities (continuous self-growth).	X	X			X				X		
The lecturer/facilitator should be available and helpful.	X	X								X	
There should be faculty co-operation with the subject, learners and lecturer's needs.			X						X		
ATMOSPHERE GENERATED (atmosphere inside the classroom)											
The lecturer/facilitator should have concern and respect for learners (overall friendliness).	X	X			X				X	X	X
The lecturer/facilitator should be respected by learners		X									
The lecturer/facilitator should be committed to the learners.							X				
There should be discipline in the classroom.		X									
The lecturer/facilitator should show academic rigor.		X									

TABLE 2.1 – Lecturer/facilitator characteristics (continued)

Characteristic	Dyson and Godfry (1997) as recorded by Xiao and Dyson (1999: 350) ³	Xiao and Dyson (1999: 354)	Johnson Foundation (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly et al. ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
CURRICULUM DESIGN AND CONTENT (The way the lecturer/facilitator designs the subject content, notes etc.)											
The supplementary materials and teaching aid should be good, useful and have variety.	X	X							X	X	
The lecturer/facilitator should have knowledge of the subject.	X	X							X		
There should be clarity of course objectives and requirements, and the value thereof.	X									X	
The lecturer/facilitator should help the learners with mastering the important work.				X					X		
The course material should add value.	X							X			
The course and lectures should be structured.							X				
The lecturer/facilitator should not allow improper adjustments to the workload.									X	X	X

TABLE 2.1 – Lecturer/facilitator characteristic (continued)

Characteristic	Dyson and Godfry (1997) as recorded by Xiao an Dyson (1999:350) ³	Xiao and Dyson (1999: 354)	Johnson Foundation (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly <i>et al.</i> ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
GENERAL											
The lecturer/facilitator should be enthusiastic about the subject and teaching (enjoy teaching).	X	X					X			X	X
The lecturer/facilitator should motivate learners to do their best / encourage learners to learn.				X	X			X	X	X	
The lecturer/facilitator should have well perceived personality characteristics.	X	X							X	X	
The lecturer/facilitator should have good pronunciation skills.	X										
The lecturer/facilitator should be eager to learn.	X										
The lecturer/facilitator should apply clear thinking.		X									
The lecturer/facilitator should have own ideas and not only be a follower.		X									
The lecturer/facilitator should set the example.								X			X
The lecturer/facilitator should share his/her dream with learners.								X			
The lecturer/facilitator should make things happen.								X			

TABLE 2.1 – Lecturer/facilitator characteristics (continued)

Characteristic	Dyson and Godfry (1997) as recorded by Xiao an Dyson (1999:350) ³	Xiao and Dyson (1999: 354)	Johnson Founda- tion (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly et al. ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
PRESENTATION/LECTURING INVOLVING LEARNERS											
The lecturer/facilitator should involve learners in the learning process/learning atmosphere (active learning).			X		X					X	X
The lecturer/facilitator should encourage questions and discussions/openness for opinions and help to build confidence among learners.	X								X		X
The lecturer/facilitator should provide intellectual challenges and encouragement of independent thought.	X	X									X
The lecturer/facilitator should create an environment in which learners feel free to express their opinions.						X		X			X
The lecturer/facilitator should build the need for learning/research before teaching.				X					X		

TABLE 2.1– Lecturer/facilitator characteristics (continued)

Characteristic	Dyson and Godfrey (1997) as recorded by Xiao an Dyson (1999:350) ³	Xiao and Dyson (1999:354)	Johnson Foundation (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly et al. ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
PRESENTATION/LECTURING											
PRESENTATION											
The lecturer/facilitator should apply effective teaching methods and have good examples integrated.		X							X	X	X
The lecturer/facilitator should stimulate an interest in the subject.	X	X					X		X	X	
The lecturer/facilitator should be clear and understandable on learners' level.	X								X	X	
The lecturer/facilitator should have good communication skills.		X			X						
The lecturer/facilitator should have good presentation skills.		X									
The lecturer/facilitator should be practical and in association with reality.									X		
The lecturer/facilitator should expand in lecturing.		X									
The lecturer/facilitator should affect the learners' hearts.					X						
The lecturer/facilitator should stimulate a personal learning context.							X				

TABLE 2.1 – Lecturer/facilitator characteristics (continued)

Characteristic	Dyson and Godfrey (1997) as recorded by Xiao an Dyson (1999:350)	Xiao and Dyson (1999:354)	Johnson Foundation (1989:12)	Wilkinson (1992)	Hendricks (1987)	Oliver recorded by Kelly et al. ² (1999:329)	Sharma (1997:129)	Wing (2001:65)	Crawford as noted by Good ¹ (1999:546)	Young & Shaw (1999:677)	Visser (2000:11)
PRESENTATION/LECTURING											
TAKING LEARNERS INTO CONSIDERATION											
The lecturer/facilitator should be sensitive to, and have concern with learners' academic level and progress.	X	X	X						X		
The lecturer/facilitator should take the way learners learn into account.			X		X						
SOFT SKILLS											
The lecturer/facilitator should provide moral and behavioural guidance and be teaching for life change in the learners.		X		X		X					
The lecturer/facilitator should develop learners' team building skills.			X					X			
The lecturer/facilitator should equip learners for a life of service.				X							
The lecturer/facilitator should consider teaching/learning time management.			X								X

Some of the groups of factors considered in Table 2.1 pages 17 to 23 were:

- 1) Assessment;
- 2) Atmosphere;
- 3) Curriculum design and content;
- 4) General lecturer/facilitator's characteristics;
- 5) Matters outside the classroom;
- 6) Presentation and lecturing; and
- 7) Soft skills.

The following were noted in the groups:

- Looking at the *assessment* of learners, the instructor's fairness and good quality assignments was predominant, along with a positive approach towards the results and providing good, quality and frequent feedback;
- The learners' perception on the *atmosphere* in the class is predominantly determined by the lecturers'/facilitators' concern and respect (overall friendliness) towards the learners;
- When looking into the process of *curriculum design and content* the lecturer/facilitator should definitely take the desire towards useful supplementary materials and teaching aids, having knowledge of the subject field and not overloading the learners into account;
- The matter of *general lecturer/facilitator characteristics* highlighted three aspects: Lecturers'/facilitators' enthusiasm, lecturers'/facilitators' motivation of learners; and well perceived personality characteristics. It was also identified that the lecturer/facilitator should have leadership skills;
- *Outside the classroom* the main factors lecturers/facilitators should consider are good preparation and organisation, continuous self-growth and research and availability to the learners;
- In *presenting lectures* lecturers/facilitators should consider three major factors, namely involving the learners, taking the learners into consideration and having effective teaching methods that are stimulating and interesting; and
- Lastly from the *soft skill* section it seems that it is also expected from lecturers to provide learners with moral and behavioural guidance.

These matters are also incorporated in a presentation of the Academic Support Services of the North-West University (Potchefstroom Campus) called: "Facilitation of Teaching and Learning - Design a contact session that encourages learning". The presentation

incorporates the following as attributes of effective (“good”) teaching (Van Hamburg, 2006:22):

- Encourage *learner-lecturer* contact;
- Encourage *co-operative* learning;
- Encourage *active* learning;
- Give *rapid feedback*;
- Stress *effective time management*;
- Communicate *high expectations*; and
- *Respect diverse talents, skills and learning styles.*

The following matters identified above are discussed in more detail in the following paragraphs:

- Paragraph 2.3.2, below – Lecturers’/facilitator’s approach to teaching;
- Paragraph 2.3.3, page 30 – Continued development;
- Paragraph 2.3.4, page 31 – Communication;
- Paragraph 2.3.5, page 32 – Character and personality;
- Paragraph 2.3.6, page 33– Relationship building and motivation; and
- Paragraph 2.3.7, page 36 – Preparation.

2.3.2. Teaching approach

The lecturer/facilitator has a responsibility for facilitating the learning process, controlling the learning environment and eventually let learning take place. Hendricks (1987:122) emphasises that teaching is to cause the learner to learn. If the learner does not learn, effective teaching did not take place. Wilkinson (1992:15) defines the key responsibility of lecturers/facilitators as the ability to successfully pass the desired content, character and conduct on to the next generation. He continues to say about master lecturers/facilitators “Wherever they are and whatever they teach, lasting life change takes place”. He continues to say that “They (lecturers/facilitators) love teaching and they help others love learning.” Wilkinson (1992:15) also shares this sentiment. He motivates this by saying that it is the lecturer’s/facilitator’s responsibility to cause the learners to learn, because the lecturer/facilitator controls the subject, style and speaker (Wilkinson, 1992:33). He further says that lecturers/facilitators exist to serve the learners (1992:39). This sentiment about the responsibility of the lecturer/teacher is also shared by Ramsden(1989:158) who states: “We, the lecturers/facilitators (*lecturers/facilitators*), need to reflect on what we do that influences

the relations between learners and what they learn. It is then our job to act on what we have learned about the relation and our part in it. If the environment is 'impoverished', it is up to us to make it richer..."

In promoting learning the lecturers/facilitators has a certain focus and style, that will eventually influence the learning process. The teaching approach will be discussed under the headings of the focus of the lecturers/facilitators teaching (paragraph 2.3.2.1, below) and the teaching style (paragraph 2.3.2.2, page 28).

2.3.2.1. Focus of teaching

In a study conducted at two teaching institutions Friedlan (1995:48) found that the teaching approach of the lecturer/facilitator effected the learners' perception on the subject of accounting. Various previous research identified various teaching approaches. Some of these are highlighted below:

a) Dawe *et al.* (2005:10) say that teaching approaches can be categorised as follows:

- The personal approach – this model focuses on how the lecturer/facilitator can act as a role model. These include learner centred curricula and role-playing;
- Re-connecting to reality – focuses of experiential learning connecting to real life and includes problem-based learning; and
- Holistic thinking – making interdisciplinary connections that involve critical thinking.

b) Leveson (2004:539) provides the following categories of approaches to teaching accounting:

- Learner-initiated, learner-centred strategy with the intention of encouraging growth and change;
- Learner-centred strategy intended to encourage a relational understanding of the discipline;
- Educator-initiated, learner-centred strategy with the intention of developing basic disciplinary concepts;
- Educator initiated, learner activity strategy with the intention of helping learners acquire basic accounting concepts; and
- Educator-centred strategy with the intention of transmitting information in order to develop competence in basic accounting procedures.

c) Mosston & Ashworth (1990) discuss the following teaching styles in their book "The Spectrum of Teaching Styles":

a) Reproduction styles :

- The command style – the lecturer/facilitator causes learners to learn by means of a stimulus;
- The practice style – the lecturer/facilitator causes learners to learn by explaining, giving a task, evaluating the task and providing feedback;
- The reciprocal style – The lecturer/facilitator lets learners work together and receive feedback from each other;
- The self-check style – The learners receive immediate feedback among themselves; and
- The inclusion style – The lecturer/facilitator accommodates individual differences with a range of options and entry points when allocating a task.

b) Production styles

- The guided discovery style – The lecturers/facilitators ask questions that bring forth responses and discoveries from the learners.
- The convergent discovery style – The learners are allowed to discover a single correct answer to a question.
- The divergent production style - The learners are allowed to discover a multiple correct answer to a question.
- The learner-designed individual program style – The learners discover, create and organise ideas of their own.
- The learner-initiated style - The learners discover, create and organise ideas of their own in an area of their choice.
- The self-teaching style – All decisions on learning are set by the learner.

d) Kember (1994:70) indicates two orientations to teaching, namely learning facilitation and knowledge transmission.

From all the above it seems that there are in a sense only two approaches to effective teaching. The one focuses on *what the lecturers/facilitators do* and the other focuses on *the learner*. These will be elaborated on in paragraph 4.2, page 80.

2.3.2.2. Teaching style

Except for the difference in focus of teaching, every lecturer/facilitator also has a different teaching style. This may well correlate with his/her own learning style (also see learning styles, paragraph 2.4.1, page 38). Thompson (1997:126) also substantiates this by indicating that lecturers/facilitators would teach in line with their own learning style. Thompson is of the opinion that lecturers/facilitators should capitalise on what they do well rather than try to use strategies that they are less comfortable with.

Sharma (1997:142) concludes that lecturers'/facilitators' strategies will not help if their intentions are merely to satisfy protocol instead of genuinely improving the quality of the learners' understanding. According to Hendricks (1987:61-66) there are a number of things a lecturer/facilitator should do through their teaching style. They should:

- Teach learners to think (change their minds) in order to understand;
- Teach learners to learn (for the rest of their lives). To get them involved in the process, the big picture (overview) should be given to them first; and
- Teach learners to work (The lecturer/facilitator should not do anything for learners that they can do for themselves).

McChlery and Visser (2006:2) adapted the Felder-Solomon Index of learning styles to compare the learning styles of learners and the teaching style of lecturers across all four years of degrees at one university each in the United Kingdom (Glasgow Caledonian University) and South Africa (North-West University [Potchefstroom Campus]). McChlery and Visser (2006:13) concluded the following on the teaching styles of lecturers (also refer to paragraph 2.4.1, page 38, for the findings on the learning styles):

- On evaluating the **active** (processing information through engagement in physical activity or discussion) / **reflective** (processing information through introspection) teaching style, lecturers tend to be balanced (58.33% and 72.73% of the population respectively). The majority of the rest were found to be active lecturers/facilitators (29.17% and 27.27% sample respectively);
- On evaluating the **sensing** (preferentially perceive information through sights, sounds, physical sensation) / **intuitive** (preferentially perceive information through possibilities, insights, hunches) teaching style lecturers tend to be balanced (50.0% and 45.45% of the population respectively), with the majority of the rest being sensing lecturers/facilitators (33.33% and 31.82% population respectively);

- On evaluating the **visual** (external information is most effectively perceived through pictures, diagrams, graphs, demonstration) / **verbal** (external information is most effectively perceived through words, sounds) teaching style, lecturers were predominantly visual (56.52% and 45.45% of the population respectively), with the rest practicing balanced teaching styles (39.13% and 36.36% respectively); and
- On evaluating **sequential** (progress towards understanding in continual steps) / **global** (progress towards understanding in large jumps, holistically) teaching styles, lecturers tended to be balanced (70.83% and 59.09% of the population respectively). The majority of the rest were found to be global lecturers/facilitators (20.83% and 27.27% respectively).

From the above it seems that accounting lecturers tend to teach in an active, sensing, visual and global manner. McChlery and Visser (2006:18) concluded that the teaching styles of lecturers and learning styles of learners who participated in the study were a positive match. This could indicate that the lecturers met the needs of most accounting learners. However, results also indicate that this might not be the best way to develop learners.

2.3.2.3. Summary on teaching approaches

The most important thing about teaching is not what the lecturer/facilitator does, but what he/she causes the learners to do (Hendricks, 1987:55). The lecturer/facilitator is thus the stimulator and motivator with the learner being the investigator and doer. Wilkinson (1992: 300) takes it even further by saying that equipping learners with the necessary skills should impact both their character and conduct. Wilkinson (1992:35) therefore says that lecturers/facilitators should evaluate their success through the success of their learners. It was found that lecturers tend to teach in an active, sensing, visual and global manner.

Contrary to modern belief it is thus the lecturer's/facilitator's responsibility to cause/stimulate learning. To achieve the above-mentioned, lecturers/facilitators, however, must adopt a learner centred approach. In such an approach the lecturer/facilitator would be the facilitator and the learners would actively participate.

The different teaching methods are discussed in detail in chapter 4.

2.3.3. The lecturer's/facilitator's own continuous development and growth

Learners must similarly respect their lecturers for their superior knowledge. The lecturer/facilitator should therefore also be a lifelong learner (continuously growing) in order to keep on teaching (Hendricks, 1987:27). Hendricks identified three areas of growth for the lecturer/facilitator:

a) Intellectual growth (Hendricks, 1987:39-41)

- To have an own consistent study and reading program;
- Giving attention to continuing education courses; and
- Getting to know the learners' needs and characteristics;

b) Physical growth (Hendricks, 1987:43-45)

- Taking control over the use of your time and possessions;
- Taking control over your family responsibilities and relationships;
- Following a healthy eating plan and exercise; and
- Getting sufficient sleep.

c) Social growth (Hendricks, 1987:46)

- Making friends with people from various backgrounds; and
- Making friends from various age groups.

Another shortcoming according to Simpson *et al.* (1999:258) is that lecturers do not always have the practical experience and authoritative knowledge to information technology in a pedagogical manner in the classroom.

According to Hendricks (1987:50) a lecturer/facilitator should continue to ask how he/she can improve. Lecturers/facilitators should thus not only make a point to keep up to date with the technical content of their subject field, but also with the latest in teaching methodologies and technology. It astonishes that to teach even primary school learners, lecturers/facilitators need a relevant teaching qualification. However, for tertiary teaching a relevant post graduate qualification is the most important (if not the only) requirement. That may be the reason why most lecturers are content orientated.

2.3.4. Lecturer's/facilitator's communication

Communication is unavoidable in the learning context. According to Hendricks (1987:24) the rationale behind teaching comes from a passion to communicate. Below are some issues to consider in the communication process:

Hendricks (1987:100) notes that the lecturer/facilitator communicates to the learner by means of what he knows, what he feels and what he does. There are, however, two requirements for effective communication (Hendricks, 1987: 108-109):

- Preparation (The lecturer/facilitator should know what they want to say, how they want to say it and have illustrations from his or her life) to facilitate this process; and
- Presentation (How you communicate).

Wilkinson (1992:58-66) gives certain issues that lecturers/facilitators should consider in communicating the content:

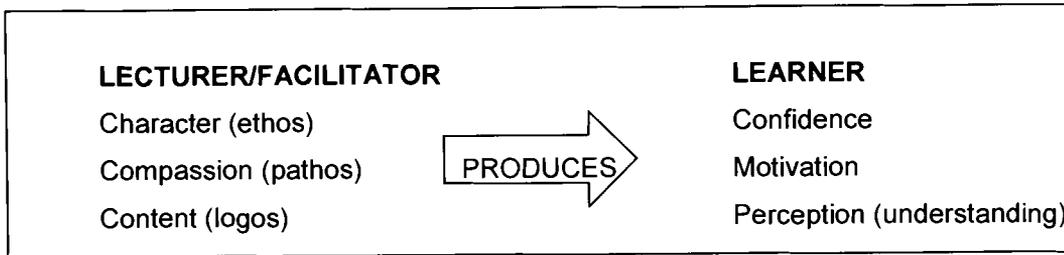
- The learners should be loved consistently and unconditionally;
- The subject should be communicated with the learners' needs in mind;
- The style should be altered regularly according to the situation;
- The lecturer/facilitator should be him-/herself;
- The lecturer/facilitator should constantly note the learners' attitudes, attention and actions; and
- The lecturer/facilitator should excel in his strengths and compensate for weaknesses.

Hendricks (1987:120) recalls Socrates as indicating three concepts that summarise the essence of communication:

- *Ethos*: the credibility of the lecturer/facilitator should be established;
- *Pathos*: the compassion with which the lecturer/facilitator arouses the passion of the learners; and
- *Logos*: the content of the communication.

Hendricks (1987:121-122) continues to illustrate the above with regard to the learning process, amended to diagram 2.2:

DIAGRAM 2.2 - The effect of lecturer/facilitator communication on the learner



(Source: Hendricks, 1987:121-122, adapted)

The effectiveness of the communication should always be tested by getting feedback from the learners (Hendricks, 1987:113).

The lecturer's/facilitator's communication is thus far more than just the presentation of the content. It plays a much bigger role in the overall learning environment.

2.3.5. Lecturer's/facilitator's character and personality

The lecturer's/facilitator's character may well be the one factor that draws the learner to the subject or push the learner away. Wilkinson (1992:38) says that lecturers/facilitators impact learners more through their character and commitment than through their communication.

Banner and Cannon (1997:40) note that what is known and how this is presented can be linked to another dimension of teaching, namely character and personality. According to Banner and Cannon the lecturer's/facilitator's character and personality determines the quality and effectiveness of the instruction. According to them great lecturers/facilitators are remembered for the stories they told, the ways they commanded attention, their mannerisms and expressions rather than their knowledge or how they taught.

Davis (2006:6) states that a moral person should be marked by honesty, self-control, friendliness, decency, selflessness, fairness, respect, responsibility, compassion, loyalty, empathy and a cooperative spirit. It is these characteristics that the lecturer/facilitator should disclose and model to learners.

It is thus important for the lecturer/facilitator to take the effect of his/her personality on the learning environment into account and to continue developing personality traits that would enhance the learning environment.

2.3.6. Relationship and motivation

2.3.6.1. Relationships

The ability to have a meaningful relationship on a higher level is one of the factors that distinguish the human race from animals. Wilkinson (1992:51-57) identifies the following relationships between the elements of the learning environment that can affect success or failure in the classroom (Table 2.2).

TABLE 2.2 – Lecturer/facilitator relationships

Relationship	When the relationship is strong	When the relationship is weak
Lecturer/facilitator to content	<ul style="list-style-type: none"> - The lecturer/facilitator could be expecting too much of learners. - The lecturer/facilitator may be teaching unnecessary material. - The lecturer/facilitator may induce heavy workloads. 	<ul style="list-style-type: none"> - The lecturer/facilitator does not know the content sufficiently. - Lecturer/facilitator cannot answer questions.
Lecturer/facilitator to learner	<ul style="list-style-type: none"> - The lecturer/facilitator could be in touch with learners. - The lecturer/facilitator may be viewed as transparent and understanding. - The lecturer/facilitator may not cover all the necessary content. 	<ul style="list-style-type: none"> - The lecturer/facilitator is uncomfortable around the learners. - The lecturer/facilitator may keep a distance from the learners. - The learners may perceive the lecturer/facilitator as cold, professional and tough.
Lecturer/facilitator to his style / method	<ul style="list-style-type: none"> - The lecturer/facilitator may be a motivating speaker. - The lecturer/facilitator will incorporate good stories, nice visuals. - Learners may enjoy the classes. 	<ul style="list-style-type: none"> - The lecturer/facilitator tends to stick to lecturing. - Learners may experience classes as boring.

(Source: Wilkinson, 1992:51-57, adapted)

It is important that the lecturer/facilitator takes these relationships into account and strives towards maintaining a balance in the classroom. The lecturer/facilitator should not only have sufficient knowledge of the subject content, but also a balanced relationship with learners. Lastly, the lecturer/facilitator must continuously enhance his/her teaching style or methodology without placing too much emphasis on it.

2.3.6.2. Motivation

It is within this relationship that the lecturer/facilitator can motivate or demotivate the learner. Hendricks (1987:139) says that "The number one problem in education today is the failure to motivate learners...to get them off their dime and into action". He refers to this as the learners' Motivation Quotient (MQ) and goes as far as saying that it may be more important than the learners' IQ. Teaching should thus be more effective if learners are to be motivated. According to Hendricks there are proper and improper ways of motivation. These are summarised in Table 2.3 that follows:

TABLE 2.3 - Proper and improper motivation

PROPER MOTIVATION	IMPROPER MOTIVATION
- Helping the learner to become aware of his/her needs	- Rewarding short term memory
- Applying good training	- Applying guilt
- Telling what to do	- Deceit of the learners
- Showing how to do it	
- Letting the learner do	

(Source: Hendricks, 1987:139)

Lin *et al.* (2002:252) describe the two kinds of motivation in college classes as:

- Intrinsic (in which the task is enjoyable or satisfying in itself, e.g. interest in the subject matter, enjoyment of a challenge); and
- Extrinsic (in which motivation is induced by rewards or punishment dependent upon success or failure e.g. giving grades).

Lin *et al.* (2002:256) found that a moderate level of extrinsic motivation is better than a high one and higher levels of intrinsic motivation are positively related to grades. They concluded, however, that the best is a moderate extrinsic motivation linked with a high intrinsic motivation.

There are different sources of motivation:

- Cook (1981:4) states that many training instructors have found that games can be a powerful tool to motivate learners. Lowe and Simons (1997:44) found that accounting

learners were mostly motivated by external factors such as future earnings and career options; and

- Margolis and McCabe (2006:219-220) identify three sources of motivation:
 1. Enactive mastery – giving learners tasks that they can succeed in to a certain degree;
 2. Vicarious experiences – Observing peers modelling a task; and
 3. Verbal persuasion – giving learners information that can be interpreted and evaluated.

Margolis and McCabe (2006:226) say that by using strategies to motivate learners, lecturers/facilitators can help struggling learners develop a more accurate, optimistic, “can do” attitude.

2.3.6.3. Expectation

Wilkinson (1992:75) links motivation and learner performance with the lecturer’s/facilitator’s expectation. He recalls the following from his own teaching experience (Wilkinson, 1992:73-75):

During his first year of teaching a colleague congratulated him on teaching to a specific group of learners. His colleague provided him with the reason why this group was special.

*“Section two has all the top high school seniors... The honours group. Cream of the crop...Motivation! Like a team of wild horses straining at the reins....
The next day, section one filed in and we had a good hour...
After break, section two walked in. I couldn’t believe it.... Everything seemed different – their questions, their eye contact, their facial expressions...
As we neared midterms, I found myself walking.... with the academic dean.”*

He was talking about how he specially enjoyed teaching section two. Then the dean told him something he was not prepared for:

“Bruce, I need to tell you something that may surprise you – there is no honours class this year. We cancelled it.”

Afterwards he investigated the papers and section two was indeed outperforming the others and the only thing that was actually different was his expectation of the group. He concluded that that day was one of the most dramatic learning experiences of his life.

From the above paragraphs on relationship and motivation it can be concluded that the relationship between learner and lecturer and the subsequent motivation and expectation on the part of the lecturer/facilitator thus plays a very important role in the learner's performance. There are correct and incorrect ways of motivation. Lecturers/facilitators should rather focus on long-term motivation that comes from intrinsic sources.

2.3.7. Lecturer's/facilitator's preparation

Nothing that is worthwhile comes without effort. For effective learning to take place there is a need for preparation on the side of both the lecturer/facilitator and the learner (Hendricks, 1987:159). He does, however, mention that there is a negative correlation between predictability and impact in the class (Hendricks, 1987:16).

Wilkinson (1992:226) says that the lecturer/facilitator should establish the need for the learner to learn. He continues to say that this could be done by:

- Capturing the learner's attention at the start of the class;
- Stirring the learner's curiosity;
- Stimulating the learners need to learn the content; and
- Satisfying this need.

All of the above would, however, require a great deal of preparation on the side of the lecturer/facilitator. They not only would need to focus on the preparation of the subject content, but will also have to give attention to the method, motivation and guidance that will be given to learners.

2.3.8. Summary on the lecturer/facilitator

The lecturer/facilitator is one of the elements or variables of the teaching-learning environment. The lecturer/facilitator stands in a direct relationship (is the link) between the

learner, methodology and subject content and therefore has a big responsibility in the teaching-learning environment.

A lecturer/facilitator is regarded as an effective/"good" lecturer/facilitator when he/she has concern and respect for learners, involve them, take them into consideration and is available for them. They should thus follow a learner-centred approach. A lecturer/facilitator should apply continuous self-growth and have sufficient knowledge of the subject. He/she should also provide useful supplementary materials, effective teaching methods and fair assessment as well as quality and frequent feedback. The lecturer/facilitator should have good communication with learners as well as good personal characteristics. They should also be fair and provide learners with moral and behavioural guidance. They should have a positive attitude towards results (have high expectation of learners), be enthusiastic and motivate learners. Lastly, the lecturers/facilitators should be prepared for contact sessions.

2.4. THE LEARNER

In order for the lecturer/facilitator to apply the correct methodology, it would be important to understand the characteristics of the learners. When investigating the profile of professional accounting learners Agyfman and Unerman (1998:87) said that the first year of tertiary education can come as a shock to learners because of the contrast with secondary education. They also conclude that at this stage an awareness for development of broad skills arise among learners. Gray and McKernan (2000:9) highlighted the areas of concern regarding accounting learners as follows:

- They are generally unable to demonstrate independent critical thought;
- It appears that their moral maturity declines when they get older;
- There appears to be a decline in moral awareness and sensitivity as they progress through their careers; and
- They have come to accept that they must not question the accepted assumptions of their lecturers/facilitators.

In the following paragraphs the learner characteristics are evaluated in more detail.

2.4.1. Approaches to learning (learning styles)

Various authors had in the past done research on learning styles. It was found that every learner has a preference as to how he/she learns. Sharma (1997:125) argued that unless it is understood how learners learn and what the effects are of the learning-teaching context on their learning outcomes, efforts to alter the learning-teaching context may not yield the desired outcomes.

A few research findings that illustrate this point include:

- Sharma (1997:142) concluded that the majority of learners conceive learning as an increase in knowledge. As a result they are syllabus bound and experience fear of failure. The preliminary results indicated that learners' learning approaches were developed by their perceptions of the learning context;
- On another matter, Tempone and Martin (1999:177) established that the degree to which learners achieve learning outcomes are limited if they do not see a learning task as useful or a way of developing their skills;
- According to York (1999:77) various research studies indicated that the typical modus operandi for learners is to confront an unfamiliar problem by looking for similar solutions. This has some impact on the pedagogical results of approaches; and
- Tempone and Martin (1999:184) also conclude that learners see and approach group work differently.

Research findings on the different learning styles of the new generation of learners are set out below.

Tileston (2005:16) says that today's learners are a part of a multimedia world from birth. Therefore they do not only listen, but also participate. Tileston (2005:17) identified three types of learners:

- **Auditory** – those who remember information best when they hear and discuss it;
- **Visual** – those who remember information best when they see it; and
- **Kinaesthetic** - those who solve problems by physically performing the task at hand.

The following approaches to learning were listed by Sharma (1997:140):

a) Meaning orientation:

- Deep approach (understanding and inquiring);
- Use of evidence (conclusions formed on evidence); and
- Relational (logical connection between new and past material).

b) Reproduction orientation:

- Syllabus Bound (learning depends on the defined task);
- Fear of failure (anxious of academic performance); and
- Surface (learners are passive learners or unable to form holistic perspectives, concerned about detail).

The different generations were already discussed in chapter 1, paragraph 1.1.2, page 2. Costello *et al.* (2004:254) are of the opinion that generations X and Y have specific learning styles. Lee (1996:57) offers six guidelines:

- Learning material should be presented in short sections;
- There should be focused segments of work;
- Sessions should stimulate learners;
- Lecturers/facilitators should capitalise an enthusiasm for technology;
- There should be opportunities for personal contact between learners and lecturers/facilitators; and
- There should be separate instructional and reference services in libraries.

The research and kinds of approaches may well be vast and will probably continue to grow in future. What is important at this stage, however, is the characteristics identified for accounting learners. The next few paragraphs address previous findings on the learning styles of accounting learners specifically.

Research in Australia indicated that accounting learners had relatively high **surface** and lower **deep learning** approaches, while higher surface approaches were found to be associated with less successful academic performance (Booth *et al.*, 1999:227). This was similar for male and female learners. A deep approach is characterised by (Booth *et al.*, 1999:279):

- Intention of learners to understand the material;
- Focusing on underlying assumptions; and
- Identifying, classifying and organising new ideas and previous knowledge.

McChlery and Visser (2004:2) used the Felder-Solomon Index of learning styles in a comparative analysis of learning styles among learners in all four years of study at a university in the United Kingdom (Glasgow Caledonian University) and South Africa (North-West University [Potchefstroom Campus]). McChlery and Visser (2004:14) concluded the following on the learning styles of first year learners:

- On evaluating the **active** (processing information through engagement in physical activity or discussion) / **reflective** (processing information through introspection) learning style, learners tend to be balanced (60.5% and 67.5% of the population respectively), with the majority of the rest being active learners (29.3% and 20.78% respectively);
- On evaluating the **sensing** (preferentially perceive information through sights, sounds, physical sensation) / **intuitive** (preferentially perceive information through possibilities, insights, hunches) learning style, learners tend to be sensing (55.96% and 61.68% of the population respectively), with the majority of the rest being balanced learners (40.36% and 35.06% respectively);
- On evaluating the **visual** (external information is most effectively perceived through pictures, diagrams, graphs, demonstration) / **verbal** (external information is most effectively perceived through words, sounds) learning style of learners, the visual (45.87% and 48.73% of the population respectively) and balanced learning styles (48.6% and 43.5% respectively) were close; and
- On evaluating the **sequential** (progress towards understanding in continual steps) / **global** (progress towards understanding in large gaps, holistically) learning style, learners tend to be balanced (56.88% and 71.4% of the population respectively), with the majority of the rest being sequential learners (40.37% and 20.78% respectively).

From the above it seems that accounting learners tend to be active, sensing, visual and sequential learners.

Baker *et al.* (1986:9) used Kolb's learning style questionnaire to assess the learning styles of accounting major learners and found that:

- 39% were **convergers** (combining abstract conceptualisation and active experimentation in applying theory in practice);
- 22% were **accommodators** (combining concrete experience and active experimentation);
- 19% were **divergers** (combining concrete experience and reflective observation); and
- 20% were **assimilators** (combining reflective observation and abstract conceptualisation).

In conclusion they found that 61% of respondents preferred an active learning style, while 39% preferred a reflective learning style. 41% preferred a concrete learning style, while 59% preferred an abstract learning style.

Filbeck and Smith (1996:80) used a Myers-Briggs Personality Indicator for evaluating the personalities of undergraduate corporate finance learners. Their findings were that:

- 65.9% of the learners were **extroverts** (focusing on outside world, preferring interaction) as to 34.1% who were **introverts** (getting energy from inside);
- 75.5% of the learners were **sensing-oriented** (value what they can see, touch, feel, smell and hear), while 24.5% were **intuition** oriented (focus on abstract, uses “gut feeling” to gain information);
- 72.3% preferred **thinking** (focus on objective decision making, seek logic) as to 27.7 % who prefer to rely on **feeling** (subjective decision making); and
- 60.6% of learners were **judging** (leading an organised and orderly life) compared to 39.4% who were **perceiving** (leading a life that is flexible and spontaneous).

Thus, in an attempt to describe the average introductory accounting learner, the following would characterise the learner (taking into account the above research findings of Booth *et al.*, [1999:227], McChlery and Visser [2004:14], Baker *et al.* [1986:9] and Filbeck and Smith [1996:80]):

- The learner would prefer processing information through engagement in physical activity or discussion and combining abstract conceptualisation and active experimentation in applying theory in practice;
- Preferentially perceive information through sights, sounds, smell, physical sensation or feeling and value;
- External information is most effectively perceived through pictures, diagrams, graphs, demonstration;
- The learner progresses towards understanding in continual steps, focusing on objective decision making and seeking logic;
- The learner is unable to form holistic perspectives and is concerned about detail;
- The learner focuses on the external world and prefers interacting and personal contact; and
- is leading an organised and orderly life.

These findings indicate that learners will perceive the learning process with different approaches. A picture of the average accounting learner was sketched. The

lecturer/facilitator needs to consider this image in planning a class or deciding on a teaching method. It is, however, important to remember that other learners who do not fall in this category should also be accommodated.

2.4.2. Biographical matters

Except for specific learning styles, it should also be considered that learners have various backgrounds and different bio data. Various characteristics and bio data matters were researched before. Ethnicity, type of school attended and prior knowledge did not play a major role in the level of results achieved. Culturally endorsed ideas and attributes may, however, influence a learners' learning (Auyeung & Sands, 1997:21). Gender issues have also been investigated but were generally inconclusive (Jackling & Anderson, 1998:67). De Lange *et al.* (1997:295) found only minor differences between the performance of different gender groups.

Hore and West (as referred to by Jackling & Anderson [1998:67]) found that mature learners performed excellent in disciplines that would relate to their experience and profession. Jackling and Anderson (1998:70) also found that whether learners are part-time or full time, and from which background they came were two variables to take into account. Koh and Koh (1999:13) found that male learners, those with previous working experience, those with better academic attitude, mathematic background and younger learners perform better in accountancy degree programs. Lever (1978:471) found a distinct difference in the way people from different gender groups organise playing activities. Boys play in a more complex manner by means of role differentiation, interdependence between players, size of playgroup, explicitness of goals, number of rules and team formation.

The effect of, for instance gender and age does not appear conclusive from previous studies. Lecturers/facilitators will therefore need to be sensitive to these factors when deciding on teaching methods.

2.4.3. Skills and knowledge

Learners also have different previously obtained skills and knowledge. This was partially also addressed in the previous paragraph. As reported by Tanner and Lindquist (1998:139) the Accounting Education Change Commission said that learners are becoming more competent

in technical issues at the expense of other important competencies such as critical thinking and team based skills.

Previous studies on the effect of previous accounting exposure concluded the following:

- Research conducted by Rowlands (1988) indicated that learners with secondary school accounting scored higher in early tests. However, no difference could be found in the final examination;
- Previous studies on the effect of prior accounting education indicate that it has a positive effect on the first semester unit of accounting at tertiary level (Jackling & Anderson, 1998:66). The benefit of prior knowledge to first year learners does, however, not continue (Jackling & Anderson, 1998:70);
- Duff (2004:409) concluded that previous research indicates that age, gender and prior academic achievement directly affects learners approaches to learning and their academic performance and progression. He identified previous academic performance as the strongest indicator;
- Other researchers found that learners without high school knowledge performed better at accounting than those with high school knowledge (Koh & Koh, 1999:13);
- Research performed by Esterhuyse and Van der Walt (1995:129) indicated that the following could be predictors of future accounting performance:
 1. Previous academic performance in the first language, mathematics and accounting;
 2. Psychometric tests indicator (avoidance and postponement); and
 3. Personality factor – responsibility;
- Hoefler and Gould (2000:228) found that the following variables are important determinants of academic performance:
 1. Quantitative components;
 2. Verbal components; and
 3. Previous academic performance.
- Jackling and Anderson (1998:70), however, claimed that as (management) accounting is quantitative in nature, languages do not play a major role in determining learners' performance; and
- Stoner (1999:217) indicates that learners are not as IT literate as is in many instances assumed.

Chia (2005:75) also found that the concept of Emotional Intelligence was becoming more important in completing successful job interviews.

Although the various findings noted above seem to indicate a general difference in performance between learners who had accounting at school and those who lack prior knowledge of accounting, the difference does not seem to continue past the first year. There are conflicting findings regarding the importance of language, but this may be more important in an era where communication competencies are regarded as increasingly important. Learners with a sense of responsibility and who are emotionally developed also seem to be more likely to succeed.

2.4.4. Summary on the learner

The average introductory accounting learner prefers to process information through engagement in physical activity or discussion. They also prefer to combine abstract conceptualisation and active experimentation in applying theory in practice. These learners prefer to perceive information through sights, sounds, smell, physical sensation or feeling and value. They perceive external information most effectively through pictures, diagrams, graphs, demonstration and progress towards understanding in continual steps. They also focus on objective decision-making and seek logic. Moreover they are unable to form holistic perspectives and are concerned about detail. They focus on the external world and prefer interacting and personal contact. Finally they lead an organised and orderly life.

Although not predominant, it was pointed out that biographical matter and learners' previous knowledge and skills should also be considered.

2.5. THE LEARNING ENVIRONMENT (MILIEU)

The last variable of the learning environment to be discussed in this chapter is the milieu. This is more than just the physical classroom. Researchers also describe it as the classroom environment. Zandvliet and Straker (2001:850) evaluated the physical and psychosocial classroom environment for technology rich classrooms and found that both had an effect on learner satisfaction.

Weinstein (s.a.) summarised four assumptions made by environmental psychologists who study learning and physical environment as recorded by Gifford (1997:243) as:

- The setting can either facilitate or hinder learning;
- The effects of pacesetting are influenced by the social and instructional context;
- There is no single best setting. The best settings are those who are determined according to the type of material being learnt, goals of the class and characteristics of the learners; and
- Learning is maximised when the physical setting is considered as careful as other aspects such as the curriculum.

Weeks (2005:36) says that the equipment filling today's classroom must meet a variety of new goals and teaching styles. It was noted that lecturers/facilitators did not stand in one place for long and wanted to use as much wall space as possible.

The classroom environment is discussed under the following sub-headings:

- The atmosphere (paragraph 2.5.1, page 45); and
- The physical classroom (paragraph 2.5.2, page 47).

2.5.1. The atmosphere

Macgregor *et al.* (2000:1) note that research points to the value of undergraduate learning environments that set high expectations, promote active and interactive learning, give learners personal validation and frequent feedback. Yet, institutions often continue introductory classes that carry hundreds of learners. According to them the large class environment works against the very elements that promote learners' involvement, intellectual development, learning and success. From their research, it seems that the majority of lecturers who successfully address large class issues were often incorporating some kind of group work in the classes.

The Regional Educational Laboratory (2006) advocates three primary reasons changes need to be made to the classroom environment (atmosphere), namely:

- To make the classroom environment more appropriate for learners;
- To support how learners learn and
- To foster standard based teaching.

The Regional Educational Laboratory (2006) has summarised key areas for improving the classroom environment. These are:

- Having supportive relationships among learners ;
- Learner participation in decision making and setting goals;
- Clear expectations and goals between learners and lecturers;
- Opportunities for collaborations between learners;
- Adequate time for learners to complete tasks;
- Opportunities for learners to work on open-ended tasks;
- Lecturers/facilitators providing interesting and meaningful activities.

The human brain furthermore seems to be wired to make connections (Tileston, 2005:27). Tileston continues to say that every time new information is added, the brain makes an attempt to connect that with previous knowledge. Helping the learner make these connections should therefore enhance his / her learning experience. Tileston (2005:29) also says that learners are more likely to remember something when they have an emotional connection to it.

Tileston (2005:39) describes the five brain retrieval systems as:

- Semantic – holds information learned from words. Semantic memory must be rehearsed or have a link to previous knowledge or relevance;
- Episodic – memory based on context and location. A particular context or location triggers the memory;
- Procedural – processes such as driving a car;
- Automatic – automatic responses or conditioned responses. This includes the ability to read; and
- Emotional – memories of events with emotional attachment.

As emotional memory is the most powerful (Tileston, 2005:44), the lecturer/facilitator should take note of these retrieval systems.

Various aspects such as the lecturer's/facilitator's personality, motivation and expectations, teaching methodology, learner personality and emotional environment, evidently affect the classroom atmosphere.

2.5.2. The physical classroom

Learning, participation, social interaction in the classroom and learners' feeling about school settings are affected in important ways by the physical school setting, in conjunction with other factors such as teaching style and age of learners (Gifford, 1997:274).

Gifford (1997:246) reports that the physical features of the learning setting affect learner performance. These include:

- Learners studying at large schools have a larger variety of things, which they can learn from, normally participate in fewer activities and learn and enjoy activities as spectators. Murdoch and Guy (2002:271) also found that small class learners scored significantly higher on final exams than learners in larger classes;
- Decentralized schools may decrease learner/lecturer/facilitator interaction. Gifford (1997:249) reports that temporary or lower walls increase distractibility. He continues to say that having a school one finds attractive is associated with better grades. However boys and girls may not find the same decor attractive;
- It is also mentioned that material is better recalled in the setting where it was learned. (Gifford, 1997: 252) shows that notices interfere with learning. Notice boards in classrooms may impair the performance of girls to a larger extent than that of boys.
- The lighting in a classroom affects some kids' performance in terms of basic cognitive and motor activities (Gifford, 1997:256);
- It is also advocated that a slightly cool, but not humid climate is best suited for learning (Gifford, 1997:257); and
- It was further noted that high-density spaces may affect learning when activity involves movement around the classroom. This is especially the case when learning depends on a classroom resource that does not increase to the same degree as the number of learners. This could lead to particular situations where it seems crowded to the learners and when they experience concept to be learnt as complex (Gifford, 1997:264). Knight and Noyes (1999:747) advocated that children should be given more choice in their seating locations. Furthermore, individuals involved in education should receive better guidance in terms of their decision-making about classroom furniture etc.

It seems that greater care should probably be taken in planning the physical classroom. Although this is often not in the hands of the lecturer/facilitator, the effect of the physical room should be more of an element to consider in the teaching/learning environment.

2.5.3. Summary of the milieu

It was established that a distinction could be made between a physical place and the classroom atmosphere. Although the lecturer/facilitator may have little influence over the physical place, he or she can have a major influence on the atmosphere and subsequently indeed influence the milieu.

2.6. SUMMARY

In the first part of the chapter the teaching-learning environment was identified. The lecturer/facilitator, learner and content are set in the specific classroom environment and thus influenced by it. For learning to take place there must be a lecturer/facilitator, learner and content irrespective of the milieu (atmosphere, institution). The interaction between lecturer/facilitator and learner is primarily via the content (the lecturer/facilitator teaches the content and the learner learns the content). There is, however, also a non-content based relationship (expectations, perceptions and motivation) between the lecturer/facilitator and learner that may influence the learning process. The interaction between learner and lecturer/facilitator via the content (curriculum, course, and program) takes place by means of the methodology (which includes the teaching methodology and assessment methods).

An effective lecturer/facilitator was described from the literature. Looking at learner assessments, the instructor's fairness and good quality assignments were predominant along with a positive approach towards the results and providing good, quality and frequent feedback. Outside the classroom the main factors lecturers/facilitators should consider are good preparation and organisation, continuous self-growth and research and availability to the learners. On the learners' perception of the classroom atmosphere, it seems from the research lecturers'/facilitators' concern and respect (overall friendliness) towards the learners plays an important role. When looking into the process of curriculum design and content the lecturer/facilitator should definitely take the desire towards useful supplementary materials and teaching aids into account. He/she should also have knowledge of the subject field and not overload learners. The matter of general lecturer/facilitator characteristics highlighted three aspects: Lecturers'/facilitators' enthusiasm, lecturers'/facilitators' ability to motivate learners and well perceived personality characteristics. It was also identified that the lecturer/facilitator should have leadership skills. In presenting lectures lecturers/facilitators

should consider three major factors, namely involving learners, considering learners and having effective teaching methods that are stimulating and interesting. Lastly it seems that it is also expected from lecturers to provide learners with moral and behavioural guidance.

The different matters were summarised and discussed under the heading of the lecturers'/facilitators' style/approach, communication, personality, motivation and expectations and preparation.

The average introductory accounting learner was described as preferring to process information through engagement in physical activity or discussion and combining abstract conceptualisation and active experimentation when applying theory in practice. They also seem to perceive information through sights, sounds, smell, physical sensation or feeling and value. In addition external information is most effectively perceived through pictures, diagrams, graphs, demonstration. They progress towards understanding in continual steps, focussing on objective decision making and seeking logic. They are furthermore unable to form holistic perspectives and are concerned about detail. Finally they focus on the external world and prefer interaction and personal contact, while leading an organised and orderly life.

Although not predominant, it was pointed out that biographical matter and learners' previous knowledge and skills should also be considered.

Regarding the milieu it was established that a distinction should be made between a physical place and the atmosphere. Although the lecturer/facilitator may have very little influence over the physical place, he/she can have a major influence on the atmosphere and thus indeed influence the milieu.

The content of the teaching-learning environment is addressed in chapter 3, while different teaching methodologies are discussed in chapter 4.

CHAPTER 3 - CONTENT OF THE TEACHING-LEARNING ENVIRONMENT FOR PROFESSIONAL ACCOUNTANTS

3.1. INTRODUCTION

In the previous chapter knowledge was gained on the lecturer/facilitator, learner and milieu as part of the overall teaching-learning environment. This chapter addresses the content (in terms of subject and competencies) in the teaching-learning environment and subsequently also objective 2 (paragraph 1.4, page 8) of this study.

The content is the primary element of the overall teaching-learning environment. All the elements in the teaching-learning environment collaborate in order for the learner to learn the content or obtain the skills. In order to develop a teaching tool, it would therefore be necessary to identify the content requirements of an introductory accounting syllabus. It would also be important to note the requirements of the accounting profession and criticism against current teaching practices and syllabus content. These requirements would include technical knowledge requirements as well as other skill or competency requirements.

The question may well be asked why professional accounts enjoy the high stature they do. Research conducted by the ACCA indicated that SME's (Small and Medium Enterprises) worldwide consider their accountants the most important source of advice (Anon, 2006e:14). The reason may well be that their accountants have previously disclosed a high level of technical knowledge. Then there are also the ethical requirements that professional accountants must adhere to. CIMA (2006b) substantiates this by indicating that a distinguishing mark of the accounting profession is to act in the public interest.

Despite the above, Walters (2006:18) notes that the current number one and two difficulties to retain staff in accounting practices are the low number of applicants with the required skills and competencies, as well as the lack of the work experience that the firm demands. Nouri *et al.* (2005:1) confirm this by saying that to attract competent accounting learners for entry-level positions is a critical challenge for many organisations.

It thus seems that a balance must be found between the call for less emphasis on accountants technical knowledge and skills as identified in paragraph 1.1.4 (page 5) and paragraph 3.2.3 (page 58), and the need for the profession to provide the technical expertise it has become known for.

While the requirements of the profession change, it seems that the accounting program content may also hinder the profession. Research conducted on CIMA and ACCA learners indicated that (Anon: 2006b):

- 33% of the accounting learners have considered giving up their accounting aspiration at some stage;
- More than 50% blamed course pressure while;
- 29% attributed this to the number of examinations and 31% to issues in their personal lives.

In order to keep up with the changes and requirements, it may well be that accounting education has subsequently increased learners' workload. This may pose a serious threat to the future of accounting education, as learners must also incorporate other competencies in an already overloaded curriculum.

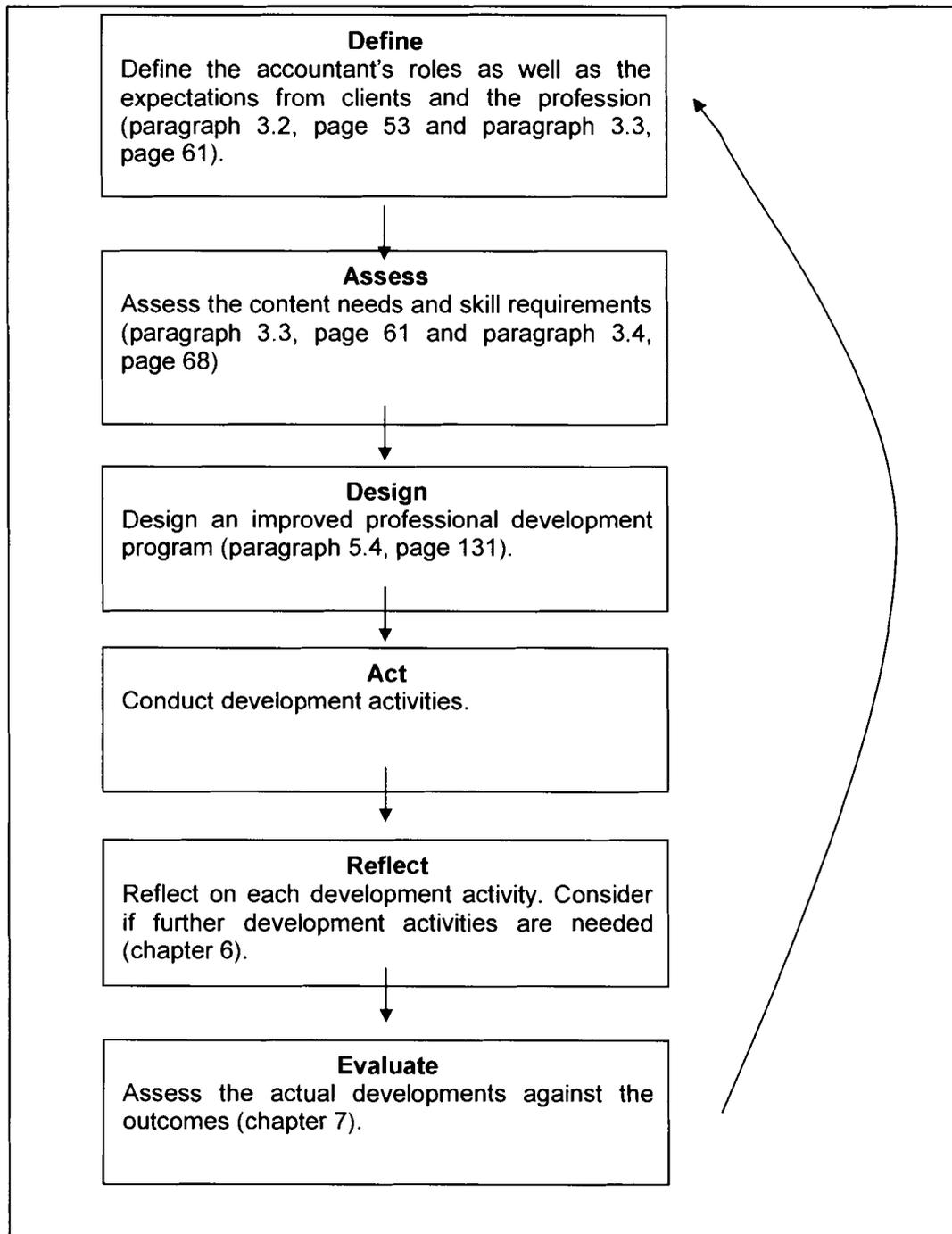
In light of this, Percy (2006:11) notes that it is currently the best time ever for a newly qualified accountant to look for a job. However, she continues that there is a divergence between candidates' needs and that of employers. Banks were particularly interested in the technical knowledge and skills, while the candidates wanted to perform more analytical roles in organisations. This corresponds with traditional "big" accounting and auditing firms expanding in the area of consultation (Anon, 2006c:55). Walters (2006:18) also supports this finding.

In the end it remains a requirement of professional bodies that their members act diligently and in accordance with applicable technical and professional standards (CIMA, 2006b:1). The content of the teaching-learning environment is thus an element that cannot be ignored. It should form the cornerstone of learning accounting, with the methodology and lecturer/facilitator and learner characteristics cooperating to achieve the goal of the learner. This goal is in the first instance to master accountancy.

Content is, however, not static. It would require continuous reflection and evaluation. CIMA (2006a:2) has developed a diagram for the stages of the professional development cycle. This diagram (refer to diagram 3.1) was adapted to show steps in the continuous evaluation

of the accounting curriculum. Diagram 3.1 also highlights where these steps are addressed in this study.

DIAGRAM 3.1 – Steps in evaluating the accounting curriculum



(Source: CIMA ,2006a:2, adapted)

Various factors affect the content of the teaching-learning environment. It is important for the accounting lecturer/facilitator to take note of these factors, in order to address them proactively. These factors are firstly discussed in the following paragraphs. Thereafter the technical and skill content for a professional accounting syllabus are researched.

3.2. FACTORS AFFECTING THE CONTENT OF THE TEACHING-LEARNING ENVIRONMENT

The factors affecting the content of the teaching-learning environment are discussed in terms of:

- Changing times;
- Challenges facing traditional accounting education; and
- Criticism against traditional accounting education.

3.2.1. Changing times

Contemporary business environments are characterised by a number of changes. On the one hand one finds a changing manufacturing environment (from hand labour to machine labour to computer-integrated manufacturing), a changing business environment (characterised by less protection and increased competition), and an increasingly technologically advanced environment. Given concern for the environment as well as competition on the global market, a need arises for a change in management perspectives in order for today's managers to be successful. Professional accountants are not excluded from these challenges (Visser *et al.*, 2001:1).

The IFAC (International Federation of Accountants) works with 157 member bodies in 118 countries by encouraging accountants worldwide to maintain high quality practices (CIMA, 2006a). IFAC (1996:2) indicated in 1996 that "rapid change is the predominant characteristic of the environment in which professional accountants work".

CIMA also indicated that recent corporate failures have resulted in greater scrutiny of professionals and a resulting need for professionals to demonstrate that they maintain and develop their professional competencies and ethical awareness (CIMA, 2006a:1).

To have a competitive advantage in organisations and be able to perform with the necessary competency, managers must keep up to date with the most recent developments in a broad field of expertise (Visser *et al.*, 2001:1). These may exceed their own study field. Kaizen is the Japanese term for continuous improvement and may well be the keyword for this needed proficiency (Visser *et al.*, 2001:1). The challenge may even be bigger on the professional accountant who must service the different needs of various clients (Visser *et al.*, 2001:1).

As if the changes and challenges required for an improved curriculum are not enough, incorporating soft skills should also be addressed. Tucker *et al.* (2000:336) conclude that implementing emotional intelligence theory exercises will help learners become well-rounded graduates. This should include a theoretical introduction and self-assessment for freshmen.

International legislation is also promulgated that will forbid employers from practicing age discrimination (Anon, 2006d:10). This means that employers may not be able to enforce compulsory retirement on employees younger than 65 and may prevent employers to only admit recent graduates into their training schemes or to require a certain number of years post-qualification experience. This will necessarily lead to more emphasis on the academic education and life-long learning.

The business environment is not the only changing environment. Accounting methods, techniques, ideas and practices, those practising accounting and those using accounting, roles of accounting and the role of the accountant have all changed, are changing and will most probably change in future (Napier, 2006:1).

Holder (1997:11) in the final instance acknowledges that continuous modifications and improvements are necessary to maintain a state of the art position. The accounting educator should be aware of the changes in the profession and guard against merely teaching textbook theory.

3.2.2. Challenges facing traditional accounting education

The rapid changes in the technological and competitive environment (also stated in paragraph 3.2.1, page 53) may post serious challenges to accounting education. Adler and Milne (1997b:191) claim in 1997 that during the second last decade of the 20th century, accounting education has come under increased scrutiny and criticism for not providing the

type of entrants needed for the accounting profession of the future. The report on this matter had two consistent themes (Adler & Milne, 1997b:191), namely:

- The failure of accounting educators to cope with a wider and more general knowledge base; and
- The failure to promote learners' communication, problem solving and interpersonal skills.

They concluded by saying that the fruits of enhanced learning are clear, but that in many instances the educational regime appears locked into their old ways, which stagnates learner learning.

Lecturers themselves face the same challenges to broaden their skills in order to assist their learners in doing the same. More so, they also face the difficulty of facilitating their learners in learning these skills in such a manner that they could apply it in the real world. This could be a major obstacle, as many accounting educators at tertiary level have a professional accounting background and not a formal education/teaching related background. These professionals may have an integrated knowledge of the accounting disciplines, but transferring it to others may not be as easy - especially where the mentioned accountant was not taught all these skills or has not developed these skills him/herself.

Professional associations around the world have placed substantial emphasis on continuing professional education (Rahman & Velayutham, 1998:287). The rapid changes in the professional environment have led to a call for a shift to andragogy as Rahman and Velayutham (1998:288) recall. Evans and Foster (1997:231) acknowledge another matter to consider, namely the pressures to teach more subjects and more content to more learners.

Forristal (2002:82) says that not only did the large audit firms (Big Five) reshape themselves as professional service firms, but the regional and local firms in Canada are also moving away from traditional audit work towards other kinds of assurance, management support and advisory services. This is all done to meet clients' needs. Forristal (2002:82) acknowledges the decline in the number of accounting graduates in the United States. He continues that although CA's are still sought after in Canada the market will get its talent elsewhere if accounting majors fail to deliver.

Forristal (2002:83) also indicates that while learners in Canada are excited by the opportunities of being a CA, many of them are moving away to other attractive and interesting careers. This trend was also seen at the North-West University (Potchefstroom Campus) where there was a small decline in B.Com Chartered Accountancy first years with

the introduction of the B.Com in Forensic Accounting in 2006. This was already noted by the Bedford Report (1986), which indicated that accounting services are becoming both broader and more specialised.

The Bedford Report (1986) furthermore indicated that trends in the accounting profession raised the following issues for accounting education:

- Providing more breadth for the expansion of services and products;
- Providing knowledge in basic economics, marketing, management and use of technology to cope with greater competition both within and from outside the profession;
- Providing a balance between the broad fundamentals and sufficient education in special fields;
- Providing a balanced coverage of accounting standards;
- Providing education on underlying legal concepts and social consequences of litigation arising from accounting practice;
- Providing education on the use of computers; and
- Providing continued education.

Another important report to take into consideration would be the Public Accountants and Auditors Board (PAAB) of South Africa's report on the future of accounting education in South Africa (the FAESA report). This report (PAAB, 1994:1-8) gives (amongst others) the following recommendations on the future of accounting education in South Africa:

- The accountancy profession should be structured in a manner that provides for:
 1. Access to all with the ability and desire to enter the profession;
 2. Maintaining high standards;
 3. Retaining a diversity of strengths; and
 4. Redressing radical inequalities of the past.
- The profession should be subject to a process of regulation, which includes recognising educational programmes.
- The standard examination should be a test of professional competence and not a re-test of the content of recognised educational programs.
- Educational programs at the full professional level should not be based on the "transfer of a body of knowledge approach. It should rather focus on "learning to learn".
- Educational programmes should have two components namely skills and knowledge.
- The importance of information technology should be recognised.

- A competency-based approach to training programs should be adapted in favour of the traditional time-based approach.

Taking international best practice regarding accounting education into account it would be important to also note the International Education Standards (IES) developed by the International Federation of Accountants (IFAC).

The IFAC Education Committee developed seven standards (IES's) to establish a global benchmark for educating and developing professional accountants (Needles, 2005:123) namely:

- IES 1 – Entry Requirements to a Programme of Professional Accounting Education;
- IES 2 – Content of Professional Accounting Education Programmes;
- IES 3 – Professional Skills;
- IES 4 – Professional Values, Ethics and Attitudes;
- IES 5 – Practical Experience Requirements;
- IES 6 – Assessment of Professional Capabilities and Competencies;
- IES 7 – Continuing Professional Development: A Program of Lifelong Learning; and Continuing Development of Professional Competence.

Needles (2005:128) reports that participants at the Globalization Roundtable in Durban, South Africa, in June 2004 accepted the IES as standards, but were of the opinion that developed countries may find it difficult to accept and developing countries may have difficulty in finding resources to implement it.

The IFAC “Draft International Education Guideline (IEG) 11: Information technology for professional accountants” identified two major challenges the accounting profession faces regarding information technology (2006:2):

- Information technology affects how organisations are structured. It must be integrated into financial and management control systems. The traditional role of accountants should thus be enhanced; and
- Information technology changes the nature and economics of the accounting activity. Accountants must therefore have IT skills when they qualify.

Taking the above into account, merely provides a glimpse of the turmoil the average accounting lecturer and learner faces. There is a constant development in the financial environment and an increased demand on the knowledge and skills of the professional accountant. All the demands from the profession, professional bodies, accounting standard

setters and educational bodies boil down to the very essence of what should happen inside and out of the classroom.

3.2.3. Criticism against traditional accounting education

The eminent demands and criticism of the present differ from institution to institution, country to country and professional body to professional body. Various similarities do, however, occur.

Kelly *et al.* (1999:321) state that the Bedford Committee USA (1986) reported that accounting education did not change much over the past 50 years. They also recorded that a Commonwealth of Australia report (1990) outlined that accounting education has been in a state of neglect.

Matthews (2001:117) points out that reflecting on the state of accounting education in the United States has become a continuous process since the 1986 Bedford report. However, there appears to have been little change since, as each successive report outlines the same problems.

Francis and Minchington (1999:301) found a disparity between the wide range of quantitative techniques covered by the Chartered Institute of Management Accountants syllabi and the limited extent to which many of these techniques are applied. These findings present a dilemma for the Institute and other professional accountancy bodies (Francis & Minchington, 1999:301). It was, however, concluded that educators and employers are of the opinion that a knowledge and understanding of a wide range of quantitative skills is a powerful differentiator for the accounting profession. The findings suggest that the role of a syllabus is much more than simply equipping an accountant with the tools routinely needed to do the job. A wider range of skills and understanding of the disciplines is needed, and could be obtained by including quantitative skills and techniques.

Kelly *et al.* (1999:324) quoted various researchers who claim that the dominance of scientific approaches of knowledge creation is under increasing criticism. It is further argued that this positivist methodological perspective is incapable of addressing accountings' complex social implications. They continue to say that a recurring theme in much of the contemporary debate is moving from learning facts to learning to learn (Kelly *et al.*, 1999:326). Classroom instruction generally focused on transferring knowledge through lectures. He continues to

say that examinations were often a combination of multiple-choice questions and a variety of problems requiring either extensive calculations or preparing financial statements. Changes in the curriculum were, however, forced due to:

- Changes in technology;
- Commerce becoming more complex; and
- Society expecting more from professional accounting.

According to Sharma (1997:143) better quality accounting learners can be produced if a reproduction attitude is replaced by an orientation towards meaning. Evans and Foster (1997:232) address the narrow focus of traditional accounting education, which focused on technical and fractal treatment of knowledge, which favours a surface level of understanding conceptual and critical elements. Davidson *et al.* (2000:53) noted that accounting and auditing firms called for changes in accounting education that would make new accountants more capable of meeting the new challenges.

The American Institute of Certified Public Accountants advocated that accounting education should incorporate oral and written communication skills, critical problem solving skills, use of technology, interpersonal skills, business and professional ethic considerations and team building skills (Cooper, 1997:183). With further reference to Cooper (1997:53) that said that only Certified Professional Accountants willing and able to adapt to the new environment of management will have a chance to survive.

According to Rowlands *et al.* (1998:235) traditional accounting education with the emphasis on “transfer of body of knowledge” approach is inadequate for today’s accountant and manager. This may be because more than knowledge replication is required from them.

In 1993 the United Nations recommended that: “Today’s professional accountant, in addition to acquiring accounting skills and knowledge, has to be an entrepreneur, financial analyst, global competitor, market analyst, and public relations specialist, as well as a general manager” (Rowlands *et al.*, 1998:235).

Furthermore, the South African Qualification Authority (SAQA) set critical outcomes to be addressed in each education program. These outcomes must be reflected in future training and can also be applied to improve management training (Visser, 2000:10). The assumption can be made that a paradigm shift in the training of accountants as managers may be necessary to accommodate the requirements mentioned above. This paradigm shift must occur among both trainers (facilitators) and learners. With further reference to SAQA, strong

international links, highlighting critical outcomes such as problem solving, leadership, use of technology, entrepreneurship, effective learning, development of careers and improvement of citizenship, must all be addressed in the education and training of accountants (Visser, 2000:10). This leads to the search for improved teaching methods, which are also important from the perspective of having high standards and complying with regulations.

Addison and Waugh (1998:163) concluded that it is necessary to educate life-long learners. According to Adler and Milne (1997b:193) education in general has received criticism for failure to adequately provide learners with the competencies to understand their knowledge and to continue life-long learning. According to them courses normally have a heavy workload, many contact hours, excessive amounts of course material, a lack of in-depth study lead to learners' naive conception of learning and teaching.

Collett (2000:67) says that it has long been realised that accounting learners need multi-disciplinary skills, applicable in practice. He continues to say that learners, in many instances, find that they need to apply their knowledge of other disciplines shortly after entering the job place.

Adler *et al.* (2000:113) note that survey data highlights three reasons why lecturers do not adopt learner centred approaches. These are a lack of learner readiness, inadequate educator support mechanisms and non-reflective lecturer/facilitator practices. They are of the opinion that positive change would only be possible with a more vigorous and proactive approach.

According to Pincus (1995:89) traditional introductory accounting emphasises record keeping aspects of accounting, focusing on financial accounting record keeping and managerial accounting record keeping. The format was procedural or rule-orientated. This is particularly the view on the first year accounting course. Learners too often remember an introductory accounting course in terms of too much content, dull lectures, contact with teaching assistants rather than professors, impossible tests, lack of involvement, feelings of frustration and high drop out rates (Pincus, 1995:92). Holder (1997:11) also acknowledges that the accounting curricula at many schools exhibited relatively little change over the past years. Changes made were mostly in view of adding new material or due to changes in professional standards and laws. Even when picking up the latest introductory accounting textbooks (with the rare exception) one would find that the only change is the actual content.

Criticism against accounting educators is eminent from the above. It also seems that the change should start at school and introductory accounting level. Boyd *et al.* (2000:36) say that educators resist change because it is time consuming, difficult and in many instances the opposite of what they believe and know. Criticism against accounting educators' resistance to change is addressed in paragraph 1.1.4 (page 5). Reality is, however, that if the accounting educators do not implement the necessary changes, the profession will find somebody else who will be willing to do so. It is a simple economical matter of demand and supply.

In the next paragraph a summary and grouping will be provided from the requirements (skills and competencies) listed by various organisations and authors. It would be important to obtain a list of the most recognised competencies and skills to address these, where possible, in teaching accounting at introductory level.

3.3. SKILLS AND COMPETENCIES REQUIRED FROM ACCOUNTANTS AND THUS ALSO ACCOUNTING LEARNERS

According to Bolt-Lee and Foster (2003:34) accounting education worldwide is changing to meet the needs of the contemporary business world. They add that new professional accountants need a value added focus. Bolt-Lee and Foster (2003:39) also stress that learning, and therefore also skills development, does not end with receiving a diploma. It must continue throughout the professional's life.

Pratt and Davey (1997:15) noted that: "Learning how to learn, intellectual inquiry and communication skills will distinguish the successful professional of the future, given that the 'shelve life' of knowledge will be very limited".

In 2003 IFAC (2003:3) categorised the capabilities of professional accountants into 6 groups, namely:

- Attitudes (such as professional values);
- Behavioural skills (such as leadership);
- Broad business perspective (such as critical thinking);
- Functional skills (such as risk analysis);
- Technical knowledge (such as auditing); and
- Intellectual skills (such as knowledge, understanding, analysis, synthesis).

With the above IFAC tried to combine the Functional Analysis approach (favoured in Australia, New Zealand and the UK) with the Competence approach (favoured in the United States).

Lee and Blaszczynski (1999:106) recorded the view of the "fortune 500" executives on the important skills required from accountants. Although accounting knowledge remains the highest, its importance has dropped significantly from 1992 to 1997. The highest increases were in personal computer and internet skills, group work and interpersonal skills.

Tables 3.1-3.3 (pages 65 to 66) provide a list of skill requirements derived from various research previously performed and requirements of professional accounting bodies. The finding includes requirements from:

- The Higher Education Project;
- The Canadian Institute of Chartered Accountants (CICA);
- The American Institute of Certified Professional Accountants (CPA);
- The Institute of Chartered Accountants of England and Wales (ICAEW);
- Accounting Education Change Commission's "The Big 8" paper;
- The South African Qualifications Authority (SAQA);
- The Accounting Change Commission (ACC);
- The International Federation of Accountants (IFAC);
- Former PU for CHE (now North-West University, Potchefstroom Campus);
- Chartered Institute of Management Accountants (CIMA);
- Remarks of the so called "Fortune 500" executives as perceived by Lee and Blaszczynski;
- The Public Accountants and Auditors Board (PAAB);
- Simyar as recorded by Adler and Milne; and
- R. Inglis and G. Dall'Alba .

The qualities or skills were broadly divided into three categories:

- Technical and other competencies - necessary for the day to day performance of tasks;
- Roles the accountant, as manager and adviser, should be able to perform; and
- Soft skills - necessary to perform tasks in a unique value added and holistic fashion.

The skills required are listed vertically with a description that was derived from the different sources. The matches (references) by authors to the skill requirements are indicated horizontally with an "x".

TABLE 3.1 – Technical and other competencies

Quality	Higher education Project (Harvey and Green, 1994) as recorded by (Morgan, 1997)	CICA (2005a)	American Institute of CPA's (AICPA) (2005)	ICAEW (2005)	The Big 8 (1989)	South African Qualifications Authority (1997:5)	Accounting change commission (1990)	IFAC (1996:3)	Former PU for CHE (1997)	CIMA (2005a) ¹	Fortune 500 executives as perceived by Lee and Blaszczynski (1999:106)	PAAB (1994:5)
TECHNICAL AND OTHER COMPETENCIES												
Critical problem solving skills (use of case studies, managing change)	x	x	x		x	x	x	x	x		x	
Oral and written communication (reporting) skills in various media	x	x	x	x	x	x	x	x	x	x	x	x
Effective/active learning skills for continuous professional education (CPE)	x		x			x		x	x			x
Being able to use technology in a responsible manner (Internet and PC)			x			x		x	x		x	x
Technical competencies (over various subject fields and the ability to integrate these competencies)		x	x		x		x	x	x	x	x	x
Analytical ability, logical argument and summarising (Numeracy/Intellectual skills)	x	x		x		x	x	x	x	x		
Critical Reading								x				

¹ The 2000 and 2005 syllabus for the foundation level is the same.

² Reference is not made to the SAICA syllabus, as it does not separately reflect the requirements of introductory accounting.

TABLE 3.2 – Roles of accountants

Quality	CICA (2005b)	South African Qualifications Authority (1997:5)	Simyar (1993) as recorded by Adler and Milne (1997a:109)	Former PU for CHE (1997)	Inglis and Dall'Alba (1998:201)
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ROLES

Entrepreneur		x	x	x	
Legal advisor	x				
Resource manager	x				
General Manager	x		x		x
Financial analyst			x		
Global competitor	x		x		
Market analysts	x		x		
Public relations expert/specialist			x		
Accepting general leadership roles					
Sales person	x		x		

TABLE 3.3 – Soft skills required

Quality	Higher education Project (Harvey & Green, 1994) as recorded by (Morgan, 1997)	American Institute of CPA's (2000:11,17)	The Big 8 (1989)	ICAEW (2005)	South African Qualifications Authority (1997:5)	Former PU for CHE (1997)	IFAC (1996:3)	CICA (2005a)	Accounting change commission (1990)	Fortune 500 executives as perceived by Lee and Blaszczyński (1999:106)	PAAB (1994:5)
SOFT SKILLS											
Team building skills (ability to work in a group)	x	x	x	x	x	x	x		x	x	
Personal attributes (commitment, energy, self-motivation and self management)	x			x	x	x		x	x		x
Contribute to society and personal fulfilment in a responsible way and thus improvement of citizenship					x	x					
Interpersonal skills		x							x	x	x
Ethic consideration		x	x				x	x	x		
Intellectually flexible and adaptiveness			x			x	x	x			
Ability to develop careers					x		x				
Accurate and on time, meet deadlines			x			x			x		
Having high values - respect for society and creation, strive towards high quality, loyalty and integrity		x	x			x	x	x	x		
Leadership and project management		x									
Cultural and ethnic sensitivity					x	x	x		x		
Negotiation skills											x

The following is derived from Tables 3.1 to 3.3, page 65 to 66:

- Concerning the technical and other competencies, most researchers identified *critical problem solving skills* and *oral and written communication skills* as an important competency. Other skills highlighted were *effective learning skills, being able to use technology, technical competencies over various subject fields and analytical abilities*;
- From the roles accountants must perform it is interesting to note that being an *entrepreneur and general manager* was noted most, with roles such as *global player, market analyst and salesperson* also being mentioned often; and
- With the soft skills, *team-building skills* and *personal attributes* were most important. Other skills noted frequently include *interpersonal skills, contributing to society, ethical considerations, being able to adapt, having high values and cultural en ethnic sensitivity*.

As if all these requirements are not enough to complicate the roles of accountants, the following is also noted: "To be successful in accounting and finance today, you must have more than solid technical, communication, and analytical skills. You must be committed to becoming a peak performer - someone who is recognised for consistently maintaining high productivity levels and going above and beyond expectations" (Messmer, 2001:8). Johns and Strand (2000:319) concluded that business learners should be exposed to situations in which they receive experience in approaching and analysing disagreement and ethical dilemmas.

Radbourne (2003:1) concluded that there is sufficient evidence in literature and test data to show that the employability gap is closed when graduates possess generic capabilities such as communication, teamwork, risk-taking, decision-making, problem solving, critical thinking, analytical reasoning, visioning, leadership, ethical practices, appreciation of diversity and commitment to social justice. Radbourne (2003:2) also found that explicit teaching of generic skills and abilities achieves learning that lasts.

There is thus overwhelming agreement between researchers that transfer of knowledge is not sufficient in teaching future accountants. There is also support for stating that the criticism against accounting education can in some way be addressed by incorporating training in these skills and competencies into the curriculum. Accountants need to master various skills and competencies during their formal educational process.

A further aspect to address would be the technical content of an introductory accounting course.

3.4. TECHNICAL CONTENT OF INTRODUCTORY ACCOUNTING

Doucet *et al.* (1998:475) noted that when studying the competencies accountants require, the most important one is course content.

In order to establish in detail the current technical knowledge expected from learners in introductory accounting the content of various introductory accounting textbooks was analyzed. "Textbooks" used at the majority of the largest South African Universities were selected as well as the introductory syllabus of CIMA. Reference was also made to a study on the competencies required for introductory accounting as well as the national curriculum for grades 10 to 12 in South Africa. Institutes such as SAICA (South African Institute of Chartered Accountants) were not included, as their syllabi do not specify introductory accounting separately. The findings are reported in Table 3.4 below. The topics are listed vertically. Where a topic is addressed in a textbook it is indicated with an "x". As the Table consists of various pages, a legend is provided at the beginning.

TABLE 3.4 – Content of introductory accounting

Legend

<p>Textbook 1 – KEW, J., METTLER, C., WALKER, T. & WATSON, A. 2004. Accounting an introduction. Cape Town: Oxford University Press. 799p.</p> <p>Textbook 2 – DE WET, J.J. 2005. Inleidende Finansiële Rekeningkunde. Stellenbosh: Ebony Uitgewers. 268p.</p> <p>Textbook 3 – DEMPSEY, A., & PIETERS, H.N. 2005. Accounting an introduction. Durban: LexisNexis - Butterworths. 662p.</p> <p>Textbook 4 – VAN VUUREN, L., VORSTER, Q., MYBURG, J. & FOUCHÉ, J. 2006. Accounting an introduction. Durban: LexisNexis - Butterworths. 634p.</p> <p>Textbook 5 – CHARTERED INSTITUTE OF MANAGEMENT ACCOUNTANTS (CIMA). 2005b. Financial accounting fundamentals. www.cimaglobal.com/cps/rde/xchg Date of access: 19 December 2005</p> <p>Textbook 6 – SOUTH AFRICA. Department of Education. National Curriculum Statements Grade 10-12. Pretoria: State printer. 2005.</p> <p>Study 1 – DOUCET, M.S., DOUCET, T.A. & ESSEX, P.A. 1998. Competencies for the introductory accounting sequence. <i>Journal of Accounting Education</i>, 16(3): 473-495.</p>
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TABLE 3.4 – Content of introductory accounting (continued)

TOPIC	Text- book 1	Text- book 2	Text- book 3	Text- book 4	Text- book 5	Text- book 6	Study 1 ¹
ACCOUNTING BASICS							
Accounting in context and the purpose of accounting	x	x	x	x	x	x	
Conceptual framework / accounting concepts	x	x	x	x	x	x	2,19
Accounting equation and double entry principle	x	x	x	x	x	x	14
Accounting cycle:							
- Transactions	x	x	x	x			5
- Source documents	x	x		x		x	
- Subsidiary journals	x	x	x	x	x	x	
- General ledger and subsidiary ledgers	x	x	x	x	x	x	
- Trial balance	x	x	x	x	x	x	
- Adjustments	x	x	x	x	x		
- Closing off	x	x	x	x	x		
- Profit calculations		x	x	x	x		
- Financial statements	x	x	x	x	x	x	6,8

¹ – The ranking of how important the topic is considered by the study is indicated. A lower number indicates a higher ranking. Where a topic was addressed in different sections of the study, more than one ranking is indicated. Managerial accounting issues were excluded and therefore the ranking will not appear complete.

TABLE 3.4 – Content of introductory accounting (continued)

(Continued)

TOPIC	Text- book 1	Text- book 2	Text- book 3	Text- book 4	Text- book 5	Text- book 6	Study 1
FINANCIAL STATEMENT ELEMENTS							
Inventory							7
- Perpetual and periodic recording systems	x	x	x	x	x	x	
- Cost formulas							
- Valuation							
- Consignment inventories			x	x			
- Disclosure			x	x			
Accounts receivable	x		x	x	x	x	7
Accounts payable	x	x	x	x	x	x	15
Provisions				x			
Contingent assets and liabilities				x			26
Cash and bank					x		7
- Understanding bank statements	x	x	x	x		x	
- Bank reconciliation							
- Petty cash			x	x	x		
Property, plant and equipment							9
- Cost	x	x	x	x	x	x	12
- Depreciation and impairment							
- Subsequent expenditure							
- Disposal							
- Fixed asset register							
- Revaluation	x	x					
- Investment property	x		x				
- Disclosure	x		x	x			
Non-Current liabilities							13
Intangibles							36,41

TABLE 3.4 – Content of introductory accounting (continued)

(Continued)

TOPIC	Text- book 1	Text- book 2	Text- book 3	Text- book 4	Text- book 5	Text- book 6	Study 1
DIFFERENT ENTITIES							
Sole proprietors	x	x	x	x		x	24
Companies							24
- Types of companies	x	x	x	x		x	
- Legal aspects and establishment	x	x	x	x		x	
- Share prices	x	x					
- Share capital	x	x	x	x			20
- Types of shares							
- Ordinary and preference shares							
- Issue of shares (Over and under subscription)							
- Conversions	x			x			
- Redemptions							
• Rights issues							
• Capitalisation issues							
- Rights of shareholders	x		x	x			
- Dividends	x	x	x	x			
- Taxes	x	x	x	x			
- Reserves	x	x	x	x			
- Financial statements	x	x	x	x		x	
- Debt	x		x				
- Corporate governance	x						

TABLE 3.4 – Content of introductory accounting (continued)

(Continued)

TOPIC	Text-book 1	Text-book 2	Text-book 3	Text-book 4	Text-book 5	Text-book 6	Study 1
Partnerships							24
- Legal aspects and establishment	x	x	x	x		x	
- Accounting principles	x	x	x	x		x	
- Appropriation of profit	x	x	x	x		x	
- Changes in number of partners	x	x	x	x			
- Reserves		x	x				
- Goodwill and revaluation of assets	x		x				
- Amalgamation of partnerships			x				
- Conversions				x			
- Dissolution (Liquidation)	x	x	x	x			
- Joint ventures				x			
- Financial statements	x	x	x	x		x	
Close corporations							24
- Legal aspects and establishment	x	x	x	x			
- Internal relationships		x	x	x			
- Membership		x	x	x			
- Accounting officer			x	x			
- Conversion into companies			x	x			
- Tax		x	x	x			
- Appropriation of profits	x	x	x				
- Accounting for transactions	x					x	
- Financial reporting requirements	x	x	x	x		x	

TABLE 3.4 – Content of introductory accounting (continued)

(Continued)

TOPIC	Text-book 1	Text-book 2	Text-book 3	Text-book 4	Text-book 5	Text-book 6	Study 1
Non-profit organisations							24
- Accounting for non-profit organisations	x		x	x		x	
- Accounting for subscriptions	x		x			x	
- Income producing activities	x		x	x		x	
- Coupons	x						
- Special funds	x		x	x			
- Financial reports	x		x	x			
SUNDRY TOPICS							
Correction of errors		x	x	x	x		
VAT	x		x	x	x	x	
Insurance claims							
- Property, plant and equipments, Loss of profits			x	x			
- Inventories			x	x			
Financial statement analysis	x		x	x	x	x	1,3,4,22 ,34,39
Cash flow statements	x		x	x	x		18
Incomplete records	x			x	x	x	
Internal controls	x		x	x	x	x	27
Salaries and Wages					x	x	
Budgeting	x		x	x		x	21
Management accounting and entities	x		x		x	x	
Departmental accounts			x	x			25,47
Branches			x	x			
Financing an entity			x				
Ethics						x	17
Impact of accounting policy choice							10
Earnings per share							30
Treasury stock							44

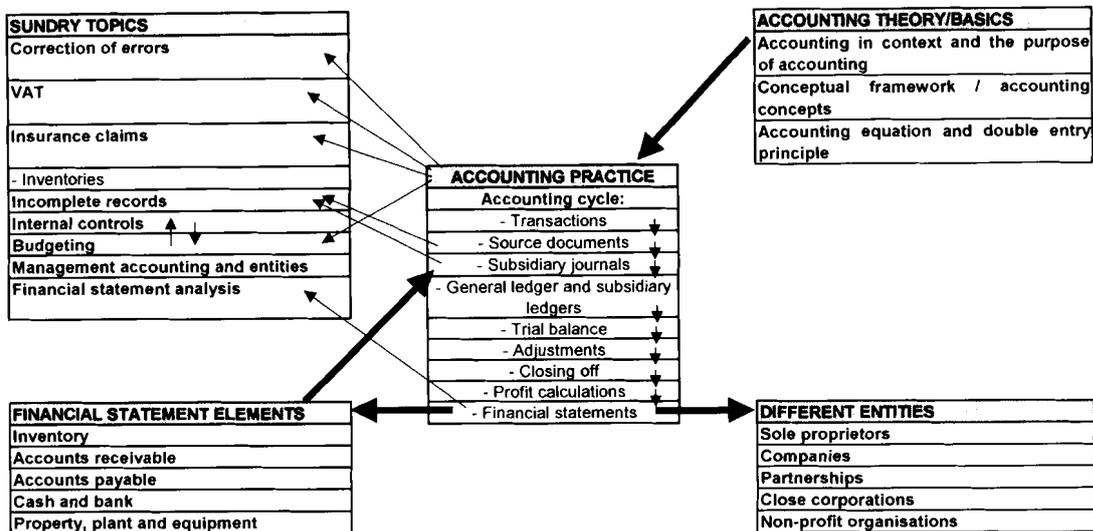
From Table 3.4 above it is evident that similarity exists between the content of the different textbooks. The following major content categories are identified:

ACCOUNTING BASICS
Accounting in context and the purpose of accounting
Conceptual framework / accounting concepts
Accounting equation and double entry principle
Accounting cycle:
- Transactions
- Source documents
- Subsidiary journals
- General ledger and subsidiary ledgers
- Trial balance
- Adjustments
- Closing off
- Profit calculations
- Financial statements
FINANCIAL STATEMENT ELEMENTS
Inventory
Accounts receivable
Accounts payable
Cash and bank
Property, plant and equipment
DIFFERENT ENTITIES
Sole proprietors
Companies
Partnerships
Close corporations
Non-profit organisations
SUNDRY TOPICS
Correction of errors
VAT
Insurance claims
- Inventories
Financial statement analysis
Incomplete records
Internal controls
Budgeting
Management accounting and entities

These topics and the relationship between them are summarised in diagram 3.2 below. The accounting theory (basics) gives rise to the accounting practice by way of the accounting

cycle. The steps in the accounting cycle follow each other in a specific sequence. During this process data is collected and recorded in line with the elements of the financial statements. The end-goal is to prepare the financial statements for different entities consisting of the financial statements. During the accounting cycle various sundry topics are also addressed. There is also a relationship between management accounting and budgeting.

DIAGRAM 3.2 - Subject content of introductory accounting



3.5. CONCLUSION

In the previous paragraphs it was stated that there is a changing commercial environment posing serious demand on the accounting profession to undergo similar changes and address new challenges of a changing environment. These demands are mirrored to accounting educators. The challenges facing accounting educators and newly qualified accountants are tremendous. From the research it seems that accounting educators have up to now not lived up to expectations. Accounting education has thus been under fire for not addressing the competencies needed to address these challenges.

These competencies include technical and other competencies such as *critical problem solving skills* and *oral and written communication skills* as important competencies. Other skills highlighted were *effective learning skills, being able to use technology, technical competencies over various subject fields and analytical abilities*.

The professional accountant should also be able to perform the roles of *entrepreneurs and general managers*. In addition they should also be *global players, market analysts and salespeople*.

Soft skills needed include *team-building skills* and *personal attributes* as the most important ones. Other skills noted frequently include *interpersonal skills, contributing to society, ethic considerations, being able to adapt, having high values and cultural and ethnic sensitivity*.

On the technical side the accounting basics, general balance sheet items, various general accounting entities and sundry matters such as managerial accounting issues, financial management issues, internal control issues and practical accounting aspects such as taxes, errors and incomplete records should be addressed (diagram 3.2, page 76). By addressing these issues the proposed subject content for introductory accounting would be covered.

In spite of various research studies on this matter it seems, however, that little practical application has been made in the teaching methodologies of accounting educators. With this in mind, it is anticipated that the development of a teaching tool for introductory accounting would address the practical implementation of these competencies. It would also be important that the board game addresses the subject content for introductory accounting as identified in paragraph 3.4, page 68.

In chapter 4 the list of competencies and skills as well as the technical content of introductory accounting will be addressed and incorporated in designing the board game and support material.

The last element of the teaching-learning environment is the teaching methodology. Different teaching methodologies currently found in accounting education will be described in the next chapter. The methodologies will be investigated to determine which (or which combination) could be used to effectively provide learning opportunities for the technical knowledge and skill requirements.

CHAPTER 4 - TEACHING METHODOLOGIES

4.1. INTRODUCTION

The content of the accounting education curriculum was discussed in chapter 3. This chapter addresses objective three (paragraph 1.4, page 8), namely to identify existing innovative teaching methodologies. It is also discussed how these methodologies could be applied in the accounting education field.

Dictionary.com (2006) defines methodology as “a set or system of methods, principles, and rules for regulating a given discipline, as in the arts or sciences.” In education it is defined as “a branch of pedagogics dealing with analysis and evaluation of subjects to be taught and of the methods of teaching them” (Dictionary.com, 2006). The American Heritage Dictionary (2000a) defines methodology as “a body of practices, procedures, and rules used by those who work in a discipline or engage in an inquiry.” WordNet (2006a) defines it as “the branch of philosophy that analyses the principles and procedures of inquiry in a particular discipline.” From these definitions it can be concluded that accounting education methodology would deal with the methods, rules, practices, principles and procedures for analysing and assessing of accounting and eventually regulating accounting teaching.

There has long been a call for a more innovative approach to teaching accounting. The American Accounting Association (1986) indicated in the Bedford Report that accounting educators question university accounting teaching processes because they believe the material taught is inadequate and they question the effectiveness of traditional teaching and learning methods. The Report continues to say that the method of lecturing with routine problem-solving still dominates accounting teaching methods as it did 50 years ago. This method was found inadequate because it does not promote creative thinking and self-development (American Accounting Association, 1986).

Since the Bedford Report various other researchers continued to call for a move to a more innovative teaching approach. These include:

- Eggen and Kauchak (1988:1) note that effective learning occurs when learners are actively involved in organising and finding relationships in the information rather than being passive recipients;
- Friedlan (1995:61) reports that the teaching approach can affect learners' perceptions of skills and abilities that are important for success in accounting courses and by accounting practitioners. Learners exposed to non-traditional courses tend to have more realistic perceptions of skills and abilities that are important for success in accounting courses and success by accounting practitioners;
- Adler and Milne (1997b:191) argue that the basis for a change in accounting education to more active learner involvement is broader than just addressing the need for supplying of learners with wider skills and competencies. According to them, it is an essential ingredient to all learners' learning processes and the development of life long learning skills. They also argue that problem based and peer-assisted learning tasks can help to promote many of the skills and competencies required;
- According to Adler and Milne (1997b:192) there could be several reasons why accounting educators might be reluctant to switch from the traditional lecture-based approach. A learner centred approach is potentially more time consuming and may require greater commitment. This is further substantiated by a large emphasis on research, lack of adequate material, room layouts, staff training and finally a resistance from learners' side to take responsibility for their own learning;
- Davidson *et al.* (2000:53) reported that the Accounting Education Change Commission emphasised that accountants must work with unstructured problems; and
- Diller-Haas (2006) also indicates that memorising technical knowledge leaves little time for developing the skills that employers seek from accountants.

It seems that, in general, not much has changed in the past 20 years in terms of accounting teaching methodologies. This was also highlighted in the paragraph 3.2.3, page 58, regarding the criticism against accounting educators. The next paragraphs highlight main approaches to teaching and the different teaching methodologies.

4.2. DIFFERENT APPROACHES TO TEACHING

The American Heritage Dictionary (2000b) defines approach as “a way or means of reaching something; an access” while WordNet (2006b) defines it as “ideas or actions intended to deal with a problem or situation.” It seems that an approach is much the same as a methodology but in a much broader sense.

Various broad approaches to teaching exist. In the next paragraphs the pedagogy versus andragogy and learner-centred versus conventional approaches are discussed.

4.2.1. Pedagogy versus andragogy

Pedagogy and andragogy are two ways in which people learn:

- Pedagogy is the learning basic facts Nevins (2003?) or education in schools (Van Rensburg & Landman,1988:286) , and;
- Andragogy is applying facts to different situations Nevins (2003?), mostly pertaining to adults (Van Rensburg & Landman,1988:286).

Rahman and Velayutham (1998:291) distinguish in more detail between pedagogy and andragogy in the following manner:

DIAGRAM 4.1 - Pedagogy vs. Andragogy

Pedagogy	Andragogy
Subject based	Situation based
Instructor given/driven	Learner given/driven
Solving problems	Setting (problem identifying and defining)
Structured mainly through lectures	Unstructured with more room for discussion
Instruction	Facilitation
Application (use techniques, rules and concepts)	Inquiry (investigation and research)

(Source: Rahman & Velayutham,1998:291)

The Florida Department of Education (2006) adds to the above by stating that under the pedagogical approach the lecturer evaluates the learning, while with andragogy there is an element of self-evaluation. They continue to say that motivation under pedagogy is mainly from external sources, while andragogy leads to internal motivators.

Rahman and Velayutham (1998:291) conclude that it seemed that Continuous Professional Education (CPE) courses in accounting on the one hand dealt with obsolescence in core areas of knowledge by using andragogy. On the other hand, it dealt with obsolescence in peripheral areas using pedagogy. Andragogy is most often used in known areas of accounting and pedagogy in accounting sectors that are not mainstream.

4.2.2. Learner-centred learning versus conventional teaching

Another approach is that of learner-centred versus lecturer/facilitator-centred (conventional teaching). These approaches were already identified and discussed in paragraph 2.3.2.3, page 29. Cannon and Newble (2000:17-18) give the following comparison between learner-centred learning and conventional teaching:

DIAGRAM 4.2 - Learner-centred learning vs. Conventional Learning

Learner-centred learning	Conventional teaching
Learners have responsible and active roles	Learners are often passive
Learners are required to make choices about what and how to learn	Most decisions are made by the lecturer/facilitator
There is an emphasis of integrating learning across the curriculum	Emphasis on learning the particular subject only
Emphasis on enquiry-type activities	Emphasis on receiving information
Lecturer/facilitator as guide, mentor and facilitator	Lecturer/facilitator as expert, dispenser of knowledge and controller of activities
Intrinsic motivation	Extrinsic motivation
Focus on cooperative learning	Individual learning
Learning can occur anywhere	Learning is confined to fixed teaching venues
Flexibility in learning and teaching	Relative inflexible arrangements
Greater flexibility in assessment with self and peer assessment	Assessment seen as responsibility of lecturer/facilitator
Long-term perspective with lifelong learning	Short-term perspective with emphasis on completing assigned work and preparing for examination

(Source: Cannon and Newble,2000:17-18)

McChlery and Visser (2006:10) also identified a lecturer/lecturer/facilitator-centred approach and learner/learner-centred approach as approaches to teaching. They also included a problem-based approach and outcome-based approach, which in this study will be discussed under teaching methodologies.

4.2.3. Conclusion

From the above it seems that, when generalised, there is a distinct difference between two approaches:

- **A learner-centred approach (pedagogy)**, which is more unstructured and deals with a broad spectrum of content, the lecturer/facilitator is a facilitator, learners are active inquirers, working collaboratively towards lifelong learning; and
- **A lecturer/facilitator-driven approach (andragogy)**, which is structured and focuses on a single subject, the lecturer/facilitator is an instructor, learners are passively applying knowledge, working individually and being focused on short-term goals.

4.3. METHODOLOGIES OF TEACHING

This paragraph highlights the need for a change in the teaching methodologies applied in accounting. A list of innovative teaching methodologies that will be discussed in following paragraphs is also compiled.

4.3.1. A need for change

Visser (2000:2) says that the White paper on education in South Africa will determine that future higher education will be program-based and outcome-based and not subject or institutional based. This implies that the traditional lecturing method would not be suitable in future accounting education.

Various international researchers and educators also highlighted the need for different and innovative methods to teaching accounting:

- According to Flynn and Maguire (1991:115) they found process-oriented graduate programs particularly well suited to a program where the fundamentals have already been established in the undergraduate curriculum. It seems that the content orientated methods may well continue to dominate the undergraduate level;
- According to Booth *et al.* (1999:278) various accounting education researchers have indicated a move towards a wide range of methods that aim to improve learners' generic and life-long learning skills. These include the use of case studies, group based, intensive and other co-operative learning formats;
- A study by Adler and Milne (1997a:123) indicated that tertiary institutions in New Zealand were under-utilising active learning approaches such as group learning, case studies and peer assessment;

- Testing alternative media in accounting courses on undergraduate learners in Australia indicated the most positive aspects thereof as being the opportunity to self-pace, the visual and oral aspects as well as linking accounting to real practice in the day-to-day running of a business (Evans & Foster, 1997:231); and
- Cannon and Newble (2000:11) say that there is evidence of a relationship between a lecturers'/facilitators' approach to teaching and the quality of learner-learning outcomes. They continue to say that lecturers/facilitators must be aware of this and the impact their teaching method has on learners' learning approach.

From the literature (in this chapter and chapters 1 and 3) it stems that the traditional lecture methods (which may have incorporated some problem-solving) are not addressing the needs for effective learning. There are various other teaching methods that could be applied to improve the level of learning. It also seems that lecturers/facilitators should again not be caught up in swinging the pendulum to a single alternative, but that different teaching methods should be used to best develop the different content and skills needed. In alternating the teaching methods, the different learning styles would also be addressed.

4.3.2. Different teaching methods

McChlery and Visser (2006:10) note that lecturers have different strengths and preferences in the ways they transfer knowledge and applications in their teaching. From paragraph 2.3.2.2, page 28 it can be concluded that accounting lecturers included in the study of McChlery and Visser (2006) tend to teach in an active, sensing, visual and global manner. These preferences would necessarily come forth in lecturers' teaching methods.

The problem is, however, that those lecturers may fall into a comfort zone with what they know and handle with ease and may not improve their skills over time. Moreover, they may not address learners' needs related to different learning styles.

Previous research noted different teaching methods:

- Cannon and Newble (2000:9) highlight learner-centred learning methods as problem-based learning, cooperative learning, learners as consultants, service learning, research projects, peer teaching, case methods, learning portfolios and journals;

- Van Hamburg (2006) mentions the following learning activities derived from The Handbook for Lecturers (Du Plessis,1993) : brain storming, class exercises, concept maps, formulating examination questions / memorandums, formulating one nightmare question, one minute papers, multiple choice questions, more comprehensive questions, group work, listening and summarising, reading and interpreting, role-playing, videos, short tests with feedback, problem solving, case studies, excursion, open book questions, discussions, debates, simulations, fieldwork/trips, laboratory activities, fish bowls, self assessment (reflection), portfolios, experts' input and lectures;
- Gross and Gross (1980:x) identified the following approaches to college teaching: self-paced, modular methods, personalised systems of instruction (PSI), media, computers, case studies, contract learning, field experience, simulations, competency based education, peer teaching, modifying traditional college teaching and other minor innovations; and
- Other methods often heard of include interactive learning, telematic learning, e-learning and role-playing.

Many of these methods or activities differ only slightly or there are sometimes more than one name for the same method. It is therefore attempted to divide these methods into groups in order to assess the general characteristics of a group of methods.

The identified methods were summarised and divided into the following groups of teaching methods:

- Self-paced, modular methods (paragraph 4.4, page 86) – Learners work at their own pace towards clearly designed objectives through modules following on each other;
- Experience-based methods (paragraph 4.5, page 91) – Learners learn from experiences during case studies, problems, simulations, role-play and not only master theory;
- Competency/outcome based methods (paragraph 4.6, page 101) – Learners work towards mastering certain goals or outcomes and competencies that are often occupation or work related;
- Cooperative learning methods (paragraph 4.7, page 103) – Learners collaborate and in the process help each other and learn from each other;

- Interactive learning (paragraph 4.8, page 106) – Learners interact with other learners, the subject content (based in the learning material), the lecturer (which is mainly a facilitator) and the milieu;
- Teaching aid methods (paragraph 4.9, page 107) – With these methods different teaching aids are used. These may include multi-media, computers and technology; and
- Other innovations (paragraph 4.10, page 112) – Sundry methods not included in one of the above categories.

Although the methods can be divided into these groups it is important to note that the methods in one group often have cross-links with methods in other groups. In the next few paragraphs different innovative approaches to teaching (and more specifically to teaching accounting) are discussed.

4.4. SELF-PACED MODULAR METHODS

In self-paced and modular courses learners work at their own pace, with fully designed materials in printed or media form with clearly defined objectives (Gross & Gross, 1980:1). The principle is based on mastering small steps at a time, active learner participation, providing immediate feedback and confirmation of learning and self-pacing (Gross & Gross, 1980:1). Three modular approaches which have attracted the most attention are (Gross & Gross, 1980:2-3):

- Audio-tutorial approach (where audio repetition is required and learners work at their own pace);
- Mastery learning (all learners master the work, but at their own pace, before continuing); and
- Personalised System of Instruction.

The audio tutorial may well be extended into incorporating various other media. Another method that can also be included in this group is contract learning.

Stunkel (1999:67) notes that self-instruction is possible, but only with exceptional motivation and self-discipline.

In the next paragraphs self-paced, modular methods are discussed under the headings of:

- Media-tutorial and mastery learning (paragraph 4.4.1, page 87);
- Personalised Systems of Instruction (paragraph 4.4.2, page 89), and
- Contract learning (paragraph 4.4.3, page 90).

4.4.1. Media-tutorial and mastery learning

In these methods media is often used to aid the teaching process. Learners need to master a certain section, after which they can advance to a new section at their own pace. Sub-methods that can be included in these are:

- Media-tutorial;
- Open learning;
- E- learning; and
- Telematic learning.

Probably the oldest form of learning in this group is audio-tutorials where lectures/tutorials are recorded on cassette and could be listened to by the learners at their own pace and in their own environment. The tutorial could also be repeated as often as needed. As technology advanced, it includes videos, compact disk, and digital versatile disk usage.

According to De Lange *et al.* (1997:295) there is a continuous growth of open learning in countries such as the United Kingdom, India and South Africa. Webberley and Haffenden (1987:138) describe open learning as:

- Study whenever it is convenient;
- Enrol at any time;
- Studying at a pace suiting the learner;
- Leaving the system in a manner suiting the learner; and
- Having access to tutorial support and guidance at own discretion.

It was established that the flexibility of open learning was the main attraction for learners to get involved in open learning. The United Nations Educational, Scientific and Cultural Organisation (2006) also defined open learning as "instructional systems in which many

facets of the learning process are under the control of the learner. It attempts to deliver learning opportunities where, when, and how the learner needs them”.

E-learning is described as "learning facilitated and supported through the use of information and communications technology. E-learning can cover a spectrum of activities from supported learning to blended learning (the combination of traditional and e-learning practices), to learning that is entirely online" (University of Bath, 2006).

As said previously in the paragraph the audio approach can be extended to include more media. The North-West University (former PU for CHE) employed a system called Telematic Learning for distance learning students. Learners could view lectures on video and complete tasks following a work program and interactive study guide in their own time. There were, however, scheduled assignments and examinations.

All these methods have a few things in common:

- A certain media or technology is used and
- A certain amount of freedom exists regarding the tempo, time and place of study.

What is, however, important is the effect this would have on learning. Bloom (as referred to by Gross & Gross [1980:5]) reports that only 20% of learners reached the level that 80-90% of learners reached after being taught by mastery learning.

Vaughan (2005:73) said that by implementing self-paced learning in her math class she had the following results:

- Learners obtained better marks;
- Discipline problems were rare;
- Learners engaged in lively discussions;
- Learners came for extra help when needed;
- Learners worked in groups;
- Learners made the connection between learning and practicing concepts;
- There was no need to copy other learners' work; and
- Learners understood the link between various learning activities and doing well in the examination. This reduced test anxiety.

It seems that the first level of self-paced learning includes the use of media (electronic or printed) to guide the learner through the process of learning at his or her own pace. There are evaluation points along the way to determine if certain knowledge or skills have been mastered before the learner can continue. The results indicate a positive outcome for effective learning.

4.4.2. Personalised Systems of Instruction (PSI)

PSI is characterised by behavioural objects, mastery criteria, frequent testing and the use of proctors, while lectures are optional (Gross & Gross, 1980:7). PSI learners work at their own pace, in a “laboratory” setting with carefully pre-printed materials. They are being tested after each unit, while “proctors” are constantly at hand to encourage and test learners (Gross & Gross, 1980:7).

According to Robin (1975:3) two of the non-specific factors in PSI instruction can be divided into two broad categories:

a) Relationship factors

- The instructor-proctor relationship – the instructor must communicate what the proctors must do and check to see that the instructions are followed. The instructor relies on the proctor for feedback;
- The proctor-learner relationship – the proctor must see the learners as equals and must indicate a willingness to go out of his/her way to assist the learners. The proctors’ “humanness” is what makes it personalised; and
- The instructor-learner relationship – This relationship is less critical as the instructor does not employ face-to-face contact as primary instructional mode.

b) Expectancy variables

- Instructors, proctors and learners enter the course with different expectations, and when the expectations differ from the experience their reactions may affect academic performance and attitudes.

It was found that PSI improved learning by 10-20% based on end-of-course examinations (Gross & Gross, 1980:8).

PSI builds on the previous level of self-paced learning. There are, however, the introduction of proctors that monitor the process and provide assistance where necessary. This takes place in a laboratory situation.

4.4.3. Contract learning

In contract learning, projects are negotiated between the faculty member and learner, listing long-term goals, general purpose, specific objectives, learning activities (lectures to attend, books to read, papers to write) and the methods and criteria for evaluation (Gross & Gross, 1980:28). It is advocated that the negotiation of the contract is almost as important as the learning experience and that learners tend to take direct personal responsibility for their learning (Gross & Gross, 1980:28).

Greenwood (2003:339) describes a learning contract as a written agreement between lecturer/facilitator and learner in which the learner agrees to complete tasks in a prescribed amount of time on his/her own initiative. Greenwood (2003:338) remarks that learning contracts provide the balance between lecturer/facilitator choice and learner initiative that is necessary for differentiation of instruction. He continues that contracts are a good way to orchestrate learner centeredness and increase independence. Greenwood (2003:339) lists the following reasons for having learning contracts:

- Lecturers/facilitators can organise time and work with individuals or small groups while other learners are constructively occupied;
- It addresses the uniqueness of learners;
- It balances independence and initiative with synergy of working cooperatively; and
- Time is not wasted by all learners waiting for problems to be solved before they can move on.

Mazhindu (1990:101) indicates an increasing use of learning contracts in basic, continuing, undergraduate and graduate nursing courses in the United Kingdom. The reasons given include the desire to optimise learning by either matching the teaching style to that of the learner or to provide a variety of teaching methods from which the learners choose.

Mazhindu (1990:102) indicates that humanistic theory and andragogy is a further matter that contributes to the development of learning contracts.

According to Mazhindu (1990:103) contract learning emphasises lecturer/facilitator activities, lecturer/facilitator-learner interaction and subject matter and promotes learning by discovery. He continues to say that the quality of the learning lies in the learning experience, but that problems arise in the education of professionals where statutory regulations have certain demands on the period in which the course must be completed.

According to Gross and Gross (1980:32) major advantages of this method are the reduction of lecture time to less than one third without effecting end-of-course achievement, lower drop out rates, higher quality work and learners achieving notable success in landing good jobs.

Contract learning seems to be a more formal approach to self-paced learning. The lecturer is more directly involved in contracting with the learner on the goals and in monitoring the process.

4.5. EXPERIENCE-BASED METHODS

With experience-based methods the focus is on learning from experience and not only from the theory or textbook. According to Kolb and Kolb (2005:194) experiential Learning Theory is based on the assumptions that:

- Learning is best conceived as a process through which the learner goes and not in terms of reaching outcomes;
- All learning is relearning;
- Conflict, differences and disagreement drive the learning process;
- Learning is a holistic process of adaptation to the world;
- Learning results from synergetic transactions between the person and the environment; and
- Learning is a process of creating knowledge.

There are different ways of employing experience, namely:

- Case studies (paragraph 4.5.1, page 92);
- Problem-based learning (paragraph 4.5.2, page 95);
- Simulations (paragraph 4.5.3, page 98);
- Role-play (paragraph 4.5.4, page 99); and
- Field experience (paragraph 4.5.5, page 100).

4.5.1. Case study method approach

In the case study method a factual write-up of a situation is given to learners, bringing their own judgements and experiences, to engage in a group discussion and to benefit from the group's analysis (Gross & Gross, 1980:25). The case study is regarded as the closest thing to actual apprenticeship (Gross & Gross, 1980:25). According to Gross and Gross (1980:26-27) most of the "proof" of this method's success is in its continued and growing popularity and the fact that it provides a more effective learning experience. It is also more decisive and longer retention of material occurs, compared with more traditional seminar approaches.

According to Adler and Milne (1997:199) case studies go beyond traditional problem-based learning as learners must frame the problem, separate the relevant material from the irrelevant, develop alternative courses of action and then choose one of their identified courses of action as recommendation to solve the problem. This may however be arguable, depending on the view on problem-based learning (see paragraph 4.5.2, page 95).

Boyce *et al.* (2001:37) indicated that case studies could assist in developing soft skills (a range of general education skills that are not domain- or practice-specific, which include communication, interpersonal, problem-solving, conceptual/analytical, visual, oral and judgement skills).

Biggs (1989:17) identified four key elements associated with fostering a deep learning approach:

- Motivational context – fostering a need to know;
- Learner activity – learners should be active;

- Interaction with others – work with others; and
- Well-structured knowledge base.

How these matters could be addressed in case studies is shown in Table 4.1 below.

TABLE 4.1. Case study applications to develop the elements of deep and elaborative learning

Learning element to be addressed	The benefits of case study applications for deep and elaborative learning include:
1. Motivational context	<ul style="list-style-type: none"> • Use of real world scenarios. • Dealing with contemporary issues, and application of knowledge. • Ideas to new situations. • Connection to learners' own interests. • Consideration of ethical, social, and moral aspects. • Grappling with unstructured problems.
2. Learner activity	<ul style="list-style-type: none"> • Application of judgement and resolution of uncertainty. • Demonstration of understanding. • Application of knowledge to new and unique circumstances. • Multiplicity of acceptable solutions. • Application of analytical and logical reasoning. • Evaluation of alternative positions. • Reappraisal of own positions. • Questioning of conventional practice. • Consideration of multiple dimensions of problem situations, including financial, social, ethical, environmental, and political.
3. Interaction with others	<ul style="list-style-type: none"> • Discussion and debate. • Group work. • Presentation and defence of positions or conclusions. • Consideration of others' views.
4. Knowledge base: Accounting-based scenarios (including knowledge of accounting procedures)	<ul style="list-style-type: none"> • Concepts and issues • Placing technical accounting procedures in context • Examination and critique of conventional practices • Linkage of accounting and other knowledge

(Boyce *et al.*, 2001:46)

Milne & McConnell (2001:62) is of the opinion that case studies not only develop a knowledge base but also a wide range of personal and interpersonal skills.

According to Boyce *et al.* (2001:47) case studies present the opportunity to expose learners to diverse and unstructured problems in unfamiliar settings, but many commercially available textbook case studies have the following shortcomings:

- They were not designed for developing generic skills;
- Facts are selectively presented and are therefore suitable for the development of basic skills, but not higher problem-solving and communication skills;
- Instructions are often given regarding the appropriate methods to solve the problem; and
- Cases are developed for teaching technical skills given a predetermined value system, whereas learners should be made aware of conflicting value systems, ethical issues, environmental aspects and socio-political concerns.

It can be seen from the above case studies that they are academic recordings of specific problems that can be used in teaching current knowledge and skills. The advantage is that case studies provide solutions, while being less strenuous for the lecturer/facilitator.

Case studies are already used to some extent in accounting. Small uncomplicated case studies can be used in assignment type questions where a scenario is sketched in financial accounting and certain recording of transactions and other tasks are required. Solutions are available for the case study. More complicated case studies can also be used in looking at real life companies that experienced certain problems in the past. Learners have the opportunity to prepare solutions, which can be compared to what actually was done.

4.5.2. Problem-based-learning (PBL)

A term frequently used along with case studies is problem-based-learning (PBL). PBL differs, however, from case studies in that the problem is not offered as an example of applying information, but rather as a catalyst to promote the acquisition of new knowledge (Milne & McConnell, 2001:66). According to Milne and McConnell (2001:61) PBL uses problems to focus on learning, where learners develop problem-solving skills while gaining appropriate knowledge. Cannon and Newble (2000:19) describe problem-based learning as a way of designing and presenting courses that uses problems found in professional practice or real life as the stimulus for learning to take place. They continue to say that there is a difference between problem-solving activities in courses and problem-based learning. Cannon and Newble (2000:22) say that PBL is normally conducted in small groups of learners with a tutor. Hansen (2006:221) says that PBL uses complex, real-world problems to motivate

learners to identify and research the concepts and principles they need to know to solve the problems. They also describe PBL as being learner-centred (Hansen, 2006:222).

Hmelo-Silver (2004:235) describes PBL as an instructional method in which learners learn through facilitated problem solving. She continues to say that learners work in collaborative groups to identify what they need to learn in order to solve a problem, engage in self-directed learning and apply their knowledge to the problem.

According to Hmelo-Silver (2004:235) PBL includes helping learners to develop:

- Flexible knowledge;
- Effective problem-solving skills;
- Self-directed learning;
- Effective collaboration skills; and
- Intrinsic motivation.

She concludes that PBL is an instructional approach that offers the potential to help learners develop flexible understanding and life-long learning skills.

In implementing PBL the following must be considered (Milne & McConnell, 2001:73-77):

- The role of accounting educators will change (telling is not sufficient, learners must be guided through the problem solving process, while the educator changes the learners' conception of teaching and learning);
- Learner readiness and roles (learners must be guided to ask relevant questions and answer their own questions and to realise that there is not always a blueprint for the solution itself);
- Availability of 'problems' and resources (the availability of unstructured problems is limited and the approach needs much time and human resources); and
- Assessment (learners will behave in line with the assessment methods which may not be focused on PBL).

According to Hansen (2006:221) the goals of PBL are to help learners:

- Think critically, analyse and solve complex real world problems;
- Find, evaluate and use learning resources;
- Work cooperatively in teams;
- Demonstrate effective communication skills; and
- Use content knowledge and intellectual skills to become continual learners.

Mierson and Freiert (2004:15) state that PBL provides the answer for keeping learning an active part of the learning process. They continue to say that PBL helps participants develop leadership and team skills while they learn concepts and information.

Hansen (2006:222) remarks that the biggest challenge is writing good problems. He suggests that new problems can be created by rewriting end-of-chapter problems. This can be done by incorporating storytelling and it requires analysis, synthesis or evaluation.

From the above PBL can be described as using professional or practical problems, where learners need to identify the knowledge needed to solve it, in teaching the required knowledge and skills. These problems are used as catalyst of the learning experience. PBL may have different levels, from problem solving linked to assignment problems and true PBL using complex problems from practice that might not have determined solutions.

Assignment problems may appear the same as uncomplicated case studies, but using it on relevant higher level practical problems may stimulate thinking on a specific topic and require the learner to seek for answers beyond what is known. Charles Hattingh (well known accountancy course presenter in South Africa) often uses problems from his practical experience during accounting updates to stimulate discussion on topics. An example may be to take a practical problem such as recording a certain transaction that is not clearly dealt with in accounting standards and then having learners do research on the matter, in order to come up with solutions. The solutions may well differ depending on their assumptions and interpretations of the standards. Different solutions may even be acceptable.

4.5.3. Simulations

Well designed games and simulations within the protected classroom environment can approximate the complexity of professional problems. It has the advantage of fully engaging learners in the learning experience which challenges their problem solving abilities, working with other people and working with a multitude of variables (Gross & Gross, 1980:38). Gross and Gross (1980:38) state that in dealing with comparatively unstructured situations learners have the possibility to learn that defining the problem often influences finding solutions.

Tanner and Lindquist (1998:141) incorporated Monopoly™, the game by Parker Brothers, as a cooperative learning process to promote team-based skills. Tanner and Lindquist (1998:151) concluded that cooperative learning could address many of the pedagogic problems noted.

According to Tempone and Martin (1999:177) the theoretical assumption is that learners will learn effectively in groups if they are able to work together on an issue or problem without friction or disagreement. They do, however, note that, failures and undistinguished attempts are common from several published case studies.

Helliar *et al.* (2000:39) identified various shortcomings on existing finance games. These include:

- It often requires resources not available at undergraduate level;
- Do not provide information on a real-time basis; and
- No additional support exists outside tutorials.

In the use of a computerised portfolio management game (Finesse) Helliar *et al.* (2000:45) found that the game encouraged group work, fostered interest in the subjects, learners widely read the financial press and did other research for playing the games and learners showed a general understanding of economic indicators. Further studies indicated that the learners enjoyed the game and found it useful in putting into practice what was taught in class.

Assessment of individual achievement is complicated, but there is reason to believe that simulations increase learning and provide learners with a concrete experience that helps them to understand an abstract event (Gross & Gross, 1980:41). This method is already used in business, industry and military planning and is increasingly being recognised as teaching methodology (Gross & Gross, 1980:41).

From the above it seems that simulations can be linked with problem solving and case studies. In this instance the problems come in the form of a simulation of practice problems. With simulations the outcome of each simulation may differ and fixed solutions may not exist. An advantage of simulations may be the enjoyment factor among learners because of participating in the project.

As an example to the application of simulations in accounting is using a game such as Monopoly™. Learners play Monopoly™ and record the transactions that take place during game play in accounting records. The answers will differ each time the game is played and each learner will also have a different set of answers. There are also various computer games and simulations that could be incorporated as identified above.

4.5.4. Role-play

Swink (1993:91) notes that role-plays give people the chance to practice new skills in order to transfer learning to the work place. He also notes that role-play is a natural learning process, although children do it spontaneously. Swink (1993:92) continues to say that role-play uses the life and work experience of group members to enhance learning.

Role-playing activities provide an effective way for learners to “dive-in” (Resnick & Wilensky, 1998:153). Resnick and Wilensky (1998:153) indicates that there is a growing interest in role-playing activities.

According to Crumbley *et al.* (1998:183) educational novels and learners’ role-playing can be used in some accounting classes in a way that facilitates learner enthusiasm. Educational novels combine education with entertainment to make learning easy as it has the capacity to show how theory is applied in practice. Most learners reported that they found the novels

useful and enjoyable. In a study on learners' perception on alternative teaching devices the first five devices in order indicated by the learners were Videotape Role-Playing, Textbook, Educational novel, Accounting software and Computer case problems.

Role-play it seems can be described as acting or re-enactment of problems to gain an understanding of the problem and develop the skills needed in solving the problem. Role-play such as simulations may have an advantage of enjoyment, because of participation in the project.

Role-play may well be used in accounting classrooms as well. Learners may for instance re-enact discussions between auditors and management regarding the difference in opinion on the recording of an accounting transaction. The management may for instance want a certain interpretation of a standard that would reflect more positively in the financial statements, whereas the auditors prefer a conservative approach.

4.5.5. Field experience

Field experience programs are out-of-classroom learning activities where the learner is expected to get a feeling for real life illustrations of classroom theory (Gross & Gross, 1980:34). Learners are usually supervised and assessed on the job by a practising professional and may have to submit examples of work or a log to the college supervisor (Gross & Gross, 1980:34).

Maidment (2003:50) indicated that it is important to teach learners how to survive and negotiate in workplace cultures. Field experience learners showed a significant greater mastery of materials (Gross & Gross, 1980:37). Walker (1989:17) indicates that offering field experience broadens the educational alternative. Field experience keeps the academic in touch with practice. However, it also provides the business world with an idea of learners' skills and competencies.

Field experience may well be the top level of experience-based teaching methods as the problems encountered are actual problems and the consequences cannot be ignored.

Field experience may also be the most developed method of experience-based learning. It can be incorporated in accounting by, for example taking management accounting learners to a factory and letting them see and experience the production and flow of transaction. Learners could also be required to do an actual set of books for a small business. Field experience also takes place during the traineeship that most professional bodies require of their new members.

4.6. COMPETENCY/OUTCOME-BASED METHOD

Competency based education specifies performance goals which are often role-related to job requirements (Gross & Gross, 1980:43). Goals are clearly and precisely set in terms of competencies learners are to acquire and learners are assisted with equal precision to evaluate the acquisition of these competencies (Gross & Gross, 1980:43). Voorhees (2001:90) indicated that competency-based learning shifts the focus from instructional delivery to learner performance.

Spady and Marshall (1991:67) notes that Outcomes-Based Education (OBE) is founded on three basic premises:

- All learners can learn and succeed (but not on the same day and in the same way);
- Success breeds success; and
- Schools control the conditions of success.

Spady and Marshall (1991:67) state that reformers call for “different, smarter and better” to replace “more, longer and harder”.

According to Botha (1999:53) OBE means learners:

- Not only gain knowledge, but also understand what they learn;
- Develop competencies, values etc in the learning process;
- Are actively involved in the learning process;
- Must accept responsibility for their own learning; and
- Have the opportunity to work at their own pace, level and ability.

Spady and Marshall (1991:68-70) identify three levels of OBE:

- Traditional OBE – The starting point for almost all OBE efforts is the existing curriculum and deciding what is truly important;
- Transitional OBE – Combination or something in-between traditional OBE and Transformational OBE;
- Transformational OBE – Sets the existing curriculum frameworks aside when addressing the issue of future-driven exit outcomes.

Gispen-Bonebakker and Harkema (2005:2) state that competence-based education is increasingly becoming more and more a trend because of the expected decrease of the gap between education and labour market and the need to prepare learners for life-long learning. They concluded, however, that competence-based education cannot be effectively implemented in an instruction-based learning environment unless the teaching program is dramatically improved and individual assessment is possible (Gispen-Bonebakker & Harkema, 2005:10).

Earlier results of the competency-based education was inconclusive. It was, however, agreed that it helps faculties to examine their roles and feel authentic and it assists learners in learning more and being less passive (Gross & Gross, 1980:46).

Voorhees (2001:83) notes that faculty programs that focus on professions or those whose curricula are closely aligned with business enjoy a more natural connection to competency-based models.

A Competency-based or Outcome-Based method can thus be described as a method focussing on attaining certain skills and knowledge required by the profession. Every activity in the teaching process is focused on attaining the set outcomes. In fact the outcomes determine the activities in the learning process.

The professional programme for training Chartered Accountants can be taken as an example of accounting application. The South-African Institute of Chartered Accountants for example set out a curriculum indicating the competence and skills that the learner, wanting to write

their qualifying examination, should have mastered at university. The university programme is then planned against these outcomes and all subject content and teaching focuses on working towards these outcomes.

4.7. COOPERATIVE LEARNING

Cooperative learning, as the name indicates focuses on collaborative learning. Cooperative learning is discussed under the headings of:

- Peer teaching (paragraph 4.7.1, page 103); and
- Group work/group teaching (paragraph 4.7.2, page 104).

4.7.1. Peer teaching

Peer teaching involves any “learner teach learner” scenario, including leading discussions, tutoring, lecturing, acting as councillors, conducting pre-examination review groups or serving as lab-assistants (Gross & Gross, 1980:49). They continue by saying that lecturers/facilitators on all educational levels are taking advantage of the benefits of peer teaching (Gross & Gross, 1980:51).

Brady *et al.* (2003:851) note that peer teaching in itself involves different peer teaching practices. These include:

- Lecturing;
- Group discussions;
- Hands-on experience;
- Hybrids of the above; and
- Course coordination.

Brady *et al.* (2003:851) also note that peer teaching experience in Life-long Learning Institutions were different than other teaching experiences because learners:

- Participated voluntarily;
- Are tolerant of lecturer/facilitator limitations;

- Are interested in engaging in co-learning experience; and
- Established an interest to seek a sense of importance of the community.

Cases from Berry and Leonard (1974:93) show that two “C” grade learners who collaborate do equally well or better than an “A” learner. Other studies also indicated that learners who collaborate achieve the highest scores.

A method of senior learners facilitating junior learners at the North-West University (Potchefstroom Campus) was also implemented with great success. Academically strong learners are identified by lecturers. The learners from this group who feel up to it undergo training by the academic support services on campus to act as facilitators. The learners then present facilitation sessions where problems are discussed. The facilitators determine for themselves or in conjunction with the lecturer and learners what the topic of the session should be. The facilitators are, however, not allowed to lecture.

Peer teaching can thus be described as a method where learners would be lecturers/facilitators or facilitated by other learners at their level and with methods they understand.

4.7.2. Group work/Group teaching

Stunkel (1999:66) says that group learning is the most popular methodology, and that confident theoreticians claim that the best way to learn is interactively in the company of others.

Small group instruction means that a class of learners is taught in several small groups. Group construction focuses on diversity, and peer assistance is encouraged (Lou *et al.*, 2000:101). These group teachings can include learning and understanding the theory to working on problems.

Lou *et al.* (2000:101) list advantages of group teachings as:

- Because of peer teaching the lecturer/facilitator may have more time for remedial assistance to the learners who need it;
- The lecturer/facilitator has more flexibility in adjusting the learning objectives and pace to meet individuals' needs;
- Learners in small groups may rehearse materials, explain it to each other, discover solutions, debate etc.;
- Learners may be motivated by cooperative learning as opposed to individuals competing against each other; and
- Learners have the opportunity to develop social and communication skills.

Cannon and Newble (2000:47) list methods useful for small groups. These include one-to-one discussions, buzz groups, brainstorming, role-playing and plenary sessions. They are also of the opinion that technology can effectively be used in smaller groups by using e-mail, electronic discussion groups or adopting conferencing techniques using computers, sound and video.

Looking at the other side Christ *et al.* (2001:2) note that the major reason for team work failure is that learners are not adequately prepared for the team experience. They conclude that teamwork training is essential for learners to have a meaningful teamwork experience.

In order for group work to be effective Johnson and Johnson (1991:41) said that:

- Interdependence must exist;
- Face to face interaction among team members should take place;
- Individual accountability must exist; and
- Interpersonal and group processing skills must be built.

Colbeck *et al.* (2000:77) found that learners felt they gained communication skills, problem-solving and technical skills when working in groups. Bastiaans *et al.* (2001:12) indicate, however, that group-work has a negative side of free-riding, which in turn negatively affects learner performance.

Group learning may differ from peer teaching in that the learning activity occurs in a group setting and that the group basically teaches the group. It can also include activities where learners collaborate in groups within a traditional class setting. Group learning can also be linked to problem-based learning (see paragraph 4.5.2, page 95).

Group work can be introduced in various forms in the accounting teaching-learning environment. It can differ from two to three learners sitting next to each other collaborating on a problem or question, to small group discussions (buzz groups) in class and even group assignments. The group assignments could also differ from collaborative assignments to doing class presentations. The lecturer does however have a responsibility of finding the right kinds of problems to be addressed in the groups.

4.8. INTERACTIVE LEARNING

Interactive learning is described as learning that involves interactions, either with other learners, the lecturers, the environment, or the learning material (University of Bath, 2006)

Hines (2005:41) indicates that interactivity in the classroom encourages learners to participate and improves performance in tests. Another advantage of interactive learning is that learners and lecturers/facilitators receive immediate feedback where learners have to answer questions after a section of work and evaluate the answers themselves. Lecturers/facilitators can thus spend more time if required or move on more quickly.

Mierson and Friert (2004:15) remark that adults retain more when they are actively engaged in the learning process. Stunkel (1999:66) states that interactive pedagogy reduces the professorial role to that of facilitator. He continues to say the lousy lecturers will not necessarily be better off with interactive-methods.

The Northwest University (Potchefstroom Campus) implemented an interactive learning method where lecturers compile study guides to aid learners through the learning process. Through the guides learners were required to be actively involved in the process of learning as the study guide was “talking” and interacting with the learners. The learners are also

required to be prepared for contact sessions, where topic discussions follow that could also include problem-based activities.

Computer simulations can also be used for interactive learning in order to have real time interaction and feedback. In a review of an interactive accounting software program Stoner and Halabi (1997:72) state that the lack of excitement in book-keeping arises primarily from the fact that bookkeeping is basically a procedural system. This lack of excitement has significant implications for teaching. Interactive material may well address the lack of excitement in accounting.

Interactive learning can thus be summarised as a learning method that requires active learner participation, and not only listening, on a real time basis. There is, however, a need for interactive teaching material in such an instance.

4.9. USING TEACHING AIDS IN TEACHING METHODS

Cannon and Newble (2000:120) note that a lecturer/facilitator uses a wide range of teaching materials and technologies in his/her teaching career. De Lange *et al.* (2003:1) also echoed this in saying that technological change alters the way educators deliver subject matter.

Cannon and Newble (2000:121) list teaching materials as:

- The overhead projector;
- Slide projectors;
- Video projectors;
- White-/blackboard;
- Video and film;
- Printed materials; and
- The World Wide Web.

The following is listed as principles to consider when using these materials:

- Relevance – the materials must be relevant to the purpose for which they were created;

- Linkage – There must be a link between the material and what is reasonable to expect learners to know;
- Simplicity – The material must be simple in terms of language and design;
- Emphasis – Important ideas must be emphasised (using heading, underlining etc); and
- Consistency in the use of pattern and style – changing styles should not confuse learners.

Cannon and Newble (2000:139) conclude that new technologies have a significant impact on learning and teaching.

Teaching aids will be elaborated on in the following paragraphs:

- Multi-media (paragraph 4.9.1, page 108); and
- Computers and technology (paragraph 4.9.2, page 109).

4.9.1. Multi-media

Instructional media include television, film, radio, slides, photographs and audio tapes used to enhance teaching with sights and sounds (Gross & Gross, 1980:12). Today it could also include the use of the video conferencing, computers, internet, e-mail, and Power Point presentations.

According to Evans and Foster (1997:231) the use of alternative media for teaching and learning is highly topical. Ramsden's (1992:25) claim that the method used is secondary to the aim is, however, stressed. Murphy (1997:47) referred to recognising the importance of literature, film and popular music in reflecting and shaping individual's thoughts.

It was found that the results of final examinations proved instructional television at least as effective as ordinary classroom instruction (Gross & Gross, 1980:15). Gross and Gross (1980:16) concluded that the art of teaching was one of the last arts to become technological. Cawkell (1998:273) points out that in spite of massive investment of both

public and commercial funds, little seem to be known about learners benefiting from interactive media.

Hancock and Betts (1994:24) also indicated that in distance learning systems learners can meet on a remote site that has cable or satellite receivers, phone line and video cameras. Multi media equipment can provide one- or two-way audio and or video contact.

It seems that again the most important matter to consider when using media is that it cannot replace good teaching. It is there to enhance other methods. Good media cannot make up for lack in content, lecturer/facilitator characteristics etc.

4.9.2. Computers and technology

Two types of computer instruction that are most frequently used are (Gross & Gross, 1980:17):

- Computer assisted instruction, where the computer interacts with learning through a self-paced program; and
- Computer managed instruction, where instruction is managed through diagnostic testing and prescribed assignments based on individual performance and by keeping records and track of teaching materials.

Hancock and Betts (1994) say that learners live in a world of portable CD players, hand-held video games and multifunction remote controls. Yet in schools their use of technology is limited to one hour a day on obsolete computers or sharing calculators. They continue to say that the key obstacle to the use of technology in schools is the limited support lecturers/facilitators have for integrating unfamiliar technologies into instruction. This may well be true to tertiary education, although to a lesser extent.

Hancock and Betts (1994:25-28) list the following technology categories:

a) Research-verified applications

- Calculators;
- Satellite receivers;
- Drill and practice software;
- Compact discs;
- Microcomputer laboratories;
- Presentation software; and
- Telecommunications.

b) Emerging applications with substantial support

- Computerised testing;
- Interactive media;
- Multi-user dimensions;
- Text-to-speech applications;
- Voicemail; and
- Word processing.

c) Future opportunities

- Broadband networks;
- Groupware;
- Portable pen-based computers;
- Speech-to-text applications;
- Virtual reality; and
- Wireless connectivity.

Ten years later the future opportunities have already found wide application. Since 1994 the wide use of cellular phones and SMS's arrived.

Out of 20 research reviews on computer learning it was found that nine led to greater learner achievement while two studies indicated that learners did not retain the material as long as with traditional methods (Edwards *et al.*, 1975:151). The major disadvantages were also that computers encouraged rote learning, it did not motivate learners, it takes up too much time, is expensive and subject to breakdown (Gross & Gross, 1980:18). Cawkel (1998:271) is of

the opinion that there is no convincing evidence that computer applications will produce results which are better or worse than those obtained by conventional methods.

Cepni *et al.* (2006:202) conducted research on the effectiveness of Computer-assisted Instruction Material (CAIM) on three cognitive levels of Bloom's cognitive domain. They found that traditional teaching approaches were more effective on the knowledge domain, but that CAIM excelled on the comprehension and application domains. Sinclair *et al.* (2004:169) noted that CAIM enhanced rote memory skills and improved higher order critical thinking. It would, however, be important for learners to first master the basic computer and technical skills before advancing to CAIM.

In a study performed on pre-scholars it was found that general cognitive development and specific cognitive skills are not promoted by computers as it is done by traditional resources (Cute & Miksad, 1997). They continue to say the two matters did however stand out, namely attentional effects and instant feedback. They concluded that education computer software design should not overload the attention capacities of learners and in doing so distract the learners from the content.

Cannon and Newble (2000:7) indicate the following findings regarding new technology and learning:

- Research on the impact of technology such as computer-assisted learning show small, but positive effects on learning and attitudes;
- Studies on the impact of technology such as video and electronic mail show a great diversity of outcomes; and
- General literature is points to ways of improved learning processes and outcomes such as enhanced tools for learning, improved flexibility, individualised learning and more learner activity.

They concluded, however, that learners do not achieve spectacular learning outcomes.

Linked with the above, De Lange *et al.* (2003:11) found that the use of information technology in the classroom to support introductory accounting has potential to improve learners' motivation and satisfaction with the subject. Slangster and Mulligan (1997:60)

reported that learners received the introduction of the World Wide Web and e-mail in the third year accounting systems well.

Herron (1998:222) summarised that academics must respond to the existence of the Internet. The internet can be used as a data source to support teaching in the same way that a library, guest speaker or multimedia presentation could.

Computers and technology have been present in accounting for a long time, specifically to the use of calculators. There are also accounting software (like Pastel, Quickbooks etc.) for recording transactions. Learners can learn the basics of the program in accounting and even do practical assignments on it.

4.10. OTHER INNOVATIONS

Cresap (2002:77) indicates that the problem of less teaching time can be addressed where multiple learning objectives are addressed in one project or assignment. A combination of various teaching methods may thus be employed to gain the necessary effect.

Other methods to developing competent lecturers/facilitators by way of classroom visits, self-appraisals, making audio/video-tapes of lectures to study lecturer behaviour, evaluating of teaching materials, learner ratings and team teaching (Gross & Gross, 1980:55-56).

According to Gross and Gross (1980:61-62) other innovations may include team teaching (two or more persons cooperatively plan, teach and evaluate the course and learners), having laboratories or clinics (supplementing classroom experience), promoting undergraduate research and integrating different approaches.

For as long as lecturers/facilitators seek to improve the effect their teaching has on learners, new methods will develop. Lecturers/facilitators will need to continuously develop themselves and be on the lookout for better ways to teach learners accounting.

4.11. RETENTION AND APPLICATION

Wilkinson (1992:120) says that the most important thing about the content (and therefore teaching) is that of application. Learners must be able to use what was learned in the classroom in real life situations. There is a direct correlation between learning and doing (as long as the activity is meaningful) (Hendricks, 1987: 79-80). He continues to say that psychologists have told that learning potential increases from 10% of what learners hear to a potential 90% from what they do.

Wilkinson (1992:141-154) gives the following guideline to make content applicable:

- Explain the content first;
- Show the principles from the content;
- Personalise the principles;
- Persuade learners to apply these principles; and
- Allow learners to practice (apply) the principles.

Hendricks (1987:84-90) refers to meaningful activity as:

- Activity that provides direction without dictation. It should not be what the lecturer/facilitator wants, but what the learner wants to learn;
- Activity that stresses function and application. The learner should be able to use what has been taught;
- The activity should have a planned purpose. It should address the outcomes;
- The activity should show learners the process so that they know why they do something; and
- Activities that are realistic and include problem-solving situations. The activities should be lifelike and answer questions that the learner may have.

In order for the learner to retain the principle, Wilkinson (1992:180-188) suggests the following:

- The lecturer/facilitator should take responsibility to help the learners retain the content;
- The lecturer/facilitator should make sure that the content is understood before moving on;
- The lecturer/facilitator should help learners recognise the content's relevance;
- They should only focus on the most important facts;

- The facts should be organised so that they are easy to memorise;
- The content should be reviewed regularly; and
- Less time should be spent on memorisation and more time on application.

Whichever teaching methodology is thus used, it should enhance retention and application, as teaching only occurs when the learner has actually learned and can apply what was learned.

4.12. CONCLUSION

The American Accounting Association (Bedford Report) (1986) suggested that teaching techniques should include lecturing and demonstration, case analysis and discussion, role-playing in decision making situations, group research projects, work experience, peer evaluation based on oral and written reports, relevant textbooks, argumentation, effective use of teaching equipment, projects to encourage self-learning, sensitivity towards ethical cases, classroom discussions with practising professional accountants and computer-assisted instruction. From the researcher's own experience, it was also found that a range of teaching methodologies address the needs of the variety of learners the best.

Chung and Chow (2004:157) noted the importance of matching learners' learning capabilities with the right types of learning activities. Eggen and Kauchak (1988:9) are also of the opinion that no single approach to teaching is appropriate in all situations.

It would, however, be fatal to place all the emphasis on the teaching methodology as it is only one element of the teaching-learning environment. Ramsden (1992:25) said that what learners are expected to learn, forms the foreground and the method is the background. Method only forms the means, it is not the end. Inglis and Dall'Alba (1998:202) found that, in most cases, the traditional lecture, where for example information is transferred, is unsuitable as means of teaching. They also acknowledged that any improved methods were not "set in stone" and that continuous improvement and refinement would still take place in future. The importance of the teaching method lies, however, in the fact that it is one element of the teaching/learning environment that the lecturer/facilitator has the most control over. Collett (2000:67) also warns educators to be wary of changing established methods, which have

proved successful. The research proved how innovation could change the nature of a project significantly in ways which can be unexpected and perhaps counterproductive.

From the above findings on innovative teaching methods it seems that the following should be addressed whichever teaching method is used:

- The method should be learner-centred and incorporate a more unstructured learning environment that deals with a broad spectrum of content;
- The lecturers/facilitators should be facilitators, while learners should be active inquirers who cooperate towards lifelong learning;
- It should to some degree allow self-study at the learners own pace and let the learner accept responsibility for their own studies;
- Incorporate experience from practice to make learning relevant and interesting;
- Focus on the competencies required of learners;
- Give learners the opportunity to work with and learn from their peers;
- Actively involve the learners in the learning process; and
- Incorporate appropriate multi-media and technology.

From the above it thus seems that the best characteristics of the different teaching methodologies can be combined. If correctly applied, this could well provide the lecturer with a superior teaching method.

Important of the methodology is that it should enhance retention and application. This information will be incorporated in designing the board game and support material in chapter 5.

In the next chapter the knowledge gained so far will be incorporated in developing a board game to potentially enhance learning.

CHAPTER 5 - BOARD GAME AND SUPPORT MATERIAL DEVELOPMENT

5.1. INTRODUCTION

In the previous chapters the elements of the overall accounting learning environment were addressed. In this chapter the development of the board game and support material is addressed, taking into consideration the findings of the literature study. Thus secondary objective 4 (paragraph 1.4, page 8) is addressed.

The aim of developing the board game as part of an improved methodology, is to assist in advancing more effective accounting learning, incorporating the variables of the learning environment (chapter 2 to 4).

The literature has shown that a new generation of learners is entering tertiary education (paragraph 1.1.2, page 2). These learners grew up with computers and rapid-fire communication, have multicultural interest, have a greater sense of competition among them, spend less time doing homework, studying and reading for leisure, and are more impulsive. This results in an eventual decrease in academic performance. Moreover, they are becoming more critical, less confident and less enthusiastic (paragraph 1.1.2, page 2).

Due to changes in the corporate world, equipping learners with the technical knowledge and skills is not sufficient anymore. Much more is required of them, and the responsibility rests on the accounting educator to address this or at least guide the learner in obtaining the necessary skills (paragraph 1.1.3, page 3, paragraph 3.2.1, page 53 and paragraph 3.2.2, page 54). Up to now it seems that educators have been resisting the changes needed as changes and improvements did not find much practical application in the academic world (paragraph 1.1.4, page 5 and paragraph 3.2.3, page 58).

Various elements of effective ("good") teaching methodologies in accounting were noted in chapter 4 (paragraph 4.12, page 114). The researcher previously used a board game himself, in a limited way, however, to teach introductory accounting. The results and comments from the learners were positive. It was also anticipated through the hypothesis (paragraph 1.3, page 8) that a board game may well address most of the shortcomings that are experienced and could incorporate elements of effective teaching methodologies. In the next paragraphs the use of a board game is motivated from literature. Previous use of board games by other accounting educators to teach introductory accounting is also investigated.

Lastly, it is with the hypothesis that *learning accounting and the various required soft skills required of accountants should be more effective by using a creative methodology that simulates reality*, and the findings of chapter 4 regarding effective teaching methodologies, that a board game and support material are developed. This is to assist learners and lecturers in obtaining more of the required soft skills and technical knowledge (as mentioned in chapter 3) in an effective and fun way. This should increase the interest in the subject and therefore advocate life-long learning.

5.2. MOTIVATION FOR A BOARDGAME APPROACH

A board game is defined by Wikipedia Dictionary (2006) as a game played with counters or pieces that are placed on, removed from, or moved across a "board". The "board" is usually a premarked surface specific to that game. Simple board games often make ideal "family entertainment" since they are often appropriate for all ages. Other board games, however, such as chess have intense strategic value and have been classics for centuries (Wikipedia Dictionary, 2006). Paxton (1989:28) describes a board game as a game built around a game board on which most of the action takes place. According to Paxton (1989:28) board games are one of four categories (board games, role-play, hybrid games, pencil and paper games) of simulations. The use of a board game will be motivated from literature in general and more specific address the needs around accounting education found in the literature study.

5.2.1. General motivation for game use

The use of a board game as a teaching instrument is not a new concept. Even in 1980 simulations were already used in business, industry and military planning and the use thereof was increasingly recognised (Gross & Gross, 1980:41). According to Cook (1981:4) games are a firm fixture in business training, and are usually seen as having two values:

- **Instructional**; and
- **Motivational**.

In addition to the two main values, additional values include:

- Helping learners to **understand** the usefulness and future need for the principles they are learning;
- Forcing learners to be **active**;
- Improving learners' **confidence**;
- Helping learners to become **seekers of knowledge**; and
- Removing the lecturers/facilitators from the traditional role of the instructor (Cook, 1981:4).

Various other researchers have since indicated the advantages of using games in teaching. Reference is made below to some of these findings.

Paxton (1989:29) identifies the following values of simulation games:

- Games get learners **actively** involved;
- Games demonstrate the advantage of **cooperative** effort;
- Games enable the learners to experience the situation **personally**;
- Learners experience that there is a relationship between their behaviour and the outcome of events;
- Games offer the opportunity to express even hostile feelings;
- Games provide **motivation** for learning;
- **Results** of decisions can be seen **immediately**;
- Games provide for a **non-judgemental learning** experience; and
- Learners learn about their own behaviour and **working with others**.

Cook (1981:4) notes that as playing can take place in **groups** it may encourage peer teaching. Playing computerised games may also increase the **interest** in the subject and a board game may well do the same.

De Villiers (1999:9) mentions that because people are usually first exposed to board games during their childhood these board games are usually associated with leisure time activities and therefore the use thereof creates an **atmosphere of relaxation** and enjoyment. He continues to say that in most cultures games are often understood to be exercises in **intellectual competence, character building, social skills** and a **healthy competitive spirit**.

Ehlers (1988:38) says that games can be a powerful tool because they:

- Are fun to play and thereby **avoid boredom**;
- Necessitate **active** participation from learners;
- Involve competition that keeps learners **motivated**;
- Enable learning to become an **interactive** process;
- Enable the lecturer/facilitator to become a **learning resource**;
- Provide each learner with **instant feedback**;
- Enable each learner to learn from their **own experience** as well as from others;
- Are **flexible** to adapt to special circumstances; and
- Can be produced **inexpensively**.

Albrecht (1995:128) also mentions the following advantages of simulation games:

- They motivates learners to be **active** in the learning environment;
- They enhance cognitive growth as they increase the ability to recall factual knowledge, appear to improve problem-solving skills and enhance the ability to apply concepts and principles;
- They enhance effective learning;
- The “wheelings and dealings” give learners intensive practice in verbal and written **communication** skills;
- Good simulation games can be repeated with the same participants and further learning will occur; and

- Simulation games benefit learners with varying skills and experience.

Joannides and Oldenboom (1999:39) indicated that marketing simulation games can help **remedy the deficiencies resulting from traditional teaching methodologies.**

It can be concluded from the above research findings that games may well be one of the solutions in addressing the criticism against traditional accounting education because:

- Learners become actively involved;
- Learners learn from personal experience;
- Learners learn cooperatively;
- Learners are more motivated;
- Learners receive instant feedback; and
- The lecturer becomes a facilitator.

5.2.2. Perceived criticism against simulations and games

In the previous paragraph the use of games in an educational environment was well motivated. It is, however, necessary to take note of criticism against and the disadvantages of using games.

According to Paxton (1989:30) disadvantages and criticism of simulation games include:

- It over-simplifies real-life situations,
- It may fool learners to think they know all there is to know about a subject;
- It may allow learners to manipulate others without the constraints of real life;
- Learners' personalities may influence the life-likeness incorporated in the game;
- It may have only a short-lived effect; and
- It may teach that there are advantages to unscrupulous self-interest.

Ehlers (1998:38) continues to say that disadvantages of board games may be that:

- It is regarded as invaluable;
- The session may appear noisy and undisciplined;
- Learners may only be playing to win the competition;

- Learners may have religious or personal objections to playing a game that involves throwing a dice;
- Specially developed games may be expensive;
- Playing games may require more time than lectures; and
- Prior preparation is needed from both lecturer/facilitator and learner.

Cook (1981:4) highlights that business games are expensive in terms of time, space and money.

It seems that the criticism against using games in teaching may be summarised as follows:

- It may over-simplify real-life situations, building excessive confidence, making learners act in superficial ways and thus being valued less and have a short term effect;
- It may require much preparation time on the side of the lecturer; and
- It may be financially expensive.

It would thus be necessary to take these matters into account when developing or using a game in the teaching environment. The researcher is, however, of the opinion that the advantages noted in paragraph 5.2.1, page 118, well outweigh the disadvantages and criticism outlined above.

5.2.3. Specific motivation for board game use

The use of games was motivated in 5.2.1, page 118. In this section attention is given to the use of a specific board game. A well designed game and simulation can approximate, within the protected classroom environment, the complexity of professional problems and has the advantage of fully engaging learners in the learning experience. This challenges their problem solving abilities while working with other people and with a multitude of variables (Gross & Gross, 1980:38).

The researcher is of the opinion that a board game may well address the following elements of an effective teaching-learning environment:

5.2.3.1. Assisting the lecturer/facilitator

As is noted in paragraph 2.3.8, page 36 that using a board game could provide the following characteristic qualities of effective lecturers/facilitators:

- Frequent and instant feedback;
- Good preparation and organisation of the teaching environment;
- Motivating learners;
- Involving learners in an active manner; and
- Providing an effective teaching method.

5.2.3.2. Assisting the learner

Regarding the description of the average introductory accounting learner (paragraph, 2.4.4, page 44) a board game could address the following requirements set by their personality traits:

- The learner would process information (learning) through engagement in physical activity (playing the game);
- The learner would perceive information through sights, sounds, feeling (touching) and introduced values;
- The learners would interact with each other; and
- It could help learners to form holistic perspectives.

5.2.3.3. Developing the milieu

An effective milieu is noted in paragraph 2.5.3, page 48. Although using a board game would not influence the physical elements of the classroom it may provide a competitive, fun atmosphere. This atmosphere can motivate the learners in return. The constraints of the physical classroom must, however, need to be considered and the average lecture hall may not be an appropriate setting for playing board games. It may be necessary to organise a venue suitable for group work. This could be problematic in large classes.

5.2.3.4. Incorporating the content and competencies

The required competencies and technical knowledge required from professional accountants were summarised in paragraph 3.5, page 76. The board game could address technical and other competencies such as:

- Critical problem solving skills, as various challenges must be solved during game play;
- Oral and written communication skills, as learners must communicate throughout the game play;
- Technical competencies over various subject fields can be incorporated in the game; and
- Analytical abilities are exercised as part of problem solving activities.

It could also provide a glimpse into the role of an accountant, namely that of:

- Entrepreneur;
- General manager;
- Global player;
- Market analyst; and
- Salesperson.

Soft skills that can be developed include:

- Team-building skills;
- Interpersonal skills;
- Ethic considerations; and
- Being able to adapt to changes.

On the technical side, various accounting topics can be incorporated into the game play.

5.2.3.5. Using an effective methodology

The biggest motivation for using a board game may well be having an improved methodology addressing the elements representing an effective teaching methodology (paragraph 4.12, page 114):

- It would be learner-centred and incorporate a more unstructured learning environment that deals with a broad spectrum of content. As such, the lecturers/facilitators would be facilitators and learners would be active inquirers who collaborate towards life-long learning;

- It would to some degree allow self-study at the learners' own pace and let the learners accept responsibility for their own studies;
- It would incorporate practical experiences to make learning relevant and interesting;
- It would focus on the competencies required from the learners;
- It would give learners the opportunity to work with and learn from their peers;
- It would actively involve the learners in the learning process; and
- It could incorporate appropriate multi-media and technology.

The above is motivated in more detail below.

A board game would advocate andragogy as it is:

- Situation based and not content based;
- It would be unstructured with room for discussion; and
- The learners would be facilitated through the process.

The board game would also require active participation from learners. A further advantage would be that various soft skills could be incorporated which are not necessarily well received in traditional lecturing approaches. The board game could furthermore be used for individual learning as well as group learning.

A board game allows a three dimensional media (the board and playing pieces) to be introduced. It would stimulate various senses such as:

- Sight – seeing the board and three-dimensional objects on the board;
- Hearing and speaking – conversing with other learners; and
- Feeling – Touching playing pieces.

Emotions would also be stirred in the process of trying to win the “game” and could therefore get the learners more involved. Computer assisted learning was specifically excluded because of limitations on soft skills such as verbal communication, team building, interpersonal skills and the costs of the infrastructure involved. The last matter is particularly important among previously disadvantaged communities.

A board game would have an advantage over the case study method as each learner's situation will be different and the situation will differ each time the game is played. There will thus not be a shortage of available problems or case studies. It will, however, contain all the advantages of experience-based approaches as discussed in chapter 4 (paragraph 4.5, page 91).

5.2.3.6. Summary of specific motivation for board game use

The proposed board game would also address the shortcomings identified by Helliar *et al.* (2000:39) on existing finance games, namely:

- As it is a physical board game it could be available at any place or time;
- Information would be provided on a real-time basis as the game is played; and
- Learners would be able to buy the game themselves to play outside the tutorials.

In paragraphs 5.2.3.1 to 5.2.3.5 above the potential advantages and uses of a board game in accounting education were provided. If properly planned and designed it seems as if a board game may well prove to be an excellent teaching tool.

5.3. PREVIOUS BOARD GAME USE IN ACCOUNTING EDUCATION

During the literature study on the work of Knechel (1989), Albrecht (1995), Tanner and Lindquist (1998), Clayton and Pierpoint (2001), Clayton (2003) and Perry (2005) one game, namely Monopoly™ was often used in teaching financial accounting in the past. This game will be discussed next, as well as the researcher's view on the strengths and weaknesses thereof.

5.3.1. Monopoly™ application

Early experiments with business simulations date back as far as 1963 (Knechel, 1989:412). Clayton and Pierpoint (2000:1) note that playing Monopoly™ to introduce the fundamental

aspects of financial accounting is not new, as it has been employed successfully in undergraduate and postgraduate programmes in the United States.

Knechel (1989:411) indicated various advantages to using Monopoly™ for creating practice sets for financial accounting:

- There is no need for control over solutions;
- The problems are not as sterile as textbook problems; and
- Learners understand the underlying business and economic reasons for transactions better and can thus record it better.

Knechel (1989:413) used Monopoly™ as follows:

- The class was divided in separate game sets of four learners each;
- Monopoly™ was played along the normal Monopoly™ rules for 40 turns for each player;
- The players prepared journal entries (general journal) to record the events;
- After completing the game players were requested to post the entries to the general ledger (a chart of account was provided);
- After a few adjustments were made an income statement and balance sheet were prepared; and
- After grading the financial statements of the four best and four worst performers, results were discussed in the class.

Albrecht (1995:128) used Monopoly™ for a combination of financial accounting and investments. The financial accounting part was based on Knechel's model described above. The investment portion was dealt with as follows:

- After the financial statements were completed, learners assumed the roles of investors and had to make investments based on the financial statements of all learners in the class;
- The game play continued on this basis for four years (four times played); and
- In the end a return was calculated for each investor.

Monopoly™ was used as follows in a business simulation and cooperative learning combination (Tanner & Lindquist, 1998:143-145):

- Learners were randomly assigned to groups of three learners each;
- The learners had the opportunity to help decide for which aspects (such as assets, income etc.) bonus points should be awarded. One of these was then selected that would be used to identify the winning team;
- The teams were given an opportunity to strategise on how they would achieve the goal decided on previously;
- Group members were assigned to boards where the game would be played by trying to have learners with equal academic ability playing against each other;
- A game took 24 turns played in Monopoly™ where the activities are turned into business transactions and recorded;
- Upon completion each individual and group analyzed their transactions;
- Groups had to design their own journals and ledger accounts and make the necessary adjusting entries;
- A cash reconciliation had to be compiled;
- By the end of the two-week period the financial records had to be submitted along with a set of financial statements;
- Criteria used to determine each group's grade included accuracy, clarity and soundness of ideas;
- Each learner wrote an individual examination at the end;
- Team members also had to evaluate each other; and
- Lastly the bonus points were added for winning the competition.

Clayton (2003:3) describes his use of Monopoly™ as follows:

- Four learners play at a game;
- Each learner runs his/her own business;
- Play takes place for one hour a week over a four week period;
- During play learners record all financial transactions;
- Accounting issues are explained during the game play;
- Teams must submit financial reports for each week;
- Each player analyse the financial statements of each game and bets on the businesses with the most likely future success;
- After the game play each team makes a presentation on their business and each individual must submit a piece of work.

Clayton's model were closely related to that used by Albrecht, described earlier in this section.

It seems that Monopoly™ is widely used by recognised accounting educators in teaching introductory accounting principles and various additional financial skills. In general learners were divided into groups and the transactions generated while playing Monopoly™ were recorded in accounting records. The final assessment differed, however, between the educators. In the next paragraph it is reported on the effectiveness of these projects.

5.3.2. Findings on the use of Monopoly™

Perry (2005:26) says that Monopoly™ helps learners to identify what they have learned in the first few courses of accounting, be able to apply those concepts, and have fun doing it. She continues to say that it helps learners develop critical thinking skills, problem-solving skills, team building skills and communication skills.

A survey distributed to the participants of the board game project, showed the following (Tanner & Lindquist, 1998:147-148):

- 74% indicated that their interest in financial accounting was enhanced by participating in the exercise;
- 71% indicated that their interest in financial accounting was enhanced by participating in groups;
- 62% indicated that participating in the project made them less apathetic towards accounting;
- 66% said that having the project group-graded by peers, resulted in everyone outwardly showing interest in class;
- 51% indicated that being in the team increased their tendency to enjoy studying;
- 80% of the learners felt that their team-mates provided social support;
- 83% felt that they felt more social support from team-mates than what they normally do from other classmates;
- 75% of the learners indicated that team members spent time tutoring one another;
- 94% of the learners indicated that they were concerned about their team-mates during the game;

- 81% indicated that they had more enthusiasm to learn the mechanical requirements than they believed they would have if they had not completed the study; and
- 77% of the learners believed that they learned more about the accounting cycle than what they would otherwise have had.

Clayton (2003:5) reports as follows on the 2001 evaluation of the project:

- 76% perceived the exercise as an effective way of learning how to prepare a balance sheet;
- 74% perceived the exercise as an effective way of learning how to prepare an income statement;
- 79% perceived the exercise as an effective way of getting to understand the concept of assets;
- 69% perceived the exercise as an effective way of getting to understand the concept of liabilities;
- 64% stated that the exercise was an effective way to understand the difference between cash and profit calculations;
- The overall rating for the exercise was 79% over four years; and
- Learners also stated that the exercise was fun and that it had a positive social impact and addressed learners' fear of accounting.

It seems that learners especially benefited from an increased interest in the subject of accounting, working cooperatively, having learnt in an effective way and as a bonus having fun while doing it. From the above results it can be concluded (along with Tanner and Lindquist [1998:151]) that the use of cooperative learning in accounting education has the potential to address many of the pedagogical problems noted by the various institutions and authors in paragraph 3.2, page 53.

5.3.2.1. Perceived strengths of Monopoly™

There are many strengths associated with using Monopoly™ in accounting education. The game of Monopoly™ is commonly known and many learners could relate to it. Knechel (1989:412) agrees on this perspective. This may make the playing process much easier. This sentiment is also advocated by De Villiers (1999:10) who developed a board game

based on Monopoly™ for use in teaching labour relations. Monopoly™ is also easily available and not very expensive. The game could furthermore also be adapted to better suit different classroom applications and needs.

5.3.2.2. Perceived weaknesses of Monopoly™

As Monopoly™ was not initially developed as a teaching instrument for accounting, various limitations exist in adapting it to suit educational purposes. Some of the transactions in Monopoly™ such as “Paying school fees”, “Going to Jail” etc., may not be applicable to a business environment or may be confusing or unrealistic. Knechel (1989:218) also notes that the standard “Change” and “Community Chest” cards were somewhat unrealistic for business simulations. The game does also not address important technical matters including:

- Different entity types;
- Inventories;
- Manufacturing; and
- Share investments.

Only property investment is applicable and then only the rental part and no capital appreciation. A reality such as inflation is also excluded. The players also only work with cash, while bank accounts are common in reality.

5.3.3. Summary on previous board game use

Monopoly™ is often used as a tool in teaching accounting (Knechel, 1989; Albrecht, 1995; Tanner & Lindquist, 1998; Clayton & Pierpoint, 2001; Clayton, 2003; Perry, 2005). The availability, familiarity and inexpensiveness of the game makes it well suited as a teaching aid. It could also be adapted to the lecturers' needs. It seems that the use of Monopoly™ was in the past well received by learners and provided a good learning experience.

There are, however, shortcomings and limitations involved in the use of Monopoly™. It simplifies the business world and has numerous unapplicable and unrealistic transactions. These shortcomings can, however, be overcome in a tailor made board game.

5.4. GAME DESIGN

All artefacts are created within some design methodology, guiding the creative thought process and helping to ensure quality work (Hunicke *et al.*, 2004:1). Hunicke *et al.* (2004:2) present the MDA framework for game design:

- M – mechanics – first look at the particular components of the game, level of data representation and algorithms (various actions, behaviours and control mechanisms);
- D – dynamics – secondly look at the run-time behaviour of the mechanics acting on player inputs and outputs over time (this includes time pressure, opponent play etc.); and
- A – aesthetics – lastly incorporate the desired emotional responses evoked in the player (what makes the game fun?).

The game design is thus addressed under the following headings:

- Requirements for the proposed board game;
- Mechanics of the game;
- Dynamics of the game; and
- Aesthetics of the game.

5.4.1. Requirements for the proposed board game

The board game should create a learning tool to address the elements of the learning environment identified in chapters 2 to 4 (page 13 to 114). The potential use of the board game was already discussed under paragraph 5.2.3, page 121. The way in which each element can be addressed or assisted by way of a board game is discussed in the next paragraphs. Reference is made to the elements of the teaching-learning environment identified in the literature.

5.4.1.1. Assistance to lecturer/facilitator to be perceived being effective

The board game should help the lecturer/facilitator be perceived as being effective in the following manner:

- It should provide good quality assignments, enhance fairness of assessment and provide quality and frequent feedback (paragraph 2.3.1, page 15);
- It should provide the lecturer/facilitator with sufficient support, material for proper preparation, presentation and communication (paragraph 2.3.1, page 15, paragraph 2.3.4, page 31 and paragraph 2.3.7, page 36);
- The game should assist the lecturer/facilitator to properly motivate learners by determining their needs, and providing a process to tell them what to do, show them how to do it and let them do it (paragraph 2.3.1, page 15 and paragraph 2.3.6, page 33); and
- It should assist a learner-centred teaching approach (paragraph 2.3.1, page 15 and paragraph 2.3.2, page 25).

5.4.1.2. Assistance to the learner

The board game should help the learner in the following ways:

- It should take in consideration the learners' approach to learning (paragraph 2.4.1, page 38), namely:
 1. Wanting to be physically active and have active experimentation in applying theory in practice;
 2. Preferably perceiving information through sights, sounds, smell, physical sensation or feeling and value;
 3. Progressing towards understanding in continual steps focus on objective decision making and seeking logic;
 4. Helping the learner to form a holistic perspective; and
 5. Focusing on the outside world and providing interaction and personal contact.
- It should acknowledge learners' biographical differences (paragraph 2.4.2, page 42); and
- It takes learners' previous skills and knowledge into account (paragraph 2.4.3, page 42).

5.4.1.3. Providing a positive milieu

The board game and supporting material should assist the lecturer/facilitator in setting a milieu that would complement learning (paragraph 2.5.3, page 48) by:

- Involving learners emotionally;
- Presenting guidelines for presenting the project in a neat, well lighted, well conditioned room with appropriate decor.

5.4.1.4. Addressing the technical subject content

As identified in chapter 3 (paragraph 3.4, page 68) the board game should address the following technical content, generally incorporated in introductory accounting courses:

- Accounting basics:
 1. Place accounting in context and show the purpose of accounting;
 2. Introduce the conceptual framework (accounting concepts);
 3. Demonstrate the accounting equation and double entry principle;
 4. Address the elements of the accounting cycle (transactions, source documents, subsidiary journals, general ledger and subsidiary ledgers, trial balance, adjustments, closing off, profit calculations and financial statements);
- Financial statement elements:
 1. Incorporate transactions regarding inventory, accounts receivable, accounts payable, cash and bank and property, plant and equipment;
- Different entities:
 1. The game should allow the learners to prepare transactions for sole proprietors, companies, partnerships, close corporations and non-profit organisations; and
- Sundry topics:
 1. The game and assignment should incorporate matters of correcting of errors, VAT, insurance claims of inventories, financial statement analysis, incomplete records, internal controls, budgeting, management accounting and manufacturing entities.

5.4.1.5. Developing soft skills

As identified in chapter 3 (paragraph 3.3, page 61) the board game should also address the development of the following soft skills:

- Regarding technical and other competencies, develop:
 1. Critical problem solving skills;
 2. Oral and written communication skills;

3. Effective learning skills;
 4. Technological skills (being able to use technology);
 5. Technical competencies across various subject fields; and
 6. Analytical abilities.
- Regarding the roles accountants must fulfil, introduce the learner to being an:
 1. Entrepreneur;
 2. General manager;
 3. Global player;
 4. Market analyst; and
 5. Salesperson.
 - Regarding other general soft skills, provide opportunity for developing:
 1. Team-building skills;
 2. Personal attributes;
 3. Interpersonal skills;
 4. Skills for contributing to society;
 5. Ethic considerations;
 6. Skills for being able to adapt;
 7. High values; and
 8. Skills for being culturally and ethnically sensitive.

5.4.1.6. Being methodologically effective

Methodologically the board game and supporting material should (concluded for chapter 4, paragraph 4.12, page 114):

- Be learner-centred and incorporate a more unstructured learning environment that deals with a broad spectrum of content;
- Involve the lecturer/facilitator as a facilitator;
- Promote the learners to be active enquirers;
- To some degree allow self-study at the learners' own pace and let the learner accept responsibility for their own studies;
- Incorporate experience from practice to make learning relevant and interesting;
- Focus on the competencies required of the learners;
- Give learners the opportunity to work with and learn from their peers; and
- Incorporate appropriate multi-media and technology.

5.4.2. Mechanics of the proposed board game

The requirements to be incorporated into the board game and supporting material were discussed in paragraph 5.4.1, page 131. In this paragraph it is explained how the requirements were incorporated into the mechanics of the game.

5.4.2.1. In general

Regarding the game in general it addresses the following requirements:

a) Requirements regarding the lecturer/facilitator (paragraph 5.4.1.1, page 131)

- As stated in paragraph 5.2.1, page 118 a game in itself provides motivation for the learning experience;
- During the total game play the lecturer/facilitator is only a facilitator.

b) Requirements regarding the learner (paragraph 5.2.3.2, page 122)

- The idea of playing a game also actively involves learners;
- The board game also involves various senses including hearing, speaking, seeing and feeling;
- The learners will have a chance of interacting with each other during game play;
- In order to take different language backgrounds into account it was decided to have the game translated in several languages.

c) Requirements regarding the milieu (paragraph 5.2.3.3, page 122)

- Various emotions are involved when playing games.

d) Requirements regarding the subject content (paragraph 5.2.3.4, page 123)

- From playing the game learners will identify the purpose of accounting.

e) Requirements regarding the soft skills (paragraph 5.2.3.4, page 123)

- The nature of games provides interaction and personal contact;

- When playing games problem solving skills are gained throughout the management of the business and all the decisions that have to be made;
- In the process of playing, players communicate. This addresses oral communication skills. This process will also assist in developing interpersonal skills.

f) Requirements regarding the teaching methodology (paragraph 5.2.3.5, page 123)

- The idea of playing a game also actively involves learners and is thus learner-centred;
- The game also simulates reality and forms part of experiential learning;
- Playing the game also provides a less structured learning environment.

5.4.2.2. The board

The first step was developing the board. The board determines the overall content of the game. The players move around the board with play pieces and have various possibilities of transactions and actions depending on the space they land on. The final board is attached as Annexure A (page 222). The following requirements were considered in developing the board game:

a) Requirements regarding the subject content (paragraph 5.2.3.4, page 123)

- Various concepts such as assets, liabilities, equity, investments are part of the board game.
- In playing the game and moving around the board the learner is subject to various transactions, including:
 1. Paying for personal expenses;
 2. Buying and selling property investments, business investments, shares and vehicles;
 3. Buying furniture and equipment;
 4. Paying operating expenses, personnel expenses, interest, travelling costs and rent;
 5. Receiving rental income, service income, investment income (interest and dividends) and selling goods;
 6. Making profits and losses on the sale of assets;
 7. Banking money;
 8. Buying inventories, raw materials, hire labour and paying overheads;

9. Buying and selling on credit;
 10. Taking up loans and mortgages;
 11. Importing and exporting.
- The above transactions address all the elements of financial statements, including:
 1. Inventories;
 2. Accounts receivables;
 3. Accounts payable;
 4. Cash and bank;
 5. Property, Plant and Equipment.
 - By buying raw materials, hiring labour, paying overheads, learners can manufacture complete products to sell. This exposes them to the manufacturing environment and entities.
 - The board also houses the stock exchange and the market indicators for interest rates, inflation rates and exchange rates.

b) Requirements regarding the teaching methodology (paragraph 5.2.3.5, page 123)

- By adding the board game a new teaching media is introduced.

5.4.2.3. Cards

Different cards are used in the game (opportunity and threat cards, economic news cards, investments cards, property and debt cards). Some of the cards (opportunity and threat cards) are picked up when landing on the corresponding space on the board. The player must then have to fulfil the requirements prescribed by the cards. The others are for record keeping of investments, properties and debts. Copies of the cards are attached as Annexure B (page 224). The different cards address the requirements as follows:

a) Requirements regarding the subject content (paragraph 5.2.3.4, page 123)

Various sets are for introducing economic and business matters when players land on the associated blocks:

- Economic news (EN) – Some of the cards expose learners to general and global economic conditions. It also alters the interest, inflation and exchange rates (Page 241).
- Opportunities and threats (O&T) – The O&T cards introduce various business matters (including personnel matters, financing, various opportunities and threats,

marketing). Contributing to the society, values and ethical considerations were addressed in some of the cards. The O&T cards include insurance contracts as well as various damages that can occur with regard to property, inventory and profit generation (page 225).

- There are four sets of cards that provide proof and details of investments and assets (page 257 and 259):
 1. Share certificates (page 257);
 2. Property Investments (page 259);
 3. Business Investments (page 259);
 4. Houses (page 259).
- The last two sets of cards serve as proof of debts (page 264):
 1. Mortgages;
 2. Loans.

b) Requirements regarding the soft skills (paragraph 5.2.3.4, page 123)

- One set of cards, namely, opportunities and threats (O&T), address oral and written communication skills as well as ethics.

c) Requirements regarding the teaching methodology (paragraph 5.2.3.5, page 123)

- The tasks allocated on various of the cards require the learners to perform certain activities. They are subsequently actively involved in the learning process.

5.4.2.4. Tokens

Tokens are used to keep record of raw material and product inventory, as well as the number of labourers that are employed. Three sets of tokens are used:

- Raw materials – identify raw materials purchased.
- Labourers – identify labourers hired.
- Products – the learners can buy and sell products. The inventory transactions are recorded.

These tokens mainly assist in the requirements regarding the subject content. Examples are attached as Annexure C (page 269).

5.4.2.5. Playing pieces

The playing pieces of which each player must choose one, is in the form of vehicles. Players must purchase the playing pieces at the beginning of the game at different costs. Along with buying houses, these pieces illustrate to learners that when more money is spent on personal expenses and luxuries, less will be available for business investment purposes.

5.4.2.6. Cash, cheques and bank statements

The game uses cash and bank accounts for transactions. Players have chequebooks and bank accounts with overdraft facilities. This allows for cash and bank transactions (a requirement of the subject content) to be recorded. Bank reconciliations can also be performed, as a bank statement is completed throughout the game. Examples are attached as Annexure D (page 271).

The currency used in the game is the “Commercium Dollar (C\$)”.

5.4.2.7. Playing the game (goal of the game)

The game mostly focuses on the roles of the accountant and technical subject content (paragraph 5.2.3.4, page 123). In playing the game the learners are entrepreneurs, wanting to be successful in making money in the different ways the game allows. The learners must also manage all aspects of their businesses: manufacturing, inventory control, selling, investing, financing and cash flow. While importing and exporting the learners are exposed to global matters. To make share investments the player must act as market analyst. The players must also be sales people auctioning and selling goods among them.

5.4.2.8. Rules

The rules explain the game play. It states the aim of the game and explains the different spaces on the board, the cards and tokens. The rules also explain certain terminology in the context of the game to enable learners from different backgrounds and with various levels of prior knowledge to be able to play and understand the game. The rules also explain the

interaction between the different elements in the game. A copy of the rules is attached as Annexure E (page 280).

5.4.2.9. Supporting material

The board game is only the instrument in which transactions can be generated. It was necessary to develop support material in order to assist the lecturers/facilitators in planning and playing the game. The support material is attached as annexure F (page 285). The support material addresses the following requirements:

a) Requirements regarding the lecturer/facilitator (paragraph 5.4.1.1, page 131)

- The support material is set out to serve as a working list for the lecturer in preparing for the exercise;
- A grading scheme was prepared to assist facilitators in assessing the project fairly. This is especially important as there is no fixed memorandum.

b) Requirements regarding the milieu (paragraph 5.2.3.3, page 122)

- As part of the planning material a checklist is available on the milieu.

c) Requirements regarding the subject content (paragraph 5.2.3.4, page 123)

- Part of the supporting material is a credit tax invoice, cash tax invoices, chequebooks, bank statements, petty cash vouchers, bank deposit books and receipt books (refer to annexure D, page 271). Learners will complete these in recording the transactions during the course of playing the game. In analysing the transaction and recording it on the source documents and journals, learners practise their analytical skills.
- There is also round indicators for counting the turns and indicating dates.

5.4.2.10. The assignment

The assignment paper is probably one of the most important documents. This sets out the outcomes, what should be done and the assessment criteria. The assignment addresses the following:

a) Requirements regarding the lecturer/facilitator (paragraph 5.4.1.1, page 131)

- In the development of the assignment the focus is on the learners's activities;
- In order to keep the role of the lecturers/facilitators to that of a facilitator and to ensure that learners take up their responsibility, the learners could be asked to pay a consultation fee if they asked the lecturer/facilitator for help during the game play.

b) Requirements regarding the learner (paragraph 5.2.3.2, page 122)

- By having all the steps in the accounting cycle in one exercise the learners would also see the accounting cycle holistically;
- The assignment can also be structured in such a manner that the learners can take personal responsibility for the project;
- After playing the game the learners have some time to complete the rest of the assignment in their own time and place.

c) Requirements regarding the subject content (paragraph 5.2.3.4, page 123)

- In playing the game the learner would see the actual movement of transactions through the accounting cycle;
- The assignment requires the following accounting technicalities:
 1. The learners are required to complete source documents for all transactions entered into during the game;
 2. By including in the assignment that VAT at 10% (used as a fixed percentage to make calculations easier) is included in all applicable amounts and that all players are registered for VAT purposes, learners also get used to dealing with VAT;
 3. The learners are required to complete the necessary subsidiary journals using the source documents completed;
 4. Learners must prepare a general ledger from the subsidiary journals. The learners must also prepare a trial balance;
 5. The assignment requires the learners to prepare a bank reconciliation from the bank statement;
 6. In the playing process completing the financial records enable learners to find and resolve any accounting errors. If they did not keep accurate record, they will also experience the effect associated with incomplete records. In this they will realise the need to keep complete accounting records;
 7. Lastly learners must do the necessary adjustments (including providing for depreciation) and closing off and prepare a set of financial statements;

- The assignment may be altered to take the form of any profit orientated entity. Learners may play on their own, form partnerships or even companies;
- The assignment can be extended so that learners must also record the transactions on an electronic accounting system;
- The assignment can also require learners to compile the financial statements electronically, for example on Microsoft Excel.

d) Requirements regarding the soft skills (paragraph 5.2.3.4, page 123)

- While working in groups the learners experience interaction and personal contact. By having learners work together in groups, team-building skills can be practised.
- As learners work together in groups they will interact with learners from other cultures.
- The assignment may have additional requirements that the learners should write a report in which they analyse their entity's financial performance. By having learners evaluate and analyse their entities, they also practise analytical skills.

e) Requirements regarding the teaching methodology (paragraph 5.2.3.5, page 123)

- Experiential learning takes place in continual steps as the learners move through each step in the accounting cycle in one assignment.
- The assignment requires a group of learners to work out for themselves which skills and knowledge they would need to successfully complete the assignment.

The assignment was the tool that facilitated the project. It can also directly be linked to the empirical research described in paragraph 6.4, chapter 6 (page 179)

A copy of the Assignment is attached as Annexure G (page 290).

5.4.2.11. Exercise

The last part of the game is the actual playing thereof. Learners are allowed to group themselves around the playing board. Eight players play at a single board. The lecturer/facilitator is available as facilitator during the game play.

5.4.2.12. Conclusion on the mechanics of the proposed board game

The above paragraphs indicated how the requirements for an effective teaching-learning environment were addressed in the game design. As the game and other material would incorporate the majority of requirements of an effective teaching-learning environment for accounting, it could result in a positive learning experience. The evaluation and results are discussed in chapter 6.

5.4.3. Dynamics of the proposed board game

Dynamics work to create aesthetic experiences (Hunicke *et al.*, 2004:2). The dynamics of the board game are included in the rules (refer to Annexure E, page 280). Players do not only compete for their own financial stability and survival, but also against each other.

5.4.4. Aesthetics of the proposed board game

In describing the game play Hunicke *et al.* (2004:2) puts forward the following taxonomy list:

- Sensation – The game can be sense-pleasuring;
- Fantasy – The game can be make-believe/role-play;
- Narrative – The game can be in the form of a drama;
- Challenge – The game can incorporate an obstacle course;
- Fellowship – The game can promote a social framework;
- Discovery – The game can introduce an uncharted territory;
- Expression – The game can stimulate self-discovery; and
- Submission – The game can be a pastime activity.

The words fantasy, fellowship and challenge would probably describe *Commercium*TM best as *Commercium*TM forms a role-play (simulation) in a group (social) context when competing against each other.

In order to promote the aesthetics of the game, the following were built into the game play:

- In order to make the game play a pleasant experience it was necessary to accelerate the game play. All transactions would take place from the first round. Economic news

cards would also be picked up after passing the beginning, resulting in various economic activities. Various spaces were also repeated on the board;

- To illustrate the effects of interest rates, inflation etc. in the short time the game is being played, these rates and the changes thereof were inflated and are more dramatic than in reality;
- An element of competition between the players were also built into the game;
- A graphic design studio was used to complete the design of the board and other game content. The process took three months. The researcher made basic designs, layouts and set the content for the board game and cards. This was handed to a professional design studio to put together in a professional manner that would also be pleasant to the eye. The researcher wanted the board to simulate an aerial view of a town. The researcher also had input in the colour scheme and general style of the design.

5.5. CONCLUSION

It was noted from the literature that games may well be one of the solutions in addressing the criticism against traditional accounting education (paragraph 5.2.1, page 118) because:

- Learners become actively involved;
- Learners learn from personal experience;
- Learners learn co-operatively;
- Learners are more motivated;
- Learners receive instant feedback;
- The lecturer/facilitator becomes a facilitator.

There is, however, criticism against the use of games (paragraph 5.2.2, page 120). These include:

- It may over-simplify real-life situations, building over-confidence, making learners act in superficial ways and thus being valued less and have a short term effect;
- It may require much preparation time on the side of the lecturer;
- It may be financially expensive.

The researcher is of the opinion that the advantages far outweigh the disadvantages. This seems also to be supported by the researchers Knechel (1989), Albrecht (1995), Tanner

and Lindquist (1998), Clayton and Pierpoint (2000), Clayton (2003) and Perry (2005) who also supported the use of board games for educational purposes.

The use of a board game in accounting was motivated in detail in paragraph 5.2.3, page 121. It was shown that a board game could well be used to address the various requirements for an effective teaching-learning environment.

Previous use of games in accounting education was also researched. During the literature study it was found that Monopoly™ was often used with great success in teaching financial accounting (paragraph 5.3, page 125). Monopoly™ does, however, have various limitations and therefore a new board game (Commercium™) was developed using the literature on the overall teaching-learning environment gathered in chapters 2 to 4.

Developing the mechanics of the board game was addressed in paragraph 5.4.2, page 135. The board game consists of a board, various cards, playing pieces, bank accounts and money. In addition to the game attention was also given to develop support material for playing the game. These include checklists and source documents. An assignment and grading scheme that sets out the project was also prepared. There was also reference to the dynamics and aesthetics of the board game (paragraph 5.4.3, page 143 and paragraph 5.4.4, page 143).

The result of the developments was a research based, high quality game, that could be understood in all eleven official South African languages (which is believed to be a first) of South Africa. This resulted as the game was translated in eight official languages.

In chapter 6 the effectiveness of the developed board game, as a method to help learners master the content and competencies they need are evaluated. Should the evaluation be concluded to be effective, the Commercium™ will add a valuable teaching tool to be used in introductory accounting.

CHAPTER 6 - EVALUATION OF THE IMPLEMENTED METHODOLOGY

6.1. INTRODUCTION

In the previous chapters knowledge was gained on various aspects in the teaching-learning environment. The following elements were addressed:

- The learner (chapter 2);
- The lecturer/facilitator (chapter 2);
- The milieu (chapter 2);
- The content (subject and competencies)(chapter 3), and;
- Teaching methodologies (chapter 4).

The development of a board game was also discussed in the previous chapter (chapter 5). The board game was developed, taking into account the knowledge gained during the literature study compiled in chapters 2 to 5.

According to Creswell (2005:3-6) research adds to knowledge, improves practice, informs policy debates and builds learner research skills. Research objective 5 (paragraph 1.4, page 8) namely to evaluate the board game to be used in the teaching of introductory accounting is addressed in this chapter.

In this chapter the research methodology will be discussed in detail. This discussion includes:

- The purpose of the study (paragraph 6.2.1, page 147);
- Research methodology and data collection techniques (paragraph 6.2.2, page 148);
- Design of the questionnaire (paragraph 6.2.3, page 150);
- Definition of the population (paragraph 6.2.4, page 155);
- Definition of the sample (paragraph 6.2.5, page 157);
- The execution of the empirical research (paragraph 6.2.6, page 158); and
- Ethical issues (paragraph 6.2.7, page 158).

The validity and an analysis of the results of the empirical research are also being discussed (paragraph 6.3, page 159). In the last instance a summary is given, concluding on the evaluation of the board game (paragraph 6.4, page 179).

6.2. METHOD OF RESEARCH

The methodology followed during research depends on the goal or purpose of the research. According to Neuman (2000:22) the goals of research are:

- *Exploratory* – Exploring a new topic or idea to learn about it;
- *Descriptive* – Presenting the specific details of a situation, social setting or relationship; and
- *Explanatory* – Building on the previous two it links issues and determines which explanations are the best.

Anderson (2000:9) also names the three goals mentioned above and adds another goal, namely that of *forming theory*.

Educational research has to do with questions such as: best methods, factors contributing to outcome achievement, elements involved in the process and reasons for matters that occur in education (Charles, 1988:3). It would thus be important to first refer back to the purpose of this study in order to motivate the research methodology.

6.2.1. Purpose of the study

The first part of the *primary objective* of this study is to:

Develop a board game and support material that will assist learners and lecturers in obtaining more of the required soft skills and technical knowledge required by the contemporary accounting environment in an effective and fun way (paragraph 1.4, page 8).

The empirical research was therefore conducted to test the effectiveness of the board game and support material. Eventually the empirical research would thus also address the hypothesis formulated in paragraph 1.3, (page 8) as:

Teaching accounting skills and the various soft skills required of accountants should become more effective if a creative methodology that simulates reality is implemented.

6.2.2. Research methodology and data collection techniques

Two designs used in doing social research are the qualitative and quantitative research designs. Linking the two designs may confirm each other via triangulations, elaborate and provide richer evidence and initiate new lines of thinking (Miles & Huberman, 1994:41).

The choice of using qualitative or quantitative methodologies provokes intense emotional response among social scientists (Glasner & Moreno, 1989:29). Qualitative and quantitative methodologies do, however, not divide territory, but rather cover and overlap territory (Glasner & Moreno, 1989:26). Creswell (2005:39) defines quantitative educational research as research, in which the researcher decides what to study, asks specific, narrow questions, collects numeric data, analyses these numbers using statistics, and conducts the inquiry in an unbiased, objective manner. Creswell (2005:39) continues to define qualitative educational research as research where the researcher relies on the view of participants, asks broad, general questions, collects data (largely words), describes and analyses these words to identify themes, and conducts inquiry in a subjective, biased manner.

It was decided that the results of the research would take the form of numbers, tables and graphs and therefore quantitative data collection was selected. Once this had been established, it became necessary to determine exactly how the data would be collected.

According to Neuman (2000:30–32), quantitative data collection techniques can further be divided into four sub-categories:

- Experiments – Experimental research builds on the principles of a positive approach to research. Creswell (2005:52) defines experimental research as explaining whether an intervention influences an outcome for one group as opposed to another group.
- Surveys - Creswell (2005:52) describes survey research as describing trends for a population of people. This is one of the most widely used data collecting techniques (Neuman, 2000:247).
- Content analysis – According to Neuman (2000:292) content analysis is a technique for gathering and analysing the content of text. In content analysis the researcher uses

objective and systematic counting and recording procedures to produce a quantitative description of the symbolic content of the text (Neuman, 2000:293).

- Existing statistics - Researchers have already collected much information. Researchers can search through this information for information or research questions (Neuman, 2000:301). They can also analyse previously collected survey or other data (Neuman, 2000:305).

Content analysis and existing statistics were not applicable. Experimental research would partly be used in evaluating the board game, while a survey would be the most effective data collection technique evaluating the experiment in this study.

6.2.2.1. Experimental design

In order to address reliability and validity it is important to have a proper experimental design. As the pre-test/post-test evaluation would only be done at one university it was necessary to use a reputable design method that would incorporate the specific circumstances. After consultation with the Statistical Consultation Services of the North-West University (Potchefstroom campus) it was decided that the more sophisticated Solomon four-group design could be applied, as the class group was large enough.

A table showing the design is presented below:

TABLE 6.1 – Experimental design

TYPE OF GROUP	GROUP NO	PRE-TEST	EXPERIMENT	POST-TEST
Experimental	Group A	Perform pre-test	Undergo experiment	Perform post-test
Control	Group B	Perform pre-test		Perform post-test
Experimental	Group C		Undergo experiment	Perform post-test
Control	Group D			Perform post-test

Groups A and B are the classic pre-test/post-test design to determine the effect of the experiment or treatment on the participants and provide considerable confidence that any difference between the experimental group and control group could be attributed to the experiment (Anon., 2006a).

The advantage of the four-group design is that in comparing the post-test results of groups C and D with A and B respectively it could indicate whether changes in the dependent variables are due to some interaction effect between the pre-test and the experiment (Anon., 2006a). This is important for reliability, as completing the pre-test questionnaire may influence the participants.

6.2.3. Designing the questionnaire

The next step was to prepare the questionnaire. A good questionnaire flows smoothly and contains introductory remarks and instructions. It also measures each variable with one or more questions (Neuman, 2000:251).

In general the researcher should aim to avoid (Neuman, 2000:252):

- Slang and abbreviations;
- Confusion and vagueness;
- Emotional language and bias;

- Questions about more than one topic;
- Leading questions;
- Questions beyond the respondent's capacity;
- Introductory remarks to a question with which the respondent may disagree;
- Questions about future intentions;
- Double negatives; and
- Overlapping categories.

Mouton (2001:103) adds the following to be avoided to the above:

- Not performing a pilot test;
- Questions about fictitious constructs;
- Poor layout;
- Instruments that are too long; and
- Questions that are sensitive.

Researchers should also keep in mind that the memory of respondents is not that trustworthy (Neuman, 2000:255) and that some questions may be more threatening than others. This, in return, may influence the participation (Neuman, 2000:258).

The above were considered in preparing the questionnaire. Another important matter is the length of the questionnaire. Neuman (2000:264) provides the following guidelines:

	Short	Long	Maximum
Telephone interview	10 minutes	20 minutes	30 minutes
Mail questionnaire	3-4 pages	10 pages	15 pages
Face-to-face interview	1 hour	3 hours	5 hours

The questionnaire that was designed would fit on five pages and would thus be of good length. To address the matter of trustworthiness the experimental design was addressed in paragraph 6.2.2.1, page 149. The validity and reliability of the questionnaire is discussed in paragraph 6.2.4.1 and 6.3.1, page 155 and 159, respectively.

6.2.3.1. The purpose of the questionnaire

The purpose of the questionnaire was determined by making reference to the specific objectives to be met by the empirical research, namely:

- To evaluate the board game to be used for the teaching of introductory accounting (paragraph 1.4, page 8)

In order to achieve this objective, the questionnaire was therefore divided into five main sections:

- Biographical information;
- Evaluation of required skills;
- Evaluation of subject content;
- Evaluation of the teaching methodology;
- Evaluation of the effect of the board game (project) has on the learners' attitude towards the project (only part of post-test).

The questions were based on the findings of the literature study in chapters 2 to 4.

6.2.3.2. Types of questions

According to Creswell (2005:362-363) the types of questions may include:

- Personal, Attitudinal, behavioural;
- Sensitive; and
- Open and close ended questions.

The sequence of the questions also plays a role. The first (introductory) questions should be easy or fun. The middle questions may be on general topics and then the end part of the questions should follow (Neuman, 2000:265).

Neuman (2000:259) also suggests that surveys will measure opinion better if they first ask factual questions, as many people have inaccurate factual knowledge. He continues to say that the choice of using open-ended and closed-ended questions will largely be influenced by the practical limitation of the research project.

Variables can either have an infinite number of values (continuous) or have relatively fixed set of separate values (discrete) (Neuman, 2000: 173).

There are four levels of measurement (Neuman, 2000:173):

- Nominal – difference between categories, for instance different religions. A number can be assigned to a category but has no importance itself;
- Ordinal – difference between categories and it can be ordered. A number can be assigned to a category to obtain a ranking;
- Interval – measures the same thing as first two, plus it specifies the amount of difference between categories; and
- Ratio – same as the above three, except that there is a true 0 so that relations can be expressed in proportions;

There are also some specialised measures (Neuman, 2000:175):

- Scales – used to capture the intensity, direction, level or potency of a variable (mostly ordinal). Types of scales are (Neuman, 2000:183-191):
 1. Likert – people are asked if they agree or disagree on some scale (e.g. strongly agree, agree, disagree, strongly disagree). Some variation may occur;
 2. Thurstone – Numerical values are assigned to cases to see how strongly people agree or disagree with a matter (e.g. 4=strongly agree, 3=agree, 2=disagree, 1=strongly disagree);
 3. Semantic differential – Measures a subject's feeling towards a concept by letting them choose between certain adjectives (e.g. good – poor, always - never); and
 4. Guttman (cumulative) – A scale used to test the relationship between items after the data is collected. The researcher must therefore design the research with the scale in mind.
- Index – a measure used to combine several distinct indicators of a construct into a single score (mostly interval or ratio):
 1. Indexes are sometimes weighed (some items are valued more than others) or not weighed (all are valued equal) (Neuman, 2000:177-178);
 2. Indexes are also sometimes standardised to be able to compare units around a base or norm.

For these measures it is important to remember the following concepts:

- Mutually exclusive – an individual case must fit into only one category (e.g. religion);
- Mutually exhaustive - all cases must fit into at least one of the categories.

Due to the difficulty that can be encountered in coding and analysing the results of open-ended questions, it was decided to make use of closed-ended questions. These questions

would provide multiple solutions (Likert and Semantic differential scales) and require the respondents to select the alternative that best applies to them. The questionnaire also started with the biographical questions, that would be easy to answer and were not threatening.

6.2.3.3. Content of the questions

The biographical section of the questionnaire (question 1 to 9 of the questionnaire, annexure H, page 297) contained questions on gender, mother tongue, accounting marks/academic performance in accounting and the province where the learners attended secondary school.

The section on their perceived level of technical knowledge and skills (question 10 to 28 of the questionnaire, annexure H, page 297) includes questions regarding the technical skills, roles of accountants and soft skills required from an accountant identified during the literature study.

The content of the introductory accounting syllabus identified in chapter 4 makes up the next section of the questionnaire (question 29 to 58 of the questionnaire, annexure H, page 297). This section was used to identify the learners' perceived level of knowledge on the content matter.

The next section of the questionnaire includes questions on the teaching methodology used in the learners' accounting education thus far (question 69 to 74 of the questionnaire, annexure H, page 297).

The last section (only included in the post-test questionnaire) includes questions on the learners' perceived effectiveness of the *Commercium*TM project (game) (question 77 to 84 of the questionnaire, annexure H, page 297).

Noyes and Garland (2005:234) remark that attitudes towards an object influence the learner's behaviour; if the interaction between the learner and for instance technology is not good, it will hamper the learning process. It was therefore necessary to evaluate the learners' attitudes towards the *Commercium*TM project. Noyes and Garland (2005:234) used Kay's Computer Attitude Measure developed in 1989 and revised in 1993, as it was

consistent with the seminal work by Fishbein and Ajzen in 1975. The Computer Attitude Measure yielded high internal reliability coefficients (alpha being 0.89) (Noyes & Garland [2005:235]). Noyes and Garland (2005:236) developed a questionnaire containing 10 bipolar, attitudinal dimension questions based on Kay's 1993 questionnaire. The internal reliability coefficient of their study was an overall 0.79.

The same 10 bipolar questions were included as questions 88 tot 97 (annexure H, page 297) on a 7-point Likert scale. Positive ends were put on the left hand side and negative ends on the right hand side.

6.2.4. Defining the population

The population was identified as first year accounting learners and more specifically the one (and only) RECP 111 (mainly CA, CIMA, Forensic programme learners) and the learners of the two REKP 111 (mainly SAIPA programme learners) classes at the North-West University (Potchefstroom campus).

6.2.4.1. Pilot study

Before the questionnaire was distributed to the sample of learners, a pilot run was done to evaluate the validity thereof. As the total population existed of three classes, it was decided to use one class group for the pilot study. The questionnaires were distributed at the beginning of contact sessions during April 2006. The respondents were required to complete the questionnaire on a multiple choice answer sheet. The answer sheets were taken to the Information Technology department of the North-West University (Potchefstroom Campus) for electronic data capturing.

The data was analyzed by the Statistical Consultation Service of the North-West University (Potchefstroom campus) using SAS (SAS Institute Inc., 2003-2005) computer software. The results on the construct validity of the pilot study by means of factor analysis, as well as the reliability measured by the Cronbach-alpha coefficient, are set out in Table 6.2, page 156.

TABLE 6.2 – Reliability and Construct Validity of pilot study questionnaire

Section	Number of questions	Number of factors explaining a variance of more than 1	Cumulative % of variance explained by factors	Questions with low communalities (<0.40)	Alpha	Frequency of low correlation to total (< 0.2)	Average inter-correlation
Technical skills	6	2	66.09%	None	0.732	0	0.30
Roles	6	1	44.05%	Q20, Q21	0.733	0	0.315
Soft Skills	8	2	54.73%	None	0.7814	0	0.317
Subject Content	30	7	71.52%	None	0.9309	0	0.300
Teaching methodology	7	5	63.17%	Q66	0.753	0	0.289

From Table 6.2 (on page 156) it seemed that the questionnaire was reliable as Alpha were in all instances over 0.70. No item had a low correlation with the total and the average intercorrelations were larger than 0.15. The fact that in some sections the variances were explained by more than one factor was not that big a problem since these sections consisted of many questions. Overall, the results of the pilot study proved also construct valid.

Although the results on reliability and construct validity were satisfactory, the following changes were made to the questionnaire to improve it for the actual study:

- Learner numbers were added to be able to refer back to multiple choice cards in order to track erroneous readings or data input;
- Some cosmetic changes were made to some of the questions to make it clearer;
- The original Question 20 was left out, as it had a very low communality;
- The post-test section was added;
- Additional questions were added for the section on Teaching Methodology. This was done to give more clearly divided options/choices in the questionnaire.

6.2.5. Defining the sample

The following step in the research process was to define the sample. Types of probability sampling are (Neuman, 2000:216):

- Simple random – Selecting cases using a purely random process, e.g. using a random-number table from the sampling frame.
- Stratified – A separate sampling frame is created for the different categories of cases and a random sample is taken from each category.
- Systematic – A sampling frame is created and the sampling interval calculated. A random starting point is chosen and then each case along the interval.
- Cluster – A sampling frame is created for larger cluster units. A random sample is selected from the clusters and then a sample from each cluster selected.

For this study random sampling procedure were used. The official alphabetical class lists were obtained from the administrative system of the university. By using Excel each of the classes was divided randomly into four groups in line with the experimental design (paragraph 6.2.2.1, page 149). The first group (group A) was selected randomly from the list.

The sample size was 25% of the number of learners in the class. These learners were then excluded from the population and the second group (B) was then selected randomly from the remaining learners. Again the sample size was 25% of the number of learners in the class. This process was continued until the last learners remained for the last group (D).

The process was repeated for the second class. All learners were thus included in the sample, except for the one class that was used in the pilot study.

6.2.6. Conducting the empirical research

The RECP class and one of the REKP classes were divided into the four groups as described in the previous paragraph and in line with the experimental design (paragraph 6.2.2.1, page 149).

Groups A and B of each of the RECP 111 and the REKP 121 classes (being experimental group 1)(Group A of the experimental design) and control group 1 (Group B of the experimental design) were asked to complete the pre-test.

Groups A (experimental group 1 of the design) and C (experimental group 2) were then required to complete the assignment (experiment) within one week. After a week the post-test was performed on all four groups (Groups A to D) as per experimental design.

6.2.7. Ethical issues

All the groups eventually performed the assignment. No learner were thus disadvantaged by being in a control group.

6.3. SURVEY RESULTS

The survey results are discussed under the following headings:

- Survey Validity (paragraph 6.3.1, page 159); and
- Analysing the results (paragraph 6.3.2, page 162).

6.3.1. Survey validity

Learners in groups A and B completed the pre-test questionnaires. Shortly after completing of the pre-tests, within a week, all the learners of groups A and C were required to complete the group assignment involving playing the *Commercium*TM game. After completion of the project all groups were required to complete the post-test questionnaire. The post-test questionnaire was the same as the pre-test questionnaire with an additional section on evaluating the game and the learners' attitude towards the game.

The questionnaire was again tested for validity on the pre-test and post-test results. The relevant results for the different sections of the questionnaire are set out below in Table 6.3 (page 160) for the pre-test and Table 6.4 (page 161) for the post-test.

TABLE 6.3 – Reliability and Construct Validity of pre-test questionnaire

Section	Number of questions	Number of factors explaining a variance of more than 1	Cumulative % of variance explained by factors	Questions with low communalities (<0.40)	Alpha	Percentage of low correlation to total (< 0.2)	Average intercorrelation
Technical skills	6	2	60.21	Q12	0.728	0	0.32
Roles	5 ¹	1	93.18	Q20	0.795	0	0.45
Soft Skills	8	2	57.69	None	0.807	14.29	0.34
Subject Content	30	7	66.72	None	0.934	15.4	0.33
Teaching methodology	15 ²	5	63.17	None	0.824	39.05	0.24

1. The original question 20 was left out after the pilot study, due to its very low communality and thus only 5 questions remained in this section

2. Additional questions were added in the final questionnaire to get a better indication of the teaching methodology

TABLE 6.4 – Reliability and Construct Validity of post-test questionnaire

Section	Number of factors explaining a variance of more than 1	Cumulative % of variance explained by factors	Questions with low communalities (<0.40)	Alpha	Percentage of low correlation to total (< 0.2)	Average intercorrelation
Technical skills	1	42.8	Q14	0.722	0	0.31
Roles	1	52.8	Q20	0.770	0	0.40
Soft Skills	2	57.22	Q28	0.812	3.57	0.36
Subject Content	5	62.86	None	0.941	8.74	0.35
Teaching methodology	4	52.42	None	0.812	39.05	0.23

From Table 6.3 (page 160) and Table 6.4 (page 161) it seems that the questionnaire was still reliable, as Alpha was in all instances over 0.70. Very little items also had a low correlation with the total and the average intercorrelations were larger than 0.15. The fact that in some sections the variances were explained by more than one variable was not a large problem, since these sections consisted of many variables. Very few questions also had a low communality. Overall, there exists construct validity.

6.3.2. Analysis of results

In the next section the results are provided and an analysis is given of the results. The analysis is done under the heading of:

- Frequencies (paragraph 6.3.2.1, page 162);
- T-test (paragraph 6.3.2.2 to 6.3.2.4, page 172 to 175); and
- Conclusion (paragraph 6.3.2.5, page 177).

6.3.2.1. Frequencies

The following number of learners actually participated in the four groups of the research design:

TABLE 6.5 – Participants in research divided for research design

	Pre-test		Post-test	
	Frequency	Percent	Frequency	Percent
Group A (Pre-test, Project, Post-test)	87	49.15	89	24.65
Group B (Pre-test, Post-test)	90	50.85	82	22.71
Group C (Project, Post-test)			97	26.87
Group D (Post-test)			93	25.76

The groups that actually participated were thus divided more or less equally. Six persons did not indicate their group for the post-test and two did not indicate the group for the pre-test.

Tables 6.6 (page 162) to 6.9 (page 164) provide the learners' biographical background. It would be important to take these into account in analysing the data. It is also important

should the research be compared to other research findings.

TABLE 6.6 – Respondents by gender

	Male	Female	Total¹
Gender – number	174	192	366
Gender - %	47.54	52.46	100.00

¹ – Not all learners completed the question

From Table 6.6 above it seems that gender-wise the participants were equally distributed.

TABLE 6.7 – Respondents by mother tongue

	English	Afri- kaans	Other African lan- guage	Other	Total
Mother tongue – number	13	350	3	1	367
Mother tongue - %	3.54	95.37	0.82	0.27	100.00

As the official language of instruction at the Potchefstroom Campus is Afrikaans it is understandable that the majority of participants (95.37%) would be Afrikaans speaking (Table 6.7 above).

The results of question 4 indicated that very few participants did not have accounting at school on higher-grade level (3%). The academic performance set out in Table 6.8 below thus only applies to learners having had accounting on higher grade level at school.

TABLE 6.8 – Participants in research: previous academic performance

	>80%	70-79%	60-69%	50-59%	<50%	Total
Matric results – number	200	90	43	18	2	353
Matric results - %	56.65	25.50	12.18	5.10	0.57	100.00
Semester test (accounting 1) – number¹	23	49	71	107	99	349
Semester test (accounting 1) - %	6.59	14.04	20.24	30.66	28.37	100.00

¹ – Not all learners completed the question

What is important to notice from Table 6.8 is that the learners were above average performers (56.65% received a mark of 80% and above at school and only 28.37% received a mark of less than 50% for the semester test in accounting 1). It is evident from Table 6.8 that the exceptional performance of the participants at school level was not repeated in the first semester test at university. Most learners (56.65%) had a distinction average at school, but the highest number (30.6%) of learners obtained a mark of between 50% and 60% for the first semester test. What could be the reason that resulted in the decrease of the academic performance? This may be a point for further research.

TABLE 6.9 – Respondents: demographics

	Easter n Cape	Free- state	Gau- teng	Kwa- zulu Natal	Lim- popo	Mpu- malan- ga	North- ern Cape	North- West	Wes- tern Cape	Outside SA
Province matriculated ¹	6	59	88	17	17	47	15	107	18	4
%	1.59	15.61	23.28	4.50	4.50	12.43	3.97	28.31	4.76	1.05

¹ - As this section was divided into two questions, learners could have marked two regions.

The participants come from all over South Africa and a few (1.05%) were from outside the country. The majority (28.31%) were, however, from the North-West province and the

Gauteng province (23.28%) which are the closest situated to the city hosting the university.

The average scores for each part of the questionnaire for the four groups for the pre-test (Table 10, page 166) and the post-test (Table 6.11, page 166) are presented next. This data was used in calculating the effect of the experiment and the statistical significance thereof. The maximum mark that could have been scored is indicated in Table 6.10. The number and percentage score for each group is also provided. Lastly, an average score for the pre-test and post-test is provided.

TABLE 6.10 – Average score for pre-test for each section

	Max mark	Group A (n)	Group A (%)	Group B (n)	Group B (%)	Ave (n)	Ave (%)
Technical skills (Q10 – 15)	30	21.446	71.49	21.313	71.04	21.38	71.27
Roles (Q16 - 20)	25	17.805	71.22	18.289	73.16	18.05	72.19
Soft skills (Q21 - 28)	40	29.483	73.71	30.052	75.13	29.77	74.42
Subject content (Q29 - 58)	150	117.79	78.53	115.98	77.32	116.89	77.92
Teaching methodology (Q59 – Q74)	80	53.367	66.71	53.821	67.28	53.59	66.99

TABLE 6.11 – Average score for post-test for each section

	Max mark	Group A (n)	Group A (%)	Group B (n)	Group B (%)	Group C (n)	Group C (%)	Group D (n)	Group D (%)	Ave (n)	Ave (%)
Technical skills (Q10 – 15)	30	21.57	71.91	20.92	69.73	20.97	69.90	21.90	73.00	21.34	71.14
Roles (Q16 - 20)	25	18.07	72.27	18.18	72.73	18.02	72.08	18.28	73.12	18.14	72.55
Soft skills (Q21 - 28)	40	29.32	73.29	29.33	73.33	28.80	72.00	30.09	75.22	29.38	73.46
Subject content (Q29 - 58)	150	111.60	74.40	111.16	74.11	108.39	72.26	114.32	76.21	111.37	74.25
Teaching methodology (Q59 – Q74)	80	55.06	68.83	54.40	68.00	54.54	68.18	55.26	69.07	54.82	68.52

From Table 6.10 and 6.11 (page 166) it is also noted that the performance of the groups for all sections of the questionnaire was evenly distributed. The high ratings that were obtained on the different sections may also correlate with the high marks that the learners receive at school (identified in Table 6.8, page 164).

It is also noted that learners overall evaluated the subject content the highest (77.92 and 74.25% respectively). This is in line with the perception and criticism against accounting education identified earlier in the study (paragraph 1.1.3 and 3.2.3, page 3 and 58). It seems that the current accounting education still focuses on the technical subject content. The matter of innovative teaching methodology was evaluated the worst (66.99% and 68.52% respectively).

In the next few paragraphs it is attempted to learn more about the knowledge and skills of the learners currently enrolled in accounting 1. The answers to the questions were provided on a 5-point Likert scale.

Table 6.12 (page 168) shows the responses of questions 10 to 28 of the questionnaire (annexure H, page 297) regarding technical skills, roles of the accountant and soft skills required off entry accountants. Table 6.13 (page 170) shows the responses of questions 29 to 58 of the questionnaire (annexure H, page 297), regarding the technical subject content of introductory accounting. Table 6.14 (page 171) shows the responses of questions 59 to 74 of the questionnaire (annexure H, page 297) regarding the teaching methodology experienced so far by learners.

TABLE 6.12 – Technical skill and competencies, demonstration of the roles of the accountant and soft skills of learners enrolling for accounting 1

Question		Group A		Group B		Total		
		N	Mean	N	Mean	N	Mean	% ¹
The way accounting was taught (the teaching methodology) up to now enhanced the following in me:								
<i>The following technical skills and competencies were obtained:</i>								
Q10	<i>Critical problem solving skills</i>	85	3.529	86	3.628	171	3.579	71.58
Q11	<i>Oral and written communication skills</i>	87	3.540	90	3.444	177	3.491	69.82
Q12	<i>Effective learning skills</i>	87	3.552	90	3.533	177	3.542	70.85
Q13	<i>Being able to use technology</i>	87	3.552	90	3.400	177	3.475	69.49
Q14	<i>Technical competencies over various (subject) fields</i>	87	3.402	90	3.389	177	3.395	67.91
Q15	<i>Analytical ability, logical argument and summarising</i>	87	3.862	90	3.933	177	3.898	77.96
<i>I can demonstrate skills in the following roles as an accountant:</i>								
Q16	<i>Being an entrepreneur</i>	87	3.759	90	3.889	177	3.825	76.50
Q17	<i>Being a general manager</i>	87	3.954	90	3.933	177	3.943	78.87
Q18	<i>Being a global player</i>	87	3.586	90	3.667	177	3.627	72.54
Q19	<i>Being a market analyst</i>	87	3.345	90	3.400	177	3.373	67.46
Q20	<i>Being a salesperson</i>	87	3.161	90	3.400	177	3.283	65.65
<i>The following soft skills are attained:</i>								
Q21	<i>Effective functioning in group work (team building)</i>	87	3.644	90	3.478	177	3.560	71.19
Q22	<i>Personal attributes such as motivation, self-management</i>	87	3.747	90	3.889	177	3.819	76.38
Q23	<i>Effective interpersonal communication</i>	87	3.678	90	3.667	177	3.672	73.45
Q24	<i>Problem solving (in terms of society needs)</i>	87	3.494	90	3.578	177	3.537	70.73
Q25	<i>Validation of ethic considerations</i>	87	3.425	90	3.522	177	3.474	69.49
Q26	<i>Having high values - respect for society and creation, strive towards high quality, loyalty and integrity</i>	87	4.057	90	4.300	177	4.181	83.61
Q27	<i>Cultural and ethnic sensitivity</i>	87	3.379	89	3.562	176	3.472	69.43
Q28	<i>Being able to adapt</i>	87	4.057	89	4.056	176	4.056	81.13

¹ Small differences may occur between the Mean number and % due to rounding.

The following conclusions can be drawn from Table 6.12 (page 168):

- Regarding the technical knowledge and skills, the learners felt most competent (77.96%) in the field on analytical ability, logical argument and summary. They also felt least competent in technical knowledge over various fields (67.91%), being able to use technology (69.49%) and oral and written communication skills (69.82%);
- Regarding the roles of the accountant, learners felt most competent about being a general manager (78.87%) and entrepreneur (76.50%) and least competent regarding being a sales person (65.65%) and market analyst (67.46%);
- Regarding soft skills, learners felt that they have best obtained the skills of having high values (83.61%), being able to adapt (81.13%) and personal attributes (76.38%). The lowest score was on ethical issues (69.49%) and cultural and ethnic sensitivity (69.43%).

These findings correspond with the criticism against traditional accounting education (paragraph 3.2.3, page 58). Educators still predominantly focus on technical knowledge and there is a lack of the use of technology, oral and written communication skills and ethical issues.

From Table 6.13 below it seems that the following conclusions can be drawn from the subject content learners felt they have mastered at school:

- Regarding accounting basics, it seems that all the topics were well addressed with the lowest score being 78.43% for profit calculations. The best addressed topic was that of the double entry (89.38%);
- It also seems that all elements of the financial statements were thoroughly addressed (higher than 78%);
- Most entities were well addressed, with the most emphasis being on sole proprietors (85.53%) and partnerships (80.00%). The least mastered topic was the non-profit organisation (66.67%);
- As could be expected the result on the sundry topics were generally lower. The best score was obtained for the correction of errors (77.85%) and least mastered topics are Internal controls (61.14%) and management accounting (60.9%).

TABLE 6.13 – Subject content mastered by learners enrolling for first year accounting

Question		Group A		Group B		Total		
		N	Mean	N	Mean	N	Mean	% ¹
The way accounting was taught (the teaching methodology) up to now effectively addressed the following subject content:								
Accounting basics								
Q29	What the accounting context is and the role/purpose of accounting is	86	4.221	89	4.157	175	4.188	83.77
Q30	Conceptual framework and accounting concepts	86	4.163	89	4.112	175	4.137	82.74
Q31	Accounting equation and double entry principle	87	4.448	90	4.489	177	4.469	89.38
<i>Accounting cycle:</i>								
Q32	- Transactions	87	4.333	90	4.211	177	4.271	85.42
Q33	- Source documents	87	4.126	90	3.922	177	4.022	80.45
Q34	- Subsidiary journals	86	4.128	88	4.080	174	4.104	82.07
Q35	- General ledger and subsidiary ledgers	87	4.391	90	4.178	177	4.283	85.65
Q36	- Trial balance	87	4.046	90	3.944	177	3.994	79.88
Q37	- Adjustments	87	4.184	90	4.156	177	4.170	83.40
Q38	- Closing	87	3.966	90	3.989	177	3.978	79.55
Q39	- Profit calculations	87	3.874	90	3.967	177	3.921	78.43
Q40	- Financial statements	87	3.897	90	4.022	177	3.961	79.21
Financial statement elements								
Q41	Inventories	87	4.207	90	4.011	177	4.107	82.15
Q42	Accounts receivable (Debtors)	87	4.253	90	4.233	177	4.243	84.86
Q43	Accounts payable (Creditors)	87	4.161	90	4.167	177	4.164	83.28
Q44	Cash and bank	87	4.126	90	4.156	177	4.141	82.83
Q45	Property, plant and equipment (Non Current assets)	87	3.954	90	3.900	177	3.927	78.53
Different entities								
Q46	Sole proprietors	87	4.310	90	4.244	177	4.276	85.53
Q47	Companies	87	3.966	90	3.822	177	3.893	77.86
Q48	Partnerships	86	4.116	90	3.889	176	4.000	80.00
Q49	Close corporations	87	3.885	89	3.764	176	3.824	76.48
Q50	Non-profit organisations	87	3.402	90	3.267	177	3.333	66.67
Sundry topics								
Q51	Correction of errors	87	3.977	90	3.811	177	3.893	77.85
Q52	VAT	86	3.605	90	3.367	176	3.483	69.67
Q53	Insurance claims: Inventories	86	3.663	90	3.656	176	3.659	73.19
Q54	Financial statement analysis	87	3.529	90	3.478	177	3.503	70.06
Q55	Incomplete records	87	3.345	90	3.289	177	3.317	66.33
Q56	Internal controls	87	3.034	89	3.079	176	3.057	61.14
Q57	Budgeting	87	3.471	90	3.533	177	3.503	70.05
Q58	Management accounting	87	3.011	90	3.078	177	3.045	60.90

¹ Small differences may occur between the Mean number and % due to rounding.

TABLE 6.14 – Teaching methodologies experienced by learners enrolling for first year accounting

Question	Group A		Group B		Total			
	N	Mean	N	Mean	N	Mean	% ¹	
The way accounting was taught (the teaching methodology) up to now can be described as follows:								
Q59	<i>Learner centred (focused on what the learner must do and not lecturer/facilitator driven)</i>	85	3.600	90	3.767	175	3.686	73.72
Q60	<i>Also had unstructured learning opportunities</i>	85	3.188	90	3.122	175	3.154	63.08
Q61	<i>Was not necessarily always subject content based, but broad based</i>	86	3.093	89	3.079	175	3.086	61.72
Q62	<i>Lecturer/Teacher was a facilitator</i>	85	2.918	89	2.989	174	2.954	59.09
Q63	<i>There was active learner participation</i>	86	3.581	89	3.798	175	3.691	73.83
Q64	<i>Required self-study and work in the learner's own time</i>	86	4.151	89	4.090	175	4.120	82.40
Q65	<i>Included practical experiences that made learning relevant and interesting. It simulated reality</i>	86	3.558	89	3.607	175	3.583	71.66
Q66	<i>It focused on the competencies I require for my profession</i>	86	3.802	89	4.112	175	3.960	79.19
Q67	<i>Provided opportunity for group work and learning from peers</i>	86	3.512	89	3.472	175	3.492	69.83
Q68	<i>Used multi-media and technology</i>	86	3.744	89	3.888	175	3.817	76.34
Q69	<i>Included learning through various senses (see, hear, smell, physical sensation and feelings)</i>	86	3.023	89	2.888	175	2.954	59.09
Q70	<i>Occurred in continual steps and in a logical manner</i>	85	3.753	87	3.678	172	3.715	74.30
Q71	<i>Helped me to obtain a holistic perspective of the subject field</i>	86	3.500	89	3.506	175	3.503	70.06
Q72	<i>Provided opportunities for interaction and personal contact between learners and learners and between learners and the lecturer/facilitator</i>	86	3.674	89	3.753	175	3.714	74.28
Q73	<i>Took my background, home language, etc into account</i>	85	3.976	89	3.899	174	3.937	78.73
Q74	<i>Took my previous knowledge and competencies into account</i>	82	3.902	85	3.882	167	3.892	77.84

¹ Small differences may occur between the Mean number and % due to rounding.

From Table 6.14 (above) it is evident that the highest scores were obtained for:

- Requiring self study (82.4%);
- Focusing on the competencies required for the profession (79.19%);
- The methodologies took the learners' background, home language etc into account (78.73%);
- The methodology took the learners' previous knowledge and competencies into account (77.84%);
- Multi-media and technology was used (76.34%).

The lowest scores were obtained for:

- The lecturer being a facilitator (59.09%);
- The methodology including various senses (59.09%);
- The focus was not being on the subject content (61.72%);
- Unstructured learning opportunities (63.08%);
- Working in groups (69.83%).

Still the focus on subject content is noted. From the low scores it seems that much "teaching" still takes place and working in groups is not functioning that well.

6.3.2.2. T-test for the effect of the experiment

The t-test indicates whether the value of the t-statistic that is arrived at by the procedure indicates that the sample characteristics or pattern lies in the extreme tails of the normal curve (Blaikie, 2004:193). This assumes no difference between the two group means.

The first set of tests was performed to determine the effect of the experiment on the learners' skills and knowledge.

TABLE 6.15 – Testing difference between the means of Group A¹ and Group B² for the pre-test, assuming unequal variances

T-Tests			
Variable	Degrees of Freedom (DF) ³	t Value	P-value
Technical skills	174	0.27	0.7858
Roles	175	-0.98	0.3307
Soft skills	175	-0.83	0.4057
Subject content	175	0.80	0.4242
Teaching methodology	173	-0.41	0.6858

¹ Group A (completed pre-test, experiment and post-test)

² Group B (completed pre-test and post-test)

³ Number of observations freely available to vary, Wikipedia Dictionary (2007)

The “t Value” read with the “P-value” in Table 6.15 indicates that there was no significant difference (a difference larger than 0.05 when the P-value is halved) between the mean pre-test scores for each of the five categories between group A and B. This indicates that the groups could also be compared for the post-tests.

TABLE 6.16 – Testing difference between the means of Group A¹ and Group B² for the post-test, assuming unequal variances

T-Tests			
Variable	DF	t Value	P-value
Technical skills	165	1.32	0.1895
Roles	157	-0.25	0.8047
Soft skills	167	-0.02	0.9804
Subject content	169	0.19	0.8470
Teaching methodology	167	0.54	0.5867

¹ Group A (completed pre-test, experiment and post-test)

² Group B (completed pre-test and post-test)

A negative “t Value” in this instance would indicate a positive movement between the pre-test and post-test. As “P-values” were calculated for two-sided tests, the value can be halved in order to test only one-sided. A P-value (when divided by two) of less than 0.05 would indicate

a significant difference. A significant difference would indicate that the change from the pre-test to the post-test is noteworthy or important.

Although it seems that the experiment had a positive effect in some areas, none of these were significant. It indeed seems from the above that the experiment had a negative effect on the learners' perception of technical skills, subject content and teaching methodology. Their perceived negative effects were, however, also not significant.

At first sight the findings were disappointing. The purpose of the board game was to increase the skills, knowledge and perceived effectiveness of the teaching methodology. The pre-test required the learners to indicate the level of technical skills, roles, soft skills, subject content and teaching methodology. After the experiment, which could only have added to the cumulative level of technical skills, roles, soft skills, subject content and teaching methodology, the learners indicated a decrease in the level of technical skills, subject content and teaching methodology. This can however not be possible as cumulative knowledge should not decrease within a week. A reason for the phenomenon must be found.

6.3.2.3. T-test for the effect of the pre-test

The second set of tests was performed to determine if the pre-test may have had an effect on the results of the post-test.

TABLE 6.17 – Testing difference between the means of Group A¹ and Group C² for the post-test indicating effect of pre-test on post-test, assuming unequal variances

T-Tests			
Variable	DF	t Value	Pr > t
Technical skills	183	1.30	0.1937
Roles	177	0.10	0.9206
Soft skills	180	0.76	0.4480
Subject content	183	1.30	0.1940
Teaching methodology	166	0.50	0.6182

¹ Group A (completed pre-test, experiment and post-test)

² Group C (completed experiment and post-test)

The test done to determine the effect of the pre-test on the post-test (where the experiment was included) indicated that the pre-test had a negative effect on the outcome of the post-test results, but it was not significant ($p > 0.05$ when P-value is divided by 2) (Table 6.17, page 174).

TABLE 6.18 – Testing difference between the means of Group B¹ and Group D² for the post-test indicating the effect of pre-test on post-test without the experiment, assuming unequal variances

T-Tests			
Variable	DF	t Value	Pr > t
Technical skills	146	-2.20	0.0296
Roles	159	-0.21	0.8365
Soft skills	153	-1.12	0.2625
Subject content	164	-1.53	0.1289
Teaching methodology	154	-0.78	0.4379

¹ Group B (completed pre-test and post-test)

² Group D (completed post-test)

The test done to determine the effect of the pre-test on the post-test (without the experiment) indicated a positive difference in favour of group D where no pre-test was performed (Table 6.18). The difference in terms of the technical skills was significant ($p < 0.05$ when divided by 2). This should not have been. The learners in the groups were supposed to be similar and nothing differed between the two groups of learners except for the pre-test performed with group B. It again seems that the pre-test had a negative influence on post-test results.

During and after performing the post-test, learners, however, gave the impression that the experiment made them realise their shortcomings regarding the technical skills, roles of the accountant, soft skills and the subject content they have mastered. One explanation could therefore be that during the post-test they actually had a more realistic view on their cumulative knowledge and skills. If this is true, the pre-test/post-test results may not be valid at all.

6.3.2.4. The effect of the pre-test on the test results

The above assumption (paragraph 6.3.2.3, page 174) is substantiated by the following findings:

- 1) When ignoring the pre-test totally, significant differences are found.

TABLE 6.19 – Testing difference between the means of Group C¹ and Group D² for the post-test, assuming unequal variances

T-Tests			
Variable	DF	t Value	Pr > t
Technical skills	179	-2.27	0.0241
Roles	180	-0.55	0.5824
Soft skills	185	-2.13	0.0344
Subject content	174	-2.61	0.0098
Teaching methodology	184	-0.79	0.4314

¹ Group C (completed experiment and post-test)

² Group D (completed post-test)

When ignoring the pre-tests and only comparing the post-test results for the control groups C and D (Table 6.19) it is noted that the experiment had a negative effect on the outcome of the post-test for Technical skills ($p=0.0241$), Soft Skills ($p=0.0344$) and Subject Content ($p=0.0098$) and that this effect was significant ($p<0.05$ when divided by 2). The learners therefore gave a lower score on their cumulative technical skills, soft skills and subject content after the project was completed.

- 2) Questions 77 tot 79 were introduced in the questionnaire (annexure H, page 297) as a test for the results of the findings in questions 10-74. The results of questions 77 to 79 discussed in Table 6.20 below indicate that the learners reported that the experiment had a positive effect on all the areas. This does, however, not correlate with the pre-test/post-test results (Table 6.15, page 173 and Table 6.16, page 173).

TABLE 6.20 – Control questions on the effect of the Commercium™ project on technical skills, roles of the accountant and soft skills

No.	Question	Control test for questions.	Average out of 5	Most frequent selection (mode)
77	Participating in the project enhanced my technical competencies	10 to 15	3.624	4
78	Participating in the project broadened my view on the roles of the accountant	16 to 20	3.865	4
79	Participating in the project developed / enhanced my soft skills as stated in questions 21-28	21 to 28	3.638	4

From Table 6.20 it is evident that the learners experience a positive effect on their technical knowledge, roles of the accountant and their soft skills. It seems that the pre-test, post-test data thus cannot be used to proof any positive or negative effect the game may have had on the technical knowledge, roles, soft skills, subject content or feeling towards the teaching methodology. Questions 10 tot 74 of the questionnaire (annexure H , page 297) should thus be ignored.

6.3.2.5. Conclusion

The sample was representative of both genders (Table 6.6, page 163). The learners were generally Afrikaans speaking (Table 6.7, page 163). Furthermore the sample of learners was exceptional academic performers at school (Table 6.8, page 164) and although they came mostly from the North-West and Gauteng province the whole of South Africa was represented (Table 6.9, page 164). The learners were also generally of the opinion that they mastered the technical skills, roles that the accountant needs to fulfil, soft skills and the subject content to a large extent (Table 6.10 and Table 6.11, page 166).

From Table 6.12 (page 168) the following conclusions was drawn (page 169):

- Regarding technical knowledge and skills, the learners felt most competent in the field of analytical ability, logical argument and summary and least competent in

technical knowledge over various fields, being able to use technology and oral and written communication skills;

- Regarding the roles of the accountant, learners felt most competent regarding being a general manager and entrepreneur and least competent regarding being a sales person and market analyst;
- Regarding soft skills, learners felt that they have best obtained the skills of having high values, being able to adapt and personal attributes. The lowest score was on ethical issues and cultural and ethnic sensitivity.

From Table 6.13 (page 170) it seems that the following conclusions can be drawn from the subject content learners felt they have mastered at school:

- Regarding accounting basics it seems that all the topics were addressed well;
- It also seems that all elements of the financial statements were thoroughly addressed;
- Most entities were well addressed, with the most emphasis being on sole proprietors and partnerships and lesser emphasis on non-profit organisations; and
- The sundry topics received lower marks. The best score was obtained for the correction of errors and least mastered topics were internal controls and management accounting.

From Table 6.14 (page 171) it was evident that the teaching methodologies learners experienced up to the time they completed the questionnaire (as mentioned on page 172), mainly:

- Required some self study;
- Focused on the competencies required for the profession;
- Took into account the learners' background, home language etc.;
- Took into account the learners' previous knowledge and competencies; and
- Used multi-media and technology.

The lowest scores were obtained for:

- The lecturer being a facilitator;
- The methodology including various senses;
- The focus not being on the subject content;
- The presence of unstructured learning opportunities;
- Working in groups.

The above findings substantiate the criticism against traditional accounting education.

The t tests indicated that although it seems that the experiment had a mixed effect in some areas, none of these were significant changes (Table 6.16, page 173). The pre-test had an effect on the post-test results, although not significant (Table 6.17, page 174). The results of the pre-test, post-test comparison indicated unfortunately that there was a decrease in the level of technical skills, subject content and teaching methodology. The reason was investigated further.

It was concluded that questions 10 to 74 of the questionnaire (annexure H , page 297) should be ignored because:

- When ignoring the pre-tests and only comparing the post-test results for the control groups C and D (Table 6.19) it is noted that the experiment had a negative effect on the outcome of the post-test for Technical skills, Soft Skills and Subject Content and that this effect was significant. As the groups were similar in nature it seems that the lower ratings were as a result of the experiment giving the learners a more realistic view on their mastered skills and knowledge;
- The control questions did not correlate to the findings of the questions.

The effect of questions 10 to 74 was thus not analyzed further. The results of question 75 to 99 of the questionnaire (annexure H, page 297) are discussed in the next paragraphs.

6.4. EVALUATION OF THE GAME

Part E of the questionnaire (question 76 tot 99, appendix H, page 297) focuses on a separate evaluation of the board game and the assignment. This part of the questionnaire were only completed by the learners who were part of Groups A and C of the experimental design and had completed the experiment (144 learners in total). Questions 76 to 87 dealt with the effect of the board game on the learners' knowledge, skills etc. Questions 88 to 97 evaluated the learners' attitude towards the game and the assignment. The last two questions required the learners to name one positive and negative remark (question 98) of the project and to summarise the project in one word (question 99).

The results of the above are shown in Table 6.21 (page 181) and Table 6.22 (page 183), as well as graph 6.1 (page 182) to graph 6.6 (page 187)

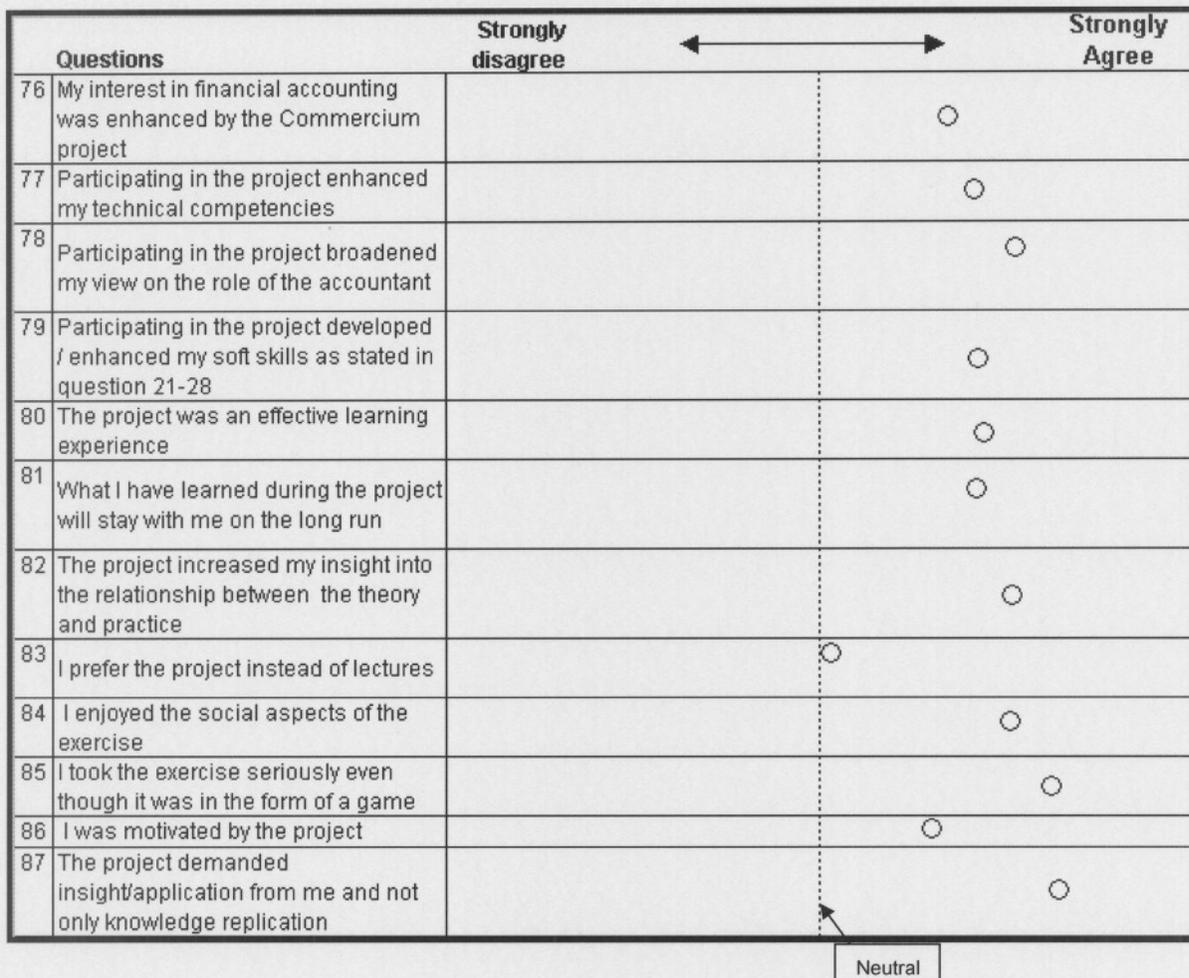
6.4.1. Effect of the board game and assignment

Questions 76 to 87 (annexure H, page 297) were evaluated on a 5 point Likert scale of strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). Table 6.21 (page 181) shows the score the project received for various questions. The results are disclosed in a more visual manner in Graph 6.1 (page 182).

TABLE 6.21 - Effect of the Commercio™ project, averages

Questions (76 to 87, annexure H, page 297)		Average (out of 5)	Most frequent selection (mode)	Standard deviation
76	My interest in financial accounting has been enhanced by the Commercio project	3.411	4	1.049
77	Participating in the project enhanced my technical competencies	3.624	4	0.882
78	Participating in the project broadened my view on the role of the accountant	3.865	4	0.863
79	Participating in the project developed / enhanced my soft skills as stated in questions 21-28	3.638	4	0.813
80	The project was an effective learning experience	3.652	4	1.028
81	What I have learned during the project will stay with me on the long run	3.604	4	0.997
82	The project increased my insight into the relationship between the theory and practice	3.837	4	0.878
83	I prefer the project instead of lectures	2.635	2	1.224
84	I enjoyed the social aspects of the exercise	3.821	4	0.976
85	I took the exercise seriously even though it was in the form of a game	4.113	4	0.820
86	I was motivated by the project	3.290	3	1.038
87	The project demanded insight/application from me and not only knowledge replication	4.135	4	0.760

GRAPH 6.1 - Effect of the Comercium™ project, plotted on scale



From Table 6.21 (page 181) and graph 6.1 (page 182) it seems that, in general, the learners felt that the project:

- Enhanced their interest in financial accounting (3.411 out of 5 or 68%);
- Enhanced their technical competencies (3.624 out of 5 or 72%);
- Broadened their view on the roles of the accountant (3.865 out of 5 or 77%);
- Enhanced their soft skills (3.638 out of 5 or 73%);
- Was an effective learning experience (3.652 out of 5 or 73%);
- Helped them to acquire knowledge and skills that will stay with them on the long run (3.604 out of 5 or 72%); and
- Increased their insight into the relationship between theory and practice (3.837 out of 5 or 77%).

It also seems that the learners enjoyed the social aspects of the project (3.821 out of 5 or 76%). The highest rated items were that they took the project seriously even though it was a game (4.113 out of 5 or 82%) and that the project demanded insight and application and not only knowledge replication (4.135 out of 5 or 83%). The learners also preferred the project to lectures (2.635 out of 5 or 53%).

Overall it thus seems that the board game and assignment was enjoyable on a social level while simultaneously increased their interest in financial accounting. The game also linked theory and practice. Lastly the game contributed to the enhancing their technical knowledge and skills, fulfilling the roles of the accountant, enhancing soft skills and mastering the subject content. They were also of the opinion that this knowledge would stay with them on the long run.

6.4.2. Attitude of the learners towards the project

As motivated in paragraph 6.2.3.1 (page 152) it was also decided to evaluate the learners' attitude towards the project. The results are indicated below in Table 6.22 and graph 6.2 (page 184).

TABLE 6.22 – Attitude towards the Commercium™ project

Question ¹	Description	Range	Mode (most frequent)	Average
88	Likeable/Unlikeable	1 (Positive) to 7 (Negative)	3	3.402878
89	Good/bad	1 (Positive) to 7 (Negative)	2	3.166667
90	Happy/Unhappy	1 (Positive) to 7 (Negative)	4	3.510949
91	Comfortable/Uncomfortable	1 (Positive) to 7 (Negative)	4	3.471014
92	Calm/Tense	1 (Positive) to 7 (Negative)	2	3.621429
93	Full/Empty	1 (Positive) to 7 (Negative)	4	3.285714
94	Natural/Artificial	1 (Positive) to 7 (Negative)	4	3.253623
95	Exciting/Dull	1 (Positive) to 7 (Negative)	3	3.185714
96	Fresh/Suffocation	1 (Positive) to 7 (Negative)	4	3.093525
97	Pleasant/Unpleasant	1 (Positive) to 7 (Negative)	3	3.421053

¹ Questionnaire, annexure H, page 297

GRAPH 6.2 – Attitude towards the Commercio™ project (average), plotted on scale

Question		Neutral	
88	<i>Unlikeable</i>	○	<i>Likeable</i>
89	<i>Bad</i>	○	<i>Good</i>
90	<i>Unhappy</i>	○	<i>Happy</i>
91	<i>Uncomfortable</i>	○	<i>Comfortable</i>
92	<i>Tense</i>	○	<i>Calm</i>
93	<i>Empty</i>	○	<i>Full</i>
94	<i>Artificial</i>	○	<i>Natural</i>
95	<i>Dull</i>	○	<i>Exciting</i>
96	<i>Suffocation</i>	○	<i>Fresh</i>
97	<i>Unpleasant</i>	○	<i>Pleasant</i>

* Items form Kay's Computer Attitude Measure as used by Noyes et al. (2005:238)

Q88-97 Questionnaire, annexure H, page 297

The dotted line (graph 6.2, above) indicates a neutral attitude. From Table 6.22 (page 183) and graph 6.2 it can be seen that the attitude towards the project was generally positive. The three attitudes that were identified from Table 6.22, page 183, as being the most positive, were that of *good*, *exciting* and *fresh*. This is important, as accounting is often portrayed as a *boring (dull)* subject. This also corresponds with the finding in question 76 (questionnaire, annexure H, page 297) that the project, including the game, increased the learners' interest in the subject (Table 6.21, page 181).

From Table 6.22 (page 183) three attitudes measured namely *unhappy*, *uncomfortable* and *tense* were slightly on the negative side. This indicates that the project might have required learners to move outside their comfort zones.

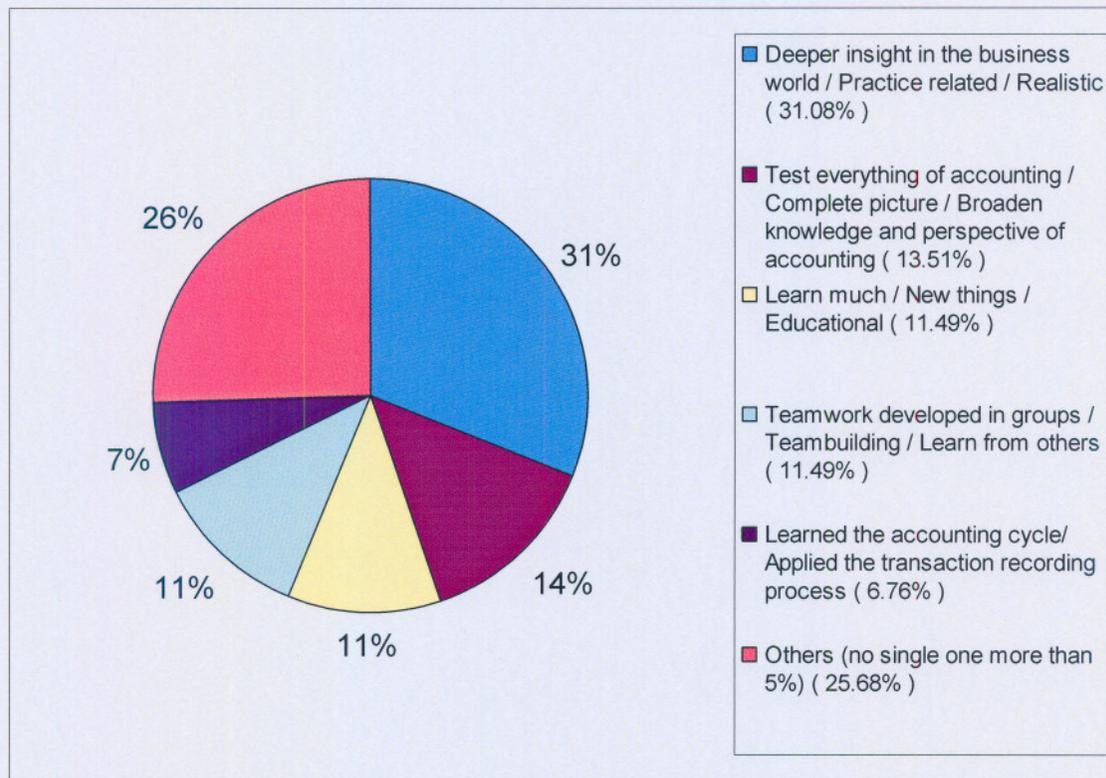
The learners thus experienced a general positive attitude towards the project because of the excitement and freshness associated with the game. The project also required the learners to move outside their comfort zones. This is positive in the light of previous literature indicating that traditional accounting education did not change much over the past years.

6.4.3. Positive and negative remarks

In the next section remarks learners wrote about the project are analyzed. Question 98 and 99 of the questionnaire (annexure H, page 297) required the learners to name one positive and one negative remark of the project as well as to summarise the project in one word.

The results of the positive remarks (refer to question 98) are summarised in graph 6.3 (page 185) and the negative remarks (refer to question 98) are summarised in graph 6.4 (page 186).

GRAPH 6.3 – Positive remarks on the Commercium™ project

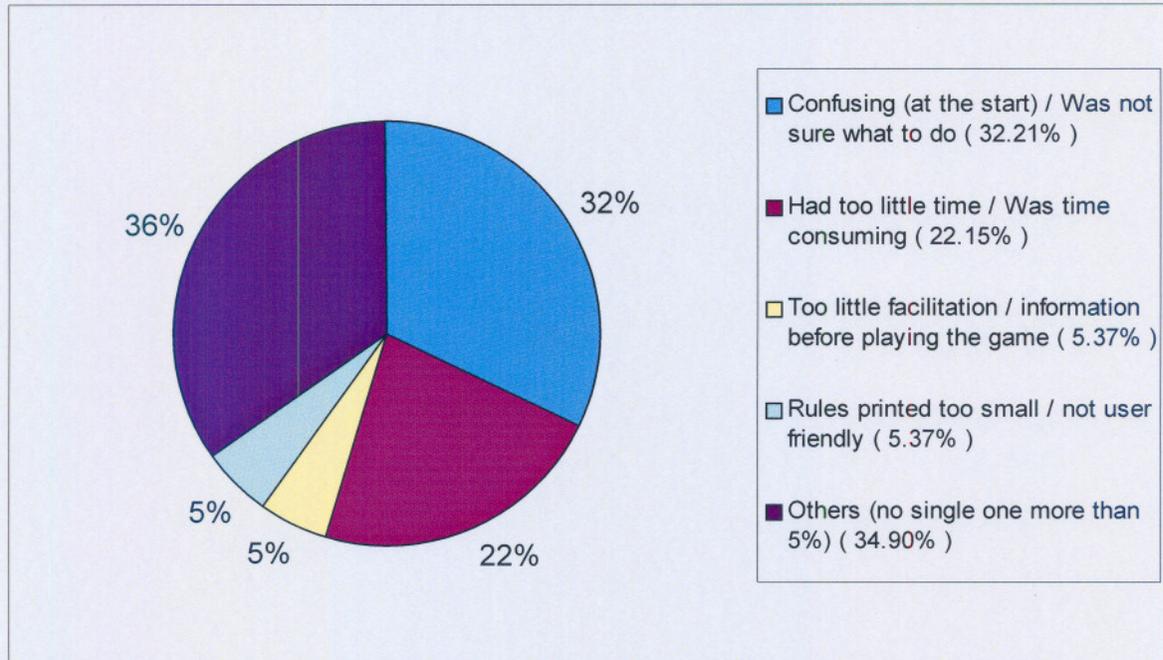


** Percentages on the chart have been rounded. Total % adds up to more than 100% due to this fact.*

The largest part of the positive remarks was on the fact the project (game) resembles the business world in a realistic and practical manner (31.08%). From graph 6.3 the next grouping of remarks (11%-14%) all had to do with the project testing a broad range of accounting topics. The learners learned much and they had the opportunity to practice and

developed teambuilding skills. As all of these were especially considered in developing the game, these were encouraging findings.

GRAPH 6.4 – Negative remarks on the Comercium™ project



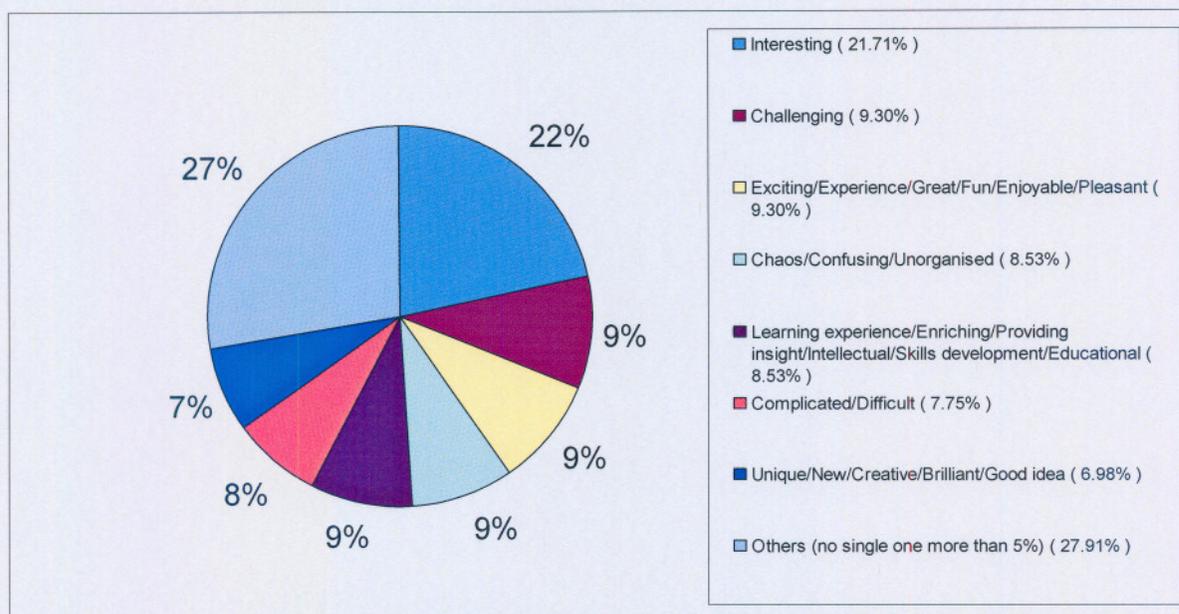
* Percentages on the chart have been rounded. Percentage of "others" adjusted to add up to 100%.

A major negative remark was that the game was confusing at the start (32.21%). This is also echoed in the remark that they would have wanted more facilitation before the game started (5.37%). This could be expected as the learners were not familiar with the game and that it was done at a difficult time of the semester. It was the first time ever the game was played and the game was also received late from the printers. This could also explain the fact that the learners felt that they had too little time to complete the project (22.15%). The fact that it was also experienced as being time consuming (22.15%) may reflect on the comparison to the amount of assignments normally given to accounting learners and time it takes for them to complete it, as this was an assignment that needed to be completed over a few days. The matter of the rules being printed too small (5.37%) would also need attention during future projects.

6.4.4. One word summary

The last question (question 99, annexure H, page 297) required the learners to summarise the project in one word. The results of the one word summary are given in graph 6.5 and 6.6 below.

GRAPH 6.5 – One word summary of the Commercium™ project



* Percentages on the chart have been rounded.

A summary of the words used to describe the project in one word is provided in graph 6.5 above. The first seven had an occurrence of more than 5%. These were:

- | | |
|--|----------|
| 1. Interesting | - 21.71% |
| 2. Challenging | - 9.30% |
| 3. Exciting/Experience/Great/Fun/Enjoyable/Pleasant | - 9.30% |
| 4. Chaos/Confusing/Unorganised | - 8.53% |
| 5. Learning experience/Enriching/Providing insight/Intellectual/Skills development/Educational | - 8.53% |
| 6. Complicated/Difficult | - 7.75% |
| 7. Unique/New/Creative/Brilliant/Good idea | - 6.98% |

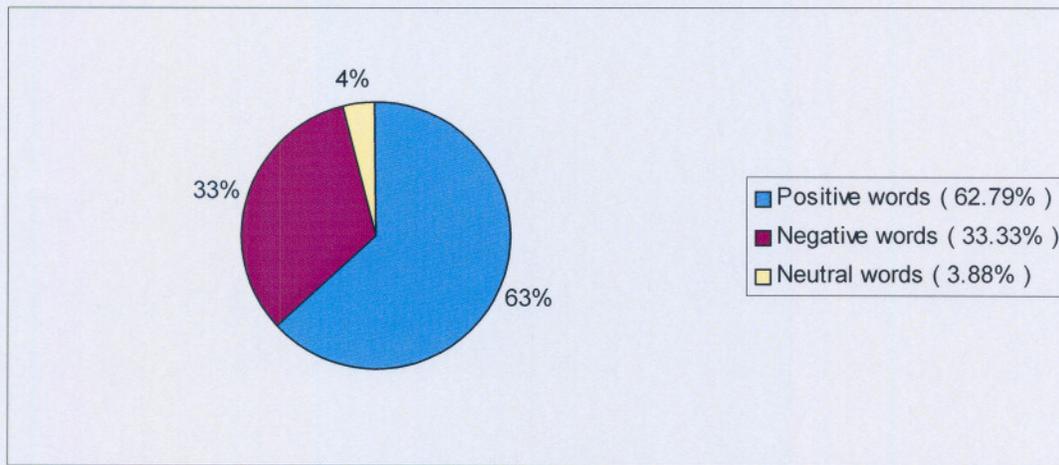
From graph 6.5 and the list above it can be seen that most of the words provided to summarise the project were positive (5 of the top 7). The one word that stood out is the word

“interesting” (21.71%). Overall it seems that the project was interesting (21.71%), challenging (9.3%), exciting and fun (9.3%). The matter of confusion (8.53%) and difficulty (7.75%) identified in the negative remarks (Table 6.4, page 161) also featured again.

Graph 6.6 below gives an overall summary of the positive and negative words used to summarise the project.

GRAPH 6.6 – One word summary of the Commercium™ project – Positive vs Negative

* Percentages on the chart have been rounded.



Positive words included remarks such as interesting, challenging, a good learning experience, exciting, unique, enriching and fun. Negative words include remarks such as confusing, difficult, chaos, tiring and unnecessary. Neutral words are the words that could not be divided into positive or negative and include average, neutral, okay, reasonable, accounting cycle. From graph 6.6 it can be seen that a vast majority had an overall positive summary of the project.

6.5. SUMMARY

In this chapter the build-up to and results of the empirical research were discussed. It could be concluded that the questionnaire used was valid (paragraph 6.3.1, page 159). The results of the pre-test/post-test comparison were, however, inconclusive (paragraph 6.3.2.4, page 175). A possible reason for this may be the fact that participants overestimated their knowledge and skills during the pre-test and that by participating in the project they obtained

a more realistic view.

The requirements of the proposed board game were identified in paragraph 5.4.1, page 131. With regard to assisting lecturers/facilitators to become effective lecturers/facilitators the game increased the interest into the subject and was seen as an effective learning experience (Table 6.21, page 181). The learners were further motivated by the project (Table 6.21, page 181), one of the requirements of being an effective lecturer/facilitator. A negative matter may be that the learners found the game confusing at the start (graph 6.4, page 186).

The learners found application between the theory and practice (Table 6.21, page 181), indicating assistance to the learners via the board game. The learners also enjoyed the social aspect of the project (Table 6.21, page 181). The overall positive attitude toward the project also indicates that the learners' different learning styles and needs were met in general (Table 6.22, page 183).

Regarding the milieu it is evident from Table 6.22, page 183 that the learners were emotionally involved in the project. This is also highlighted by the fact that they took the project seriously although it was a game (Table 6.21, page 181).

From Table 6.21 (page 181) the learners felt that the project:

- Enhanced their technical competencies;
- Broadened their view in the roles of the accountant;
- Enhanced their soft skills;

The project thus also addressed the content of the syllabus in an effective manner.

The project was also found an effective teaching methodology as:

- The learners experience feelings of *unhappy*, *uncomfortable* and *tense*, probably because of the unstructured learning environment (paragraph 6.4.2, page 183);
- It incorporates experience from practice to make learning relevant and interesting (paragraph 6.4.1, page 180);
- It focuses on the competencies required from the learners and enhanced these competencies (paragraph 6.4.1, page 180); and
- It gives learners the opportunity to work with and learn from their peers (Table 6.21, page 181);

Is was thus eminent from the last section (E) of the questionnaire (annexure , H, page 297) that the project had a positive effect on the knowledge and skills of the participants (paragraph 6.4.1, page 180). It enhanced their interest in financial accounting and their technical competencies, broadened their view on the roles of the accountant, enhanced their soft skills, was an effective learning experience, helped them to acquire knowledge and skills that will stay with them on the long run and increased their insight in the relationship between theory and practice. The learners also enjoyed the social aspects of the project. They further took the project seriously although it was a game and felt that the project demanded insight and application and not only knowledge replication.

The learners also had a general positive attitude towards the project (paragraph 6.4.2, page 183). They found it to be especially *good, exciting* and *fresh*. On the negative side it was, however, also perceived to make them *unhappy, uncomfortable* and *tense*.

The learners were also required to write down positive and negative remarks about the game. The results were recorded in paragraph 6.4.3, page 185. The largest part of the positive remarks was on the fact that the project (game) resembles the business world in a realistic and practical manner. The major negative remarks were that the game was initially confusing.

Lastly the learners were required to summarise the game in one word (paragraph 6.4.4, page 187). From the one-word summaries it seems that the project was overwhelmingly (two thirds of the remarks) perceived as positive. The one word that stood out is "interesting", which occurred in 22% of the instances (graph 6.5, page 187).

Although it was unfortunate that the data on the game's influence on the individual technical knowledge and skills, the roles of the accountant, soft skills, subject content and teaching methodology was inconclusive the remainder of the data indicates a very positive effect the game had on learners' learning experience.

This chapter addressed the evaluation of the board game and the overall project. In the next chapter the research findings will be summarised and recommendations made.

CHAPTER 7 - CONCLUSIONS AND RECOMMENDATIONS

7.1. INTRODUCTION

The study started with Albrecht and Sack's (2000) quote from the now twenty year old Bedford Report, which stated that the content of professional accounting education has remained substantially unchanged over the past 50 years and is generally inadequate for the future accounting professional. The study indicated that much research has been done since the Bedford committee, but in 2006 it seems that the warnings outlined in that report still apply.

In building up to the matter of addressing the above and other criticisms, the previous chapters addressed the elements of the teaching-learning environment and in that sense addressed primary objectives 1 to 5. This chapter is mostly aimed at addressing research objective 6 (paragraph 1.4, page 8), to make conclusions and recommendations through which the criticisms can be overcome.

This chapter thus focuses on:

- Emphasising the motivation for the study;
- Highlighting the findings regarding the objectives of the study and draw conclusions;
- Proving the hypotheses and the reaching of the primary objective;
- Making recommendations;
- Discussing future research opportunities; and
- Giving a final summary.

This chapter will thus provide the conclusions and recommendations on the study and also indicate the contribution that this study has made to the accounting education field.

7.2. MOTIVATION FOR THE STUDY

Five elements were identified in chapter one (paragraph 1.1, page 1) in the build-up to the problem statement that (according to the researcher) summarises the need for research into the practical application of good teaching methodologies in introductory accounting. An

overview on the main elements identified in paragraph 1.1 starting on page 1 of the study is provided below.

7.2.1. An ever-changing corporate world

In paragraph 1.1.1, page 1, it was noted that globalisation and changes in the corporate world post new challenges in the sphere of higher education (Pretorius, 2001:74). Higher education must prepare learners to address issues such as international relations, trade, national policies, the environment, technology, health care, human rights and urban and rural policies. The accounting education environment must adapt to these changes and must keep up with even more changes in the future.

7.2.2. Educating a new generation

Paragraph 1.1.2, page 2, focused on the new generation of learners. The current generation who enrolls at tertiary institutions is often referred to as the Millennials, Generation Y (born between 1981 and 1999) or even generation Z (Anderson, 2004). Educators dare not ignore the demographics of the generation of learners in front of them. These generations change and what was best practice ten years ago may not be the case anymore. Each generation seems to have their own preferences and needs, and educators must be aware of and take these into account during their educational activities.

7.2.3. A lack of skills among learners

In paragraph 1.1.3, page 3, the lack of skills among learners was explored. It was noted that the changing business environment demands changes in the skills required from new accountants entering the workplace. To equip learners with the technical knowledge and skills is clearly not sufficient anymore. Much more is required of them, and the onus rests on the accounting educator to address this or at least guide the learner to obtain the necessary skills.

7.2.4. Educators resisting change in accounting education

Paragraph 1.1.4, page 5 focused on the attitude of lecturers/facilitators towards the calls for changes in accounting education. It was found that accounting education has come under increased scrutiny for not delivering the type of entrants demanded by the accounting profession. It was also found that educators resist change. It thus seems that accounting educators themselves may well be one of the biggest threats to the accounting profession.

7.2.5. Continuing professional education (CPE)

Paragraph 1.1.5, page 6 noted the need for continuing professional education. To have a competitive advantage in organisations and be able to perform with the required competency, managers and accountants must keep up to date with the most recent developments in a broad field of expertise. These may exceed their own study field. It was also noted that professional associations around the world have placed substantial emphasis on continuing professional education.

The above five paragraphs provide an overview of the turmoil the average accounting lecturer and learner faces. The Public Accountants and Auditors Board of South Africa's report on the future of accounting education in South Africa (FAESA) (PAAB, 1994) already addressed many of the above-mentioned matters in 1994. Still, the research unit of the South African Institute of Chartered Accountants (SAICA) again highlighted the urgency of the matter in 2001. Several of the previous statements are echoed in a report published by the Institute (Dempsey & Stegman, 2001). From the literature, even in 2006, the call for changes in accounting education still echoes around the globe and Albrecht and Sack's statement (2000:1) that accounting education may not survive the future becomes more of a reality with every passing year.

The above forms the motivation for the study, and was used in formulating the problem statement (paragraph 1.2, page 7) set out in the next paragraph.

7.2.6. Problem statement

The problem states that the **demands** on both educators and learners in the accounting field are constantly increasing. Although much research has been done in the field of improved methodology, subject content, and needed skills, responses from both the business world and the profession indicate that this research has not found much **practical application**.

7.3. OBJECTIVES

It was thus necessary to develop an improved methodology for accounting education, addressing the shortcomings and criticism in a practical manner, and keeping the whole teaching-learning environment in mind. In addressing the problem statement the following objectives were set in paragraph 1.4, page 8:

The *primary objective* of this study is to:

Develop a board game and support material that will assist learners and lecturers in obtaining more of the required soft skills and technical knowledge required by the contemporary accounting environment in an effective and fun way. This should increase the interest in the subject of accounting and therefore advocate life-long learning in the subject field. In line with this, the board game and support material will be evaluated and recommendations on the use thereof will also be made.

The *specific objectives* required to achieve the primary objective are to:

- 1) Identify and discuss the variables involved in the teaching-learning environment that may influence effective learning (see chapter 2);
- 2) Identify the requirements on professional accountants regarding the basic technical knowledge and skills, generally acknowledged and required internationally (see chapter 3);
- 3) Identify existing teaching methodologies from literature which address these required skills (see chapter 4);
- 4) Develop a board game as part of the improved methodology, that could assist in more effective learning, incorporating the skill requirements and variables of the teaching-learning environment (see chapter 5);

- 5) Evaluate the board game to be used for the teaching of introductory accounting (see chapter 6); and
- 6) Come to conclusions and to make recommendations on enhancing the teaching of introductory accounting by using the board game (see chapter 7).

The next paragraphs provide the conclusions on the different research objectives.

7.4. CONCLUSIONS

7.4.1. Conclusions regarding the variables involved in the teaching-learning environment

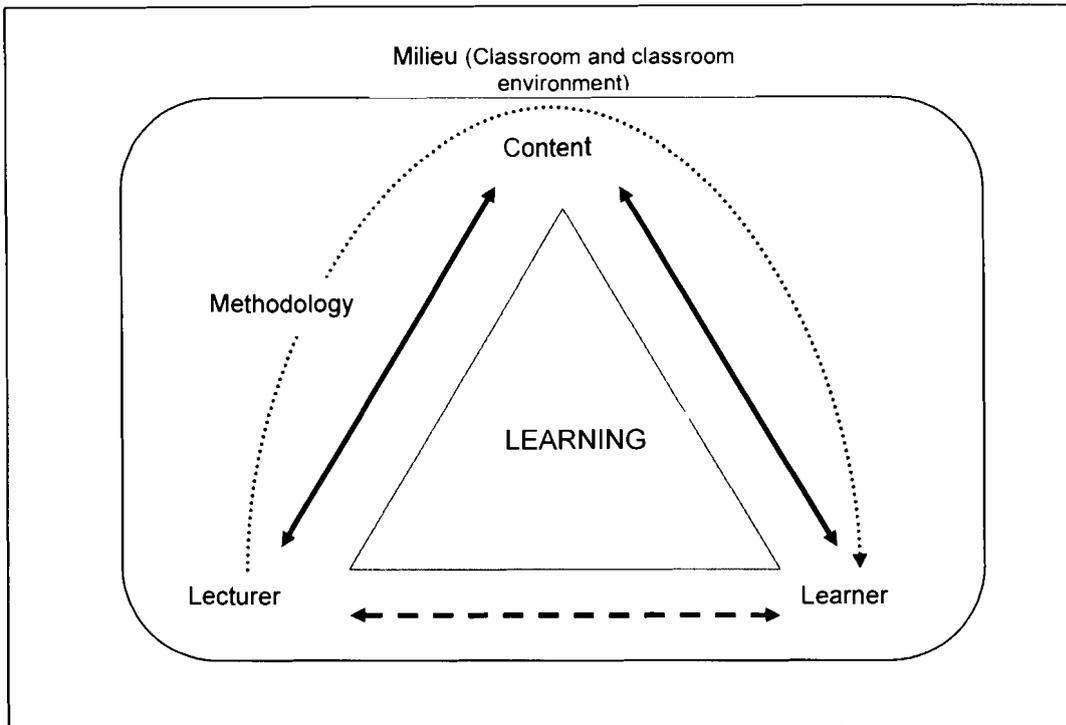
Specific objective one (paragraph 1.4, page 8) was to discuss the variables involved in the learning process that may influence effective learning. It was addressed in chapter 2 and parts of chapters 3 to 4 (page 13 to 114).

From the literature study in chapter 2, the five elements of the teaching-learning environment were identified as:

- The learner;
- The lecturer/facilitator;
- The milieu;
- The subject content; and
- The methodology.

The following diagram was prepared to outline the elements (variables) of the teaching-learning environment:

DIAGRAM 7.1 - The overall teaching-learning environment



(Source: Own research, Diagram 2.1, page 14)

Regarding the relationship between the elements it can be concluded that:

- The lecturer/facilitator, learner and content are set in a specific environment and are subsequently influenced thereby.
- For learning to take place there must be a lecturer/facilitator, a learner and subject content irrespective of the environment (atmosphere, institution).
- The interaction between lecturer/facilitator and learner is primarily via the content (the lecturer/facilitator teaching the content and the learner learning it).
- There is also a non-content based relationship (expectations, perceptions and motivation) between the lecturer/facilitator and learning that influences the learning process.
- The interaction between learner and lecturer/facilitator via the content (curriculum, course, and program) takes place by means of the methodology (which includes the teaching methodology and assessment methods).

A summary on the conclusions on each of the elements is subsequently provided.

7.4.1.1. The lecturer/facilitator

The lecturer/facilitator is one of the elements or variables of the teaching-learning environment. The lecturer/facilitator stands in a direct relationship (is the link) between the learner, methodology and subject content and therefore has a big responsibility in the teaching-learning environment.

Regarding the requirements to be considered an effective lecturer/facilitator (see paragraph 2.3, page 15) it can be concluded that the following apply:

- *Learner assessments* (including fairness, quality of assignments, quality and frequency of feedback);
- *Outside the classroom factors* (such as preparation, research, availability to learners);
- The learners' perception of the *classroom atmosphere* (the lecturers'/facilitators' concern and respect towards the learners);
- *Curriculum design* (the quality of supplementary material and teaching instruments, the lecturers' knowledge of the subject field and workload);
- *General lecturer/facilitator characteristics* (enthusiasm, motivation of learners, personality characteristics and leadership skills of the lecturer);
- *Presentation of lectures* (involvement of learners, teaching methods); and
- *Moral and behavioural guidance* provided by the lecturer.

As the lecturer has significant control over the teaching-learning environment, he/she has a great deal of responsibility in assisting the learners in the learning process.

7.4.1.2. The learner

An accounting learner was described as follows (see paragraph 2.4, page 37):

- They prefer to process information through engagement in *physical activity* or discussion;
- They prefer to *combine abstract conceptualisation* and *active experimentation* in applying theory in practice;
- They prefer to *perceive information through sights, sounds, smell, physical sensation or feeling and value*.
- They perceive external information most effectively through *pictures, diagrams, graphs, demonstration*;

- They progress towards *understanding in continual steps*;
- They also focus on *objective decision-making* and *seek logic*;
- Moreover they are *unable to form holistic perspectives* and are *concerned with detail*;
- They further *focus on the external world*;
- They *prefer interacting and personal contact*; and
- Finally they lead an *organised and orderly* life.

Although not predominant, it was pointed out that biographical matters and learners' previous knowledge and skills could also play a role in their performance.

From the above it can be concluded that accounting learners would prefer teaching which incorporates physical activity, various senses, is well organised and would allow interaction between learners. If these matters are considered, learners should perform better.

7.4.1.3. Milieu

It is concluded that a distinction could be made between a classroom as a physical place and the classroom atmosphere (paragraph 2.5, page 44). Although the lecturer/facilitator may have little influence over the physical place, he or she could have a major influence on the atmosphere and subsequently indeed influence the classroom environment. The lecturer can thus also influence the teaching-learning environment via the atmosphere.

7.4.2. Conclusion on the content of the teaching-learning environment for professional accountants

Specific objective 2 (paragraph 1.4, page 8) was to identify the requirements regarding the basic technical knowledge and skills generally acknowledged and required internationally, from professional accountants. These were addressed in chapter 3 (from page 50).

Regarding the subject content it can be concluded that:

- The content is the primary element of the overall teaching-learning environment. All the elements in the teaching-learning environment collaborate in order for the learner to learn the content or obtain the skills. In order to develop a teaching tool, it would

therefore be necessary to identify the content requirements of an introductory accounting syllabus.

- Content is, however, not static. It requires continuous reflection and evaluation. Diagram 3.1 (page 51) was compiled to show steps in the continuous evaluation of the accounting curriculum.
- The qualities or skills identified in paragraph 3.3, page 61 can broadly be divided into three categories, namely:
 1. Technical and other competencies - necessary for the day to day performance of tasks;
 2. Roles the accountant, as manager and adviser, should be able to perform; and
 3. Soft skills - necessary to perform tasks in a unique value added and holistic fashion.

It is necessary to address these three categories in order to develop accountants with the skills to adhere to the requirements set out by the industry.

7.4.2.1. Technical and other competencies

These competencies include technical and other competencies such as *critical problem solving skills* and *oral and written communication skills* (paragraph 3.3, page 61). Other skills highlighted were *effective learning skills, being able to use technology, technical competencies over various subject fields and analytical abilities*.

7.4.2.2. Roles of the accountant

The professional accountant should primarily also be able to perform the roles of *being entrepreneurs* and *general managers* (paragraph 3.3, page 61). Moreover, roles such as being a *global player, market analyst* and *salesperson* were also mentioned often.

7.4.2.3. Soft skills

Soft skills such as *team-building skills* and *personal attributes* were most important (paragraph 3.3, page 61). Other skills noted frequently include *interpersonal skills*,

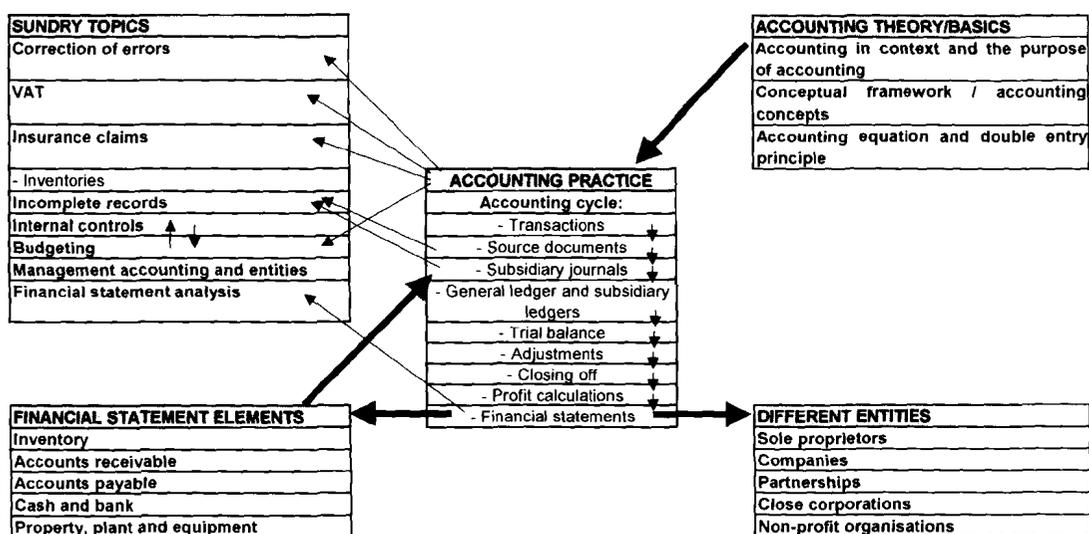
contributing to society, ethic considerations, being able to adapt, having high values and cultural and ethnic sensitivity.

7.4.2.4. Technical content

On the technical content side (Table 3.4, page 69) it is concluded that the *accounting basics, general financial statement elements, various general accounting entities and sundry matters* such as managerial accounting issues, financial management issues, internal control issues and practical accounting aspects such as taxes, errors and incomplete records should be addressed in introductory accounting (paragraph 3.4, page 68).

The content of introductory accounting and the relationships between the topics (as summarised from literature) can be diagrammatically explained as follows (see Diagram 3.2):

DIAGRAM 7.2 Subject content of introductory accounting



(Source: Diagram 3.2, page 75)

7.4.3. Conclusions on teaching methodologies

Specific objective three (paragraph 1.4, page 8) was to identify existing teaching methodologies addressing the previously mentioned (paragraph 7.4.2, page 198) required skills from literature. This objective was addressed in chapter 4 (starting from page 78).

Accounting education methodology can be defined as the methods, rules, practices, principles and procedures for analysing and evaluating accounting. These eventually regulate accounting teaching.

There are various different methodologies. When comparing these, the different teaching methodologies applicable to the teaching of accounting can be summarised under the following headings:

- Self-paced modular methods:
 1. Media-tutorial and mastery learning;
 2. Personalised Systems of Instruction (PSI); and
 3. Contract learning;

- Experience-based methods:
 1. Case study method approach;
 2. Problem-based-learning (PBL);
 3. Simulations;
 4. Role-play; and
 5. Field experience;
- Competency/outcome-based methods;
- Cooperative learning:
 1. Peer teaching;
 2. Group work/Group teaching;
- Interactive learning;
- Using teaching instruments in teaching methods:
 1. Multi-media; and
 2. Computers and technology;

It can be concluded that one singular method may not be the answer to address criticism against traditional accounting education. The above-mentioned methodologies can, however, be used in combination.

7.4.4. Conclusions regarding the development of the board game

Specific objective 4 (paragraph 1.4, page 8) was to develop a board game as part of an improved methodology. The idea was that this board game could assist in more effective learning, incorporating most of the skill requirements, variables of learning and methodologies. Objective 4 was addressed in chapter 5 (starting from page 116).

7.4.4.1. Development

In Chapter 5 (paragraph 5.2.1, page 118) it was concluded from the literature that games might well be one of the solutions to address the criticism against traditional accounting education because:

- Learners become *actively* involved;
- Learners learn from *personal experience*;
- Learners learn *cooperatively*;
- Learners are more *motivated*;
- Learners receive *instant feedback*; and
- The *lecturer/facilitator* becomes a *facilitator*.

There is, however, criticism against the use of games. The researcher is of the opinion that the advantages far outweigh these.

It seemed that various researchers who incorporated games in teaching accounting supported the above view. Monopoly™, a game that was often used in the past, has various limitations and it was thus concluded that a new board game had to be developed using the literature on the overall teaching/learning environment gathered in chapters 2 to 4.

7.4.4.2. Requirements for the proposed board game

In line with the findings of the literature study it was concluded that the board game should (paragraph 5.4.1, page 131):

- Help the lecturer/facilitator to be seen as an effective lecturer/facilitator;
- Help the learner to learn effectively;
- Assist the lecturer/facilitator to set a milieu that would complement learning;
- Address the technical content, generally incorporated in introductory accounting courses;
- Address the development of soft skills; and
- Comply with the elements of an effective and innovative teaching methodology.

It can be said that the above need not only be applicable to the board game, but also to any teaching aid that is developed for accounting education.

The above requirements were incorporated into the board game and supporting material. A detailed discussion was given in paragraph 5.4.2, page 135. As the game and other material would incorporate the majority of requirements of an effective teaching-learning environment for accounting, it was concluded that this could result in a positive learning experience.

7.4.5. Conclusions on the evaluation of the board game

Specific objective 5 (paragraph 1.4, page 8) was to perform an evaluation of the developed board game and the support material. The empirical evaluation of the board game and project were discussed in chapter 6, starting on page 146.

7.4.5.1. Method of research

It was decided that the research results would take the form of numbers, tables and graphs and therefore quantitative data collection was selected. It was also decided that experimental research would partly be used to evaluate the board game, while a survey would be the most effective data collection technique for this study. After consultation with the Statistical Consultation Services of the North-West University (Potchefstroom campus) it was decided that the more sophisticated Solomon four-group design could be applied, as the class group was large enough.

The purpose of the questionnaire was determined by referring to the specific objectives to be met by the empirical research. Due to the difficulty that can be encountered in coding and analysing the results of open-ended questions, it was decided to use closed-ended questions. These questions would provide multiple solutions (Likert and Semantic differential scales) and require the respondents to select the alternative that best applies to them.

Before the questionnaire was distributed to the sample of learners, a pilot study was conducted, to evaluate the validity of the questionnaire. Statistical Consultation Service of the North-West University (Potchefstroom campus) analyzed the data by using the computer software SAS (SAS Institute Inc., 2003-2005). The results on the construct validity of the pilot study (by means of factor analyses), as well as the reliability measured by the Cronbach-alpha coefficient, are set out in Table 6.2, page 156.

The population was identified as accounting learners in their first year, and more specifically the one (and only) RECP 111 (mainly CA, CIMA, Forensic programme) learners and the learners of the two REKP 111 (mainly SAIPA programme learners) classes at the North-West University (Potchefstroom campus).

Random sampling was used for this study. The official alphabetical class lists were obtained from the administrative system of the university. With the use of Excel, each of the classes was divided randomly into four groups in line with the experimental design (paragraph 6.2.2.1, page 149).

Groups A and B (each of the RECP 111 and the REKP 121 classes) (being experimental group 1)(Group A of the experimental design) and control group 1 (Group B of the experimental design) were asked to complete the pre-test. Groups A (experimental group 1 of the design) and C (experimental group 2) were required to complete the assignment (experiment) within one week. After a week the post-test was performed on all four groups (Groups A to D) as per experimental design.

7.4.5.2. Survey results

a) Validity

The following conclusions can be drawn on the validity and reliability of the survey results:

- From the Table 6.3 (page 160) and Table 6.4 (page 161) it can be seen that the questionnaire was reliable, as the Alpha coefficient were in all instances higher than 0.70;
- Very few items also had a low correlation with the total and the average intercorrelations were larger than 0.15;
- The fact that in some sections the variances were explained by more than one variable was not a significant problem since these sections consisted of many variables;
- Very few questions also had a low communality;
- Overall, there thus exists construct validity.

All the groups eventually performed the project (assignment). No learner was thus

disadvantaged by being in a control group.

b) Analysis of results

The following conclusions can be drawn on the demographics of the learners involved in the survey:

- The sample was gender representative (Table 6.6, page 163);
- The learners were generally Afrikaans speaking (Table 6.7, page 163);
- The sample of learners was exceptional academic performers at school (Table 6.8, page 164);
- Although they came mostly from the North-West and Gauteng provinces the whole of South Africa was represented (Table 6.9, page 164).
- The learners were also generally of the opinion that they mastered the technical skills, roles that the accountant must fulfil, soft skills and the subject content to a large extent (Table 6.10 and Table 6.11, page 166).

From Table 6.12 (page 168) the following conclusions can be drawn:

- Regarding technical knowledge and skills, the learners felt most competent in the field of analytical ability, logical argument and summary and least competent in technical knowledge over various fields, being able to use technology and oral and written communication skills;
- Regarding the roles of the accountant, learners felt most competent about being a general manager and entrepreneur and least competent about being a sales person and market analyst;
- Regarding soft skills, learners felt that they have best obtained the skills of having high values, being able to adapt and personal attributes. The lowest score was on ethical issues and cultural and ethnic sensitivity.

From Table 6.13 (Table 170) it seems that the following conclusions can be drawn from the subject content learners felt they have mastered at school:

- Regarding accounting basics it seems that all the topics were well addressed;
- It also seems that all elements of the financial statements were thoroughly addressed;
- Most entities were well addressed, with the most emphasis being on sole proprietors and partnerships and less emphasis on non-profit organisations;

- The sundry topics received lower marks. The best score was obtained for the correction of errors and least mastered topics are internal controls and management accounting.

From Table 6.14 (page 171) it is evident that the teaching methodologies that the learners were exposed to at school mainly:

- Required some self study;
- Focused on the competencies required for the profession;
- Took into account the learners' background, home language etc.;
- Took into account the learners' previous knowledge and competencies;
- Made use of multi-media and technology.

The teaching methodologies did not address the following elements noted to be a part of an effective teaching methodology, sufficiently:

- The lecturer being a facilitator;
- The methodology including various senses;
- The focus was not on the subject content;
- There were unstructured learning opportunities; and
- Working in groups.

Regarding the "t test" it can be concluded that:

- The "t tests" indicated that although it seems that the experiment had a mixed effect in some areas, none of these were significant changes (Table 6.16, page 173).
- The pre-test had an effect on the post-test results, although not significant (Table 6.17, page 174). The results of the pre-test/post-test comparison indicated unfortunately that there was a decrease in the level of technical skills, subject content and teaching methodology. The reason was investigated.
- It was concluded that questions 10 to 74 of the questionnaire (annexure H , page 297) should be ignored because:
 1. When ignoring the pre-tests and only comparing the post-test results for the control groups C and D (Table 6.19) it is noted that the experiment had a negative effect on the outcome of the post-test for technical skills, soft skills and subject content and that this effect was significant. This can, however, not be possible as the cumulative knowledge should not decrease within one week;
 2. The control questions did not correlate with the findings of the questions.

The effect of questions 10 to 76 (annexure H , page 297) were thus not analyzed further.

From the last section (E) of the questionnaire (annexure H, page 297) it was eminent that the project:

- Had a positive effect on the participants' knowledge and skills (paragraph 6.4.1, page 180);
- It enhanced the learners' interest in financial accounting, It also enhanced their technical competencies, broadened their view on the roles of the accountant, enhanced their soft skills, was an effective learning experience, helped them to acquire knowledge and skills that will stay with them in the long run and increased their insight into the relationship between theory and practice. The learners also enjoyed the social aspects of the project. They further took the project seriously although it was a game and felt that the project demanded insight and application and not only knowledge replication; and
- The learners also had a general positive attitude towards the project (paragraph 6.4.2, page 183). They found it to be especially *good, exciting and fresh*. On the negative side it was, however, also perceived to make them *unhappy, uncomfortable and tense*.

The learners were also required to write down positive and negative remarks about the game. The results were recorded in paragraph 6.4.3, page 185. The largest part of the positive remarks was on the fact that the project (game) resembles the business world in a realistic and practical manner. The major negative remarks were that the game was initially confusing.

Lastly, the learners were required to summarise the game in one word (paragraph 6.4.4, page 187). From the one-word summaries it seems that the project was perceived overwhelmingly positive (two thirds of the remarks). The one word that stood out was "interesting", which occurred in 22% of the instances (graph 6.5, page 187).

7.4.5.3. Implication of the board game for the teaching-learning environment of introductory accounting

The requirements of the proposed board game were identified in paragraph 5.4.1, page 131. From the survey findings it can be concluded that:

- Regarding the lecturer as a variable, the board game:
 1. Assists the *lecturer/facilitator* to be seen as an effective lecturer/facilitator. It also increased the interest into the subject and was seen as an effective learning experience (Table 6.21, page 181); and
 2. Further motivated learners (Table 6.21, page 181), one of the requirements of an effective lecturer/facilitator.
- Regarding the learner as a variable, the board game:
 1. Assists the *learner*, as they found application between theory and practice (Table 6.21, page 181);
 2. Helps learners to enjoy the social aspect of the project (Table 6.21, page 181); and
 3. Provides for an overall positive attitude towards the project, also indicating that the learners' different learning styles and needs were met in general (Table 6.22, page 183).
- Regarding the *milieu*, it is evident from Table 6.22, page 183, that the learners were emotionally involved in the project. This is also highlighted by the fact that they took the project seriously although it was a game (Table 6.21, page 181);
- Regarding the subject content from Table 6.21 (page 181) the learners felt that the project:
 1. Enhanced their technical competencies;
 2. Broadened their view on the roles of the accountant;
 3. Enhanced their soft skills; and
 4. Addressed the *content* of the syllabus in an effective manner.
- The project was also found an effective *teaching methodology* as:
 1. The learners experienced feelings of *unhappiness, uncomfot* and *tension* probably because of the unstructured learning environment (paragraph 6.4.2, page 183);
 2. It incorporated experience from practice to make learning relevant and interesting (paragraph 6.4.1, page 180);

3. It focused on the competencies required of learners and enhanced these competencies (paragraph 6.4.1, page 180);
4. It gave learners the opportunity to work with and learn from their peers (Table 6.21, page 181);

Although it was unfortunate that the data on the influence of the game on the individual technical knowledge and skills, the roles of the accountant, soft skills, subject content and teaching methodology was inconclusive, the remainder of the data indicated that the game had a very positive effect on the learners' learning experience.

It can thus be concluded that *Commercium*TM addresses all the elements of the teaching-learning environment.

7.4.6. Conclusion on the first part of the primary objective

In reaching the first part of the primary objective, namely to *develop a board game and support material that will assist learners and lecturers in obtaining more of the required soft skills and technical knowledge required by the contemporary accounting environment in an effective and fun way*, the following specific objectives were reached as addressed in paragraph 7.4.1 to 7.4.5, page 195 to 204:

- The variables involved in the learning process that may influence effective learning were discussed;
- The requirements regarding the basic technical knowledge and skills, generally acknowledged and required from professional accountants across the globe were identified;
- Existing teaching methodologies addressing these required skills were identified in literature; and
- A board game was developed and evaluated as part of an improved teaching methodology;

From Table 6.21 (page 181) it seems that the game indeed increased the technical knowledge and soft skills levels of the participants. It was furthermore noted that it did increase their interest in the subject and that the knowledge and skills was obtained for the long term. The learners also perceive it as being an effective learning experience.

From Table 6.22 (page 183) and graph 6.5 (page 187) it was also noted that the learners had a positive attitude toward the board game and did indeed perceive it to be fun.

It could thus be said that the primary objective of the study was reached.

7.5. PROVING THE HYPOTHESIS

The hypothesis tested in this study was as follows:

Learning accounting and the various required soft skills should be more effective¹ in a creative² environment that simulates reality³.

¹ After the evaluation it can be noted that this part of the hypothesis is proven correct because (Table 6.21, page 181)(a mark out of 5, converted to percentages):

- Learners' interest in financial accounting was enhanced (68%);
- Participating in the project enhanced their technical competencies (72%);
- Participating in the project broadened their view on the role of the accountant (77%);
- Participating in the project developed / enhanced their soft skills (73%);
- The project was perceived as an effective learning experience (73%);
- What they have learned during the project would stay with them over the long term (72%);
- The project increased their insight into the relationship between theory and practice (77%);
- They were motivated by the project (66%); and
- The project demanded insight/application from learners and not only knowledge replication (83%).

² It seemed that the game (project) was indeed perceived as being creative. In Table 6.22, page 183 it was described as being "fresh". In the one word summary on the project the word "interesting" appeared most (graph 6.5, page 187). Other words used included: "unique", "good idea", "creative", "entrepreneurial", "new".

³ From the evaluation it also seems that the project did indeed simulate reality, as this was the most frequent positive remark (31%) noted in graph 6.3, page 185. Lastly Table 6.21

(page 181) also indicated that the project increased the learners' link between theory and practice.

The elements of the hypothesis were thus present in the study. From the matters described above, the hypothesis is thus proven to be correct.

7.6. RECOMMENDATIONS

The last part of the primary objective, namely to make recommendations on an improved methodology and more specifically the use of the board game, is addressed by specific objective 6 (paragraph 1.4, page 8). The next few paragraphs state recommendations based on the conclusions.

7.6.1. Recommendations regarding the variables involved in the teaching-learning environment (specific objective 1)

The teaching learning environment consists of several elements. Lecturers/facilitators should consider *all* the elements involved in the teaching-learning environment, namely:

- The learners;
- The lecturer/facilitator;
- The milieu;
- The subject content; and
- The teaching methodology.

Regarding the requirements to be seen as an effective lecturer/facilitator, the following can be recommended:

- Looking at learner assessments, instructors should:
 1. Be fair;
 2. Provide good quality assignments;
 3. Have a positive approach towards the results; and
 4. Provide good, quality and frequent feedback.
- Outside the classroom the main factors lecturers/facilitators should take into account are:
 1. Being prepared and organised;

2. Being involved in continuous self-growth;
 3. Being involved in research; and
 4. Being available for the learners.
- On the learners' perception of the classroom atmosphere, lecturers'/facilitators' should show:
 1. Concern; and
 2. Respect (an overall friendliness) towards the learners.
 - When looking into the process of curriculum design and content, the lecturer/facilitator should definitely:
 1. Take into account the desire towards useful supplementary materials and teaching instruments;
 2. Have knowledge of the subject field; and
 3. Not overload learners.
 - Regarding the matter of general lecturer/facilitator characteristics, lecturers/facilitators must:
 1. Be enthusiastic;
 2. Motivate learners;
 3. Have well perceived personality characteristics; and
 4. Display leadership skills.
 - In presenting lectures, three major factors need consideration, namely
 1. Learners should be involved;
 2. There should be effective teaching methods that are stimulating and interesting;
 3. Lastly it seems that lecturers must also provide learners with moral and behavioural guidance.

The lecturer should take the responsibility for creating an effective learning environment. The lecturer should also continuously evaluate this environment.

Regarding the element of the **learner**, teaching instruments should help the learner in the following manner:

- It should take into account the learners' approach to learning (paragraph 2.4.1, page 38), namely that the learner:
 1. Wants to be physically active and have active experience in applying theory in practice;
 2. Prefers to perceive information through sights, sounds, smell, physical sensation or feeling and value;

3. Progresses towards understanding in continual steps focusing on objective decision making and seeking logic;
 4. Needs to form a holistic perspective; and
 5. Focuses on the outside world and wants interaction and personal contact.
- It should acknowledge learners' biographical differences (paragraph 2.4.2, page 42); and
 - It should take into account learners' previous skills and knowledge (paragraph 2.4.3, page 42).

When considering the **milieu**, teaching instruments should assist the lecturer/facilitator in setting a milieu that would complement learning (paragraph 2.5.3, page 48) by:

- Involving learners emotionally; and
- Highlighting the necessity for presenting the project in a neat, well lighted, well conditioned room with appropriate decor.

By considering all the elements of the teaching-learning environment, lecturers/facilitators will have a holistic view of the teaching-learning process and would be able to address the criticism against traditional accounting education as well as the requirements of the profession in a more satisfactory manner.

7.6.2. Recommendations regarding the content of the teaching-learning environment for professional accountants (specific objective 2)

As identified in chapter 3 (paragraph 3.4, page 68) it can be recommended that an introductory accounting course, and any teaching instrument used in it, should address the following generally agreed upon subject content:

- Accounting basics:
 1. Place accounting in context and show the purpose of accounting;
 2. Introduce the conceptual framework (accounting concepts);
 3. Demonstrate the accounting equation and double entry principle;
 4. Address the elements of the accounting cycle (transactions, source documents, subsidiary journals, general ledger and subsidiary ledgers, trial balance, adjustments, closing off, profit calculations and financial statements);
- Financial statement elements:

1. Incorporate transactions regarding inventory, accounts receivable, accounts payable, cash and bank and property, plant and equipment;
- Different entities:
 1. Allow the learners to prepare transactions for sole proprietors, companies, partnerships, close corporations and non-profit organisations;
 - Sundry topics:
 1. Incorporate matters of correction of errors, VAT, insurance claims of inventories, financial statement analysis, incomplete records, internal controls, budgeting, management accounting and manufacturing entities.

As identified in chapter 3 (paragraph 3.3, page 61) the lecturer/facilitator must also consider developing the following soft skills among accounting learners:

- Regarding technical and other competencies, he/she assists in the development of:
 1. Critical problem solving skills;
 2. Oral and written communication skills;
 3. Effective learning skills;
 4. The ability to use technology;
 5. Technical competencies over various subject fields; and
 6. Analytical abilities.
- Regarding the roles accountants must fulfil, introduce the learner to be an:
 1. Entrepreneur;
 2. General manager;
 3. Global player;
 4. Market analyst; and
 5. Salesperson.
- Regarding other general soft skills, provide opportunity for developing:
 1. Team-building skills;
 2. Personal attributes;
 3. Interpersonal skills;
 4. Skills for contributing to society;
 5. Ethic considerations;
 6. Adaptive skills;
 7. High values; and
 8. Cultural and ethnic sensitivity.

When taking the above into account the learner will be assisted to master the necessary skills and competencies required of entry-level accountants. It will also ensure that a sound foundation is set for gaining the high level of technical knowledge that professional accountants have become known for.

7.6.3. Recommendation regarding the teaching methodologies (specific objective 3)

Various innovative teaching methodologies were identified from literature. The conclusion was made that combining elements from these methodologies could result in more effective teaching of introductory accounting.

From the findings on innovative teaching methods (paragraph 4.12, page 114) it can be recommended that the following should be addressed, irrespective of the teaching method used:

- The method should be *learner-centred*;
- It should incorporate a more *unstructured* learning environment;
- It should deal with a *broad spectrum of content*;
- The *lecturers/facilitators should be facilitators*;
- Learners should be active inquirers;
- *Learners should cooperate towards lifelong learning*;
- It should to some degree allow *self-study* at the learner's own pace and let the learner accept responsibility for his/her own studies;
- It should incorporate *experience from practice* to make learning relevant and interesting;
- It should focus on the *competencies* required of learners;
- It should give learners the opportunity to work with and *learn from their peers*;
- It should *actively* involve the learners in the learning process; and
- It should incorporate appropriate *multi-media and technology*.

Important of the methodology is that it should enhance retention and application. In order to address the specific needs of accounting learners it should furthermore incorporate various senses and apply theory into practice.

The above findings can be used by accounting educators to evaluate the teaching methodologies they use. It could further be used to identify elements that are currently being neglected by the lecturer/facilitator, in order to incorporate it for effective learning.

7.6.4. Recommendations regarding the development of the board game (specific objective 4)

The recommendations made on these elements can be used in developing teaching instruments. In developing teaching material it can be recommended that the material should:

- Be well thought through assignments and well organised;
- Be useful, stimulating and interesting;
- Actively involve learners in the learning process;
- Include the requirements of the teaching-learning environment; and
- Consider the mechanics, dynamics and aesthetics in the development process.

7.6.5. Recommendations on the evaluation of the board game (specific objective 5)

It was proven in the study (paragraph 7.4.5, page 204) that the *Commercium*TM board game is a teaching instrument that can address various aspects of the criticism against traditional accounting education. The project could even keep more learners in the accounting field, as it is perceived as "interesting" (Table 6.21, page 181 and graph 6.5, page 187).

By implementing the project and using the board game in introductory accounting it would indeed address all the elements of the teaching-learning environment and enhance the technical and other skills required from accountants in a practical and effective manner.

The game can thus be used with great success in introductory accounting.

To address the disappointing results of the pre-test/post-test evaluation it would be necessary to redesign the questions to eliminate the effect of the pre-test on the experiment.

The negative remarks shown in graph 6.4 (page 186) should be addressed to improve the impact of the game. These are:

- The game being confusing (initially) / Was not sure what to do;
- Learners having too little time / The game was time consuming;
- Learners receiving too little facilitation / information before playing the game; and
- Rules being printed too small / not user friendly.

These shortcomings could be addressed in the following manner:

- Making an introductory DVD to give the learners a feeling for the game before they play it for the first time. This DVD could provide more facilitation on the content and working of the game;
- More time could be allocated to play the game. However, if learners are better prepared before the game start, this might not be necessary. Due to time constraints during the research learners were also given a short time to complete the assignment. This could also be increased by a few days;
- The rules could also be printed larger and may even be printed in colour to facilitate recognition of the spaces on the board. This would, however, have a large cost implication. This issue could, however, also be addressed in the facilitation DVD;
- The learners could also be required to play the game more than once. It could even be possible to let them play the first time without doing the assignment, just to familiarise themselves with the game.

7.7. FURTHER RESEARCH POSSIBILITIES AND IMPROVEMENTS

Various further research possibilities exist. The first would be to evaluate the possibilities of incorporating the game into other subjects such as:

- **Auditing** – having auditing learners perform small audits of the records completed by the accounting learners (maybe even performing some of the assessment);
- **Management accounting** – as the game incorporate manufacturing and inventories, various possibilities exist in this field;
- **Taxation** – as the game include various taxes, it could possibly also have some tax applications; and
- **Higher levels of financial accounting** – As the game include foreign exchange, stock markets etc., it could perhaps also be used in higher technical levels of accounting such as financial instruments and foreign exchange.

The game was evaluated at a predominantly Afrikaans speaking university, where all the learners had a previous exposure to accounting. A further set of future research possibilities could be to test and evaluate the game:

- At multicultural universities;
- Among previous disadvantaged learners;
- At schools;
- Among learners without prior accounting exposure; and
- Internationally.

A last possible research possibility foreseen is to again undertake a pre-test/post-test evaluation, but to redesign the questions to eliminate the effect of the pre-test on the experiment.

7.8. FINAL CONCLUDING REMARKS

There are various factors that accounting educators should consider in the profession of accounting education:

- A continuously changing business environment;
- A new generation of learners studying at universities;
- A lack of skills among learners;
- Accounting educators resisting changes in accounting education; and
- The requirements for continuing professional education.

From the literature it seems that much research has been done in the field of accounting education, but that it did not find practical application in the classroom. It is necessary to think creatively in order to find practical solutions for the challenges facing lecturers and facilitators.

In the study the following elements of the teaching-learning environment were identified:

- The learners;
- The lecturer/facilitator;
- The milieu;
- The subject content (including technical content and competencies); and the
- Teaching methodology.

Each of these elements were investigated during the research in order to identify factors that could be included in an improved teaching plan. As part of the plan (methodology), a board game ("Commercium™") was developed. This game meets the requirements of the teaching-learning environment.

The board game was evaluated by the first year learners at the Potchefstroom Campus of the North-West University. The evaluation proved to be very positive. The learners indicated that their technical skills, understanding of the roles performed by an accountant, soft skills as well as knowledge of the subject content improved as a result of the project. What should especially be noted is their positive reaction due to the fact that the game simulated the business environment and linked theory to practice. They also enjoyed the social and group work aspects of the assignment. The learners further had a general positive attitude towards the game. The highest evaluated positive experiences were described as *good*, *exciting* and *fresh*. On the negative side words such as *unhappy*, *uncomfortable* and *tense* were experienced. The learners were thus required to move outside their comfort zones.

Learners were also required to summarise the project in one word. Two thirds of the remarks were positive, with the number one remark being that the game is "interesting". The largest negative comment was that the project was initially confusing. This could, however, be addressed in future projects.

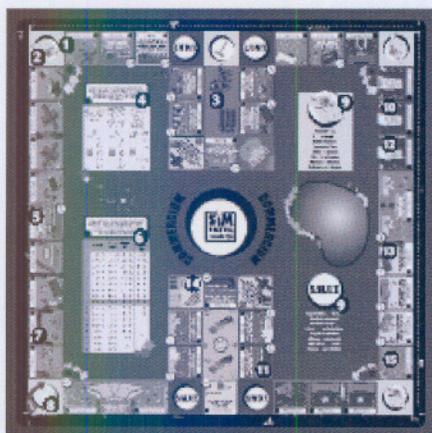
In conclusion it can thus be said the Commercium™ game meets the requirements of an effective teaching-learning environment by providing an effective teaching methodology. Lecturers now have an empirically proven effective teaching tool to use in introductory accounting, based on research of the requirements of the teaching-learning environment.

ANNEXURES

ANNEXURE A – BOARD

The board determines the overall content of the game. The players move around the board with play pieces and have various possibilities of transactions and actions depending on the space that they land on.

The board consists of the following areas:



1. Playing area (blocks)
2. Economic News blocks
3. Manufacturing area
4. Interest/inflation and exchange rate indicator
5. Retail blocks
6. Stock exchange indicating share prices
7. Residential area
8. Bank (start)
9. Place for putting Economic News and Opportunities and threats cards
10. Opportunity and threats blocks
11. Investment property blocks
12. Other payments
13. Import/Export blocks
14. Vehicle block
15. Business investment blocks

(Source: Own research)

An example of the board is attached.

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ANNEXURE B – CARDS

Different cards are used when playing the game:

- Some of the cards (opportunity and threat cards) are picked up when landing on the corresponding space on the board. The player must then fulfil the requirements of the cards. These cards include:
 1. Opportunity and threat cards;
 2. Economic news cards.
- Cards for record keeping. These cards include:
 1. Investment cards
 2. Property cards
 3. Debt cards

These cards are attached.

Opportunity and threat cards



Opportunities and Threats

Amathuba nobungozi

Amathuba nezoyikiso

Geleenthede en Bedreigings

Menyetla le Ditšhitišo

Ditšhono le matsosetsi

Minkarhi na ntshikelelo

Khonadzeo na zwithithisi

There is a fire at your offices. No business can take place (miss a turn). If you have paid insurance, use the ticket to collect C\$50 000 for loss of profits.

S.M.A.L.T.

★

Liyasha ihhovisi lakho. Angeke likwazi ukuqhubeka ibhizinisi (udlule indlela echezukayo). Uma uwukhokhelile umshuwalense, sebenzisa iihikithi ukuyolanda ama-C\$-50 000 ngokulahlakelwa yinzuzo.

S.M.A.L.T.

★

Kukho umlilo eofisini yakho. Akukho shishini linokwenzeka (uphosa ukujikelela). Ukuba uyihlawule i-inshorensi, sebenzisa iihikithi ukuqokelela ama-C\$50 000 ngenxa yokulahlakela kwenzuzo.

S.M.A.L.T.

★

'n Brand breek uit by jou kantore. Besigheid staan stil (mis 'n beurt). Indien jy versekering betaal het, gebruik die kaartjie en ontvang C\$50 000 vir verlies aan winste.

S.M.A.L.T.

★

O koppelwa go fa pono ya gago ya dikanyo tsa ekonomi. Kwebo ya gago e amogela magareng ga C\$1 000 le C\$5 000 go ya ka gore baraloki ba bangwe ba nagana eng ka pego ya gago.

S.M.A.L.T.

★

O koptwa go neelana ka lethakore la gago la ditseletsopele tsa ikonomi. Kgwebo ya gago e bona magareng ga C\$1 000 le C\$5 000, go ya le gore batshameki ba bangwe ba nagana eng ka pegelo ya gago.

S.M.A.L.T.

★

U tomberwa ku nyika mavonelo hi ku ehleketeriwa ka swa ikhonomi. Bindzu ra wena ri kuma exikarhi ka C\$1 000 ku fika ka C\$5 000 hi ku ya hi leswi vatlangi lavan'wana va ehleketera swona hi xiviko xa wena.

S.M.A.L.T.

★

Vhu humbelwa u nea mahumbulwa avho nga ha nyimele ine ya nga vha hone ya ikonomi. Bindu lavho li wana vhuikuti ha C\$1 000 na C\$5 000, zwi tshi bva kha zwine vhanwe vhatambi vha dzhisa zwone muvhigo wavho.

S.M.A.L.T.

★

Go na le mollo ofising ya gago. Ga gona kgwebo ye e ka diragalago (hloka sebak). Ge e le gore o lefela tse inshorensi, somisa thekete go koleka C\$50 000 ya tathelago ya dipolelo.

S.M.A.L.T.

★

Go a kwa diofising tsa gago. Ga go na kgwebo e e ka tswelang pele (o lolwa ke motshameki). Fa o duetse inshorensi, dirisa thekete go tsaya C\$50 000 ya tathelago ya dipolelo.

S.M.A.L.T.

★

Ku na ndzilo etihofisini ta wena. A ku na bindzu leri nga ta va kona (lahleketeriwa hi mbuyelo). Loko u hakerile ndzinda-khomo, tirmaisa thikithi ku kuma C\$50 000 ya ku lahleketeriwa hi bindzuriso.

S.M.A.L.T.

★

Hu na mulilo ofisini dzavho. Ngauralo, hu nga si vha na zwa vhubinduzi (vha a plukwa nga luta lwa mutambo). Huno arali vho badela mashelani a ndindakhombo, kha vha shumise thikithi yawho uri vha kone u dzhia C\$50 000 ya ndozwo ya phuroffiti.

S.M.A.L.T.

★

If you donate C\$5 000 to the local old-age home, you may throw the dice again.

S.M.A.L.T.

★

Uma unikelela ngama-C\$ 5 000 kumuzi wabadala, ungaphinda tuthi uphose idayisi.

S.M.A.L.T.

★

Ukuba uphisa nge-C\$5 000 kwikhaya labadala lengingqi, ungaphosa idayisi kwakhona.

S.M.A.L.T.

★

Indien jy C\$5 000 aan die plaaslike tehuis vir bejaardes stenk, kan jy die dobbelsteen weer gool.

S.M.A.L.T.

★

You are asked to give your view of economic prospects. Your business receives between C\$1 000 and C\$5 000, depending on what the other players think of your report.

S.M.A.L.T.

★

Uyacelwa ukunikeza umbono wakho ngekusas lomnotho. Ibhizinisi lakho lithola phakathi kwe-C\$1 000 ne-C\$5 000, kuye ngokuthi abanye ababambe iqhaza bawubuka kanjani umbiko wakho.

S.M.A.L.T.

★

Uyacelwa ukuvelisa imbono yakho ngamathuba ooposho. Ishishini lakho lifumana phakathi kwe-C\$1 000 ne-C\$5 000, ngokuxhomekeko ukuba abanye abadlali bacinga ntoni ngengxelo yakho.

S.M.A.L.T.

★

Jy word gevra om jou mening oor ekonomiese vooruitsigte te gee. Jou onderneming ontvang tussen C\$1 000 en C\$5 000, afhangelend van wat die ander spelers van jou verslag dink.

S.M.A.L.T.

★

Ge o neelana ka C\$5 000 go legae la bats'ofadi, o ka foša tease gape.

S.M.A.L.T.

★

Fa o aba C\$5 000 go legae la bats'ofe la mo gaem o ka latihela taese gape.

S.M.A.L.T.

★

Loko wo nyikelela C\$5 000 eka kaya ro hlaysisa vadyuhari, u nga ha hoxa dayizi nakambe.

S.M.A.L.T.

★

Arali who lambedza C\$5 000 kha mudi wa vhaaluwa, vha a fendelwa u posa daisi hafhu.

S.M.A.L.T.

★

Make a donation of C\$10 000 to any deserving player.

S.W.A.L.I

★

Yenza unikelo oyi- C\$10 000 kumdlal ofanelele.

S.W.A.L.I

★

Yenza isipho se-C\$10 000 kumdlal nawuphi ofaneleleloyo.

S.W.A.L.I

★

Maak 'n donasie van C\$10 000 aan enige verdienstelike speler.

S.W.A.L.I

★

O na le sebaka se go tsena kgwebisanong le mmapadi yo mongwe go isa ntle dišweletšwa tše 5 ka C\$10 000 e tee go feta theko ya mmaraka ya bjale. O swanetše go boledišana dipeelano tša kgwebisano le mmapadi yo mongwe.

S.W.A.L.I

★

O na le tšhono ya go tsenela dišwaraganelo le motshameki yo mongwe go romelantle go fitlha 5 wa dikuno ka C\$10 000 e le nngwe go fela tihwahlwa ya ga jaana ya mebaraka. O tshwanetse go buisanela melawana ya dišwaraganelo le motshameki yo mongwe.

S.W.A.L.I

★

U na nkarhi wo nghana eka xinghana na mutlangi un'wana ku xavisela matiko ya le handlo ku fika ka 5 wa swikumwa hi C\$10 000 tša xin'we ku thula nxavo wa makete wa nkarhi wa sweswi. U fanele ku tlwulavulela swipimelo swa xinghana na mutlangi lewun'wana.

S.W.A.L.I

★

Vha na tšharitši kana khonadzeo ya u didzhenisa kha mutingati na munwe mutambi kha malugana na u lunda zwibeledzwa zwine zwa swika zwifanana (5) nga tšhelede ina ya vha ntha nga C\$10 000 musi ho sedzwa mutengo wa makete une wa vha hote zwa zwino. Vha tea uri vha ite nyambedzano na mushumisani navho nga ha mlilayo ya tshumisano iyo.

S.W.A.L.I

★

Dira mpho ya C\$10 000 go mmapadi yo mongwe le yo mongwe yoo a swanetšego.

S.W.A.L.I

★

Dira kabo ya C\$10 000 go motshameki mongwe yo e mo tshwanetšeng.

S.W.A.L.I

★

Nyikelela nyiko ya C\$10 000 eka mutlangi un'wana na un'wana la faneleke.

S.W.A.L.I

★

Kha vha lambedze C\$10 000 kha mutambi munwe na munwe ano zwo tea uri a wane ndambedzo iyo.

S.W.A.L.I

★

You are offered up to 5 products that were stolen from a competitor. You may buy them for C\$5 000 each from the bank. If you accept the offer, take the products from any other player. He/she receives no compensation.

S.W.A.L.I

★

Ukhangiselwa ngemikhizho efinyelele kwemi-5 entšontšhwe kokuhudeiwana naye. Ungayithenga nga-C\$5 000 umunye abhangane. Uma uwamukelela umkhangiso, wuthathe kunomayimipi umdlali umkhizho. Yena akatholisinxephezelo.

S.W.A.L.I

★

Unikwa ukuya kutsho kwimveliso ezi-5 ezibiwe kumntu okhuphisana naye. Ungazithenga nganye nge-C\$5 000 kwibhanki. Ukuba uyawamkela umnikelo, thatha limveliso nakowuphi na omnye umdlali. Akakuntani mbuyekezo.

S.W.A.L.I

★

Jy word tot 5 produkte aangebied wat van 'n mededinger gesteel is. Jy kan dit van die bank koop teen C\$5 000 elk. Indien jy die aanbod aanvaar, neem die produkte van enige ander speler. Hy/sy ontvang geen vergoeding nie.

S.W.A.L.I

★

You have the opportunity to enter into a partnership with another player to export up to 5 products at C\$10 000 each more than the current market price. You have to negotiate the terms of the partnership with the other player.

S.W.A.L.I

★

Unethuba lokungena kubulingani nomdlali ukuze uthumele ngaphandle kwezwe imikhizho efinyelele kweyisi-5 ngemali eyi-C\$10 000 umkhizho umunye okungaphezulu kwamalani akhona njengamanje ezimakethe.

S.W.A.L.I

★

Unethuba lokungena kubulingane nomnye umdlali ukuthumele ngaphandle ukuya kutsho kwimveliso ezi-5 nge-C\$10 000 nganye ngaphezulu kwexabiso lemali ke langoku. Kufuneka uthethathethane ngemimiselo yobulingane nomdlali omnye.

S.W.A.L.I

★

Jy het die geleentheid om in vennootskap met 'n ander speler tot 5 produkte uit te voer teen C\$10 000 elk meer as die markprys. Jy moet met die ander speler onderhandel oor die voorwaardes van die vennootskap.

S.W.A.L.I

★

O fiva dišweletšwa tše 5 tšeo di bago di utšwitswe go tšwa go mophadišani. O ka di reka go tšwa pankeng ka C\$ 5 000 e tee. Ge o dumela tšhišinyo ye, tšea dišweletšwa go tšwa go mmapadi.

S.W.A.L.I

★

O neelwa go fitlha ka dikuno tše 5 tše di neng di utšwitswe go tšwa kwa mogaisanong. O ka di reka ka C\$5 000 e le nngwe go tšwa kwa bankeng. Fa o amogela neelano eo, tsaya dikuno go tšwa go motshameki mongwe. Ga a bone tuelo epe.

S.W.A.L.I

★

U nyikiwa swikumwa swo fika 5 leswi a swi yivivile eka mukizani. U nga ha swi xava hi C\$5 000 ha xin'we ebangini. Loko u pfumelilana na leswi, teka swikumwa eka mutlangi un'wana na un'wana. Yena a nga kumi na ku nlišwa.

S.W.A.L.I

★

Vha khou newa zwibeledzwa zwine zwa swika zwifanana (5) zwo tšwihaho u buva kha munwe ane vha tšwedzane naye. Vha khou rengiselwa zwone nga tšhithihi C\$5 000 tšhithihi tšazwo. Araji vha tanganezwa netshezo iyo, kha vha dzhie zwibeledzwa kha munwe wa vhatambi. Mutambi onoyo ha tei u lilišwa nga tšhithu.

S.W.A.L.I

★

SMART ★
 One of your businesses has polluted the environment. You are fined C\$10 000. This draws attention to environmental conservation, and Vast Exploration's share price falls by 2 levels.

SMART ★
 Elinye lamabizisini akho lingcolise imvelo. Uhlawuliswe i-C\$10 000. Lokhu sekugqamisa ukongwa kwemvelo bese inani lamashiya akwa Vast Exploration lehla ngamazinga ama-2.

SMART ★
 Elinye lamashishini akho lingcolise imekobume. Uhlawulwa i-C\$10 000. Oku kutsalela umdla kulondolozo lwamekobume, yaye izabiso lesabelo se-Vast Exploration lehla ngemigangatho emi-2.

SMART ★
 Die omgewing is deur een van jou besighede besoedel. Jy word met C\$10 000 beboet. Dit vestig die aandag op omgewingsbewaring en Vast Exploration se aandaelprys daal met 2 vlakke.

SMART ★
 Ye nngwe ya dikgwebo tsa gago e tshiafraditise tikologo. O lefiswa C\$10 000. Se se goga mahlo a patalelo ya tikologo gomme theko ya disere tsa Dinyakisiko tse Kgolo di theoga ka dinitha tse 2.

SMART ★
 E nngwe ya dikgwebo tsa gago e kgoifhetse tikologo. O nwa kothao ya C\$10 000. Se se tsibosa tsinomarelo ya tikologo, mme thwatlwa ya šere ya Vast Exploration e ya tlase ka maemo a 2.

SMART ★
 Rin'wana ra bindzu ra wena ri tyakisile mbanu. U bohwa C\$10 000. Leswi swi tisa ku vilela eka vahlayisi bya mbanu, naswona nxevo wa nkaveilo wa Vulaivisi Lebyikulu wu ya ehansi hi tšivhelela tsa 2.

SMART ★
 Linwe ma bindu avho lo tshikathadza mupo. Ngauralo, vho lainwa C\$10 000. Hezwi zwo itisa uri hu vha na muhuvho u bva kha vha ndondolamupo. Zwithu izwo zwo sia zwi khou wisa mutengo wa mukovhe wa "Vast Exploration" nga levele mbili

SMART ★
 Floods damage some of your stock. Return 50% of your raw material and products to the bank and receive C\$5 000 per item if you have already paid insurance.

SMART ★
 Izikhukhula zimosha ingxenye yesitokwe sakho. Buyisela emuva ama-50% ezinto zakho eziyimvelo nemikhiziqo ukubuyisela ebhange bese tholaama-C\$5 000 into ngsinyine uma kade sewuwukhokheille umshuwalense.

SMART ★
 Iimpuphuma zonakalise isitokho sakho esithile. Buyisela ama-50% esiveliso sakho sendalo neemveliso ebhankini za uzuzo i-C\$5 000 nganto nganye ukuba sele uyihlawulile i-inshorensi.

SMART ★
 Vloed beskadig van jou voorraad. Gee 50% van jou grondstof en produkte terug aan die bank. Ontvang C\$5 000 per item indien jy al versekering betaal het.

SMART ★
 Meetselula a senya tse dingwe tsa ditoto tsa gago. Busetsa 50% ya materiale wa gago wo o sa songwago panheng gomme o amogele C\$5 000 go selo se sengwe le se sengwe se o šetsego o se lefetše go inšorensense.

SMART ★
 Morwalela o senya leruo lengwe la gago. Busetsa 50% ya diretla tsa gago le dikuno kwa bankeng mme o amogele C\$5 000 ka mlilana fa o setse o duetse inšorensense.

SMART ★
 ... yi onha xitoko xin'wana xa swona. Vuyisela 50% wa nchumu wu mbisi na swikumiwa eka bangi naswona u kuma C\$5 000 hi nchumu loke se a wu hakerile ndzinda-khombo.

SMART ★
 Midalo ya tshinya tshinwe tsa ha zwitoko zwavho. Kha vha humisele murahu 50% ya zwishumiswa zwo tou raloho bangani uri vha kone u wana C\$5 000 ya tshinwa tshinwe na tshinwe arali vho no badela masheleni a ndindakhombo.

SMART ★
 Your vehicle is hijacked. Move to the vehicle block and buy a new vehicle. If you have paid insurance, use the ticket to receive the trade-in value of your vehicle.

SMART ★
 Imoto yakho iduniwe. Vakashela kwisigceme esithengisa izimoto uthenge imoto entsha. Uma wukhokheille umshuwalense, lisebenzise ithikithi ukukuphila imoto ekulelelo zinga emoto yakho.

SMART ★
 Isithuthi sakho siyaxhijiwa. Hambela kwibloko yezithuthi ze uthenge isithuthi esitsha. Ukuba uyihlawule i-inshorensi, sebenzisa itikithi ukufumana ixabiso lokuthengisa isithuthi sakho.

SMART ★
 Jou voertuig word gekaap. Skuif na die voertuigblokke en koop 'n nuwe voertuig. Indien jy versekering betaal het, gebruik die kaartjie en ontvang jou voertuig se inruilwaarde.

SMART ★
 Koloji ya gago e tšeerwe ka dikgoka. Šuthela go ploko ya koloji gomme o reke koli e ntšha. Ge e le gore o lefite inšorensense, šomisa thekele go amogela papaletswa ya boleng bja koloji ya gago.

SMART ★
 Koloji ya gago e kgothositswe. E ya twa bolokong ya dikoloji mme o reke koloji e ntšha. Fa o duetse inšorensense, dirisa thekele go amogela boleng ba thekiso ya koloji ya gago.

SMART ★
 U lekeriwa xifambo xa wena hi nkanu. Famba eka ndzhawu ya swifambo u ya xava xifambo xin'wana. Loko se a wu hakerile ndzinda-khombo, bhrisa thikithi ku kuma nkoka wa ku xava hi movha wa khae (trade-in) ya movha ya wana.

SMART ★
 Goloji yavho yo humbukwa nga magevhenga. Kha vha ya kha tshibuloko tsha zwiendzedzi vha nenge tshiendzedzi tshiswa. Arali vho badela masheleni a ndindakhombo, kha vha shumise thikithi uri vha kone u wana tshilame tsha u humisela tshiendzedzi ghratshini musi hu tshi rengiwa inwe.

A healthy cash flow is very important. The player with the most cash on hand and in the bank receives a 10% interest income in cash.

SWA1

★ ★ ★

Ukuthile unemali kubalulekile. Udlali onemali enngi kuneyabanye esandleni sakhe nasebhange uthola imaliengama-10% engukheshi.

SWA1

★ ★ ★

Ukuphala kwemali okuphilleleyo kubaluleke kakhulu. Umdlali oneyona mali ininzi esandleni nasebhankini ufumana inzala ye-10% yengeniso kwimali.

SWA1

★ ★ ★

Gesonde kontantvloei is baie belangrik. Die onderneeming met die meeste kontant voorhande en in die bank ontvang 10% rente-inkomste in kontant.

SWA1

★ ★ ★

Mmapadi yo mongwe le yo mongwe o swanetse go fa elemente e 1 ya neketshifi le e 1 ya phosethifi ya ye nngwe le ye nngwe ya dikgwebo tsa babapadi. Boutela mmapadi yo kgwebo ya gagwe e atlegago kudu ka ditshetele. Mmapadi yo o amogela C\$50 000 koketšong ya ditsemo tša ditirelo.

SWA1

★ ★ ★

Motshameki mongwe le mongwe o tshwanetse go beeleisa ntsha ya 1 positive le 1 negative ya dikgwebo tsa motshameki yo mongwe. Boutela motshameki yo o na le tshetele. Motshameki o o tla amogela C\$50 000 ya lotšeno la tirelo le le okeditšweng.

SWA1

★ ★ ★

Mutlangi un'wana na un'wana u fanele ku xaxameta mihaka ya kahle ya 1 na 1 yo ka yi nga ri kahle hi mabinzulu ya vatlangi lavan'wana ha un'we. Hlawula mutlangi la nga hanyanya kahle swinene hi swa timali.

SWA1

★ ★ ★

Mutambi munwe na munwe u amba tshivhi tshithihi na tsh'vhuya tshithihi tsha birudu la vhanwe viatambi. Kha vha khethile mutambi o pfumesaho. Mutambi hoyo u wana nyengedzedzo ya muholo wa tshumelo wa C\$50 000.

SWA1

★ ★ ★

Moela wa tshetele wo o nepagetšego o bohlokwa kudu. Mmapadi yo a nago le tshetele ye ntlhi ka seatleng le pankeng o amogela tshetele ya moputso wa tswalu ya 10%.

SWA1

★ ★ ★

Kelelo ya tshetele e e siameng e bothokwa. Motshameki yo o nang le tshetele e ntsi mo go ene le kwa bankeng o amogela lotšeno kwa morohotso lwa 10% e le madi a a seatleng.

SWA1

★ ★ ★

I ya nkoka mali yo tshisa leyi tshamaka yi karhi yi nghena. Mutlangi la nga na khexe yo tala na le bangi u kuma khexe ya mbuyelo wa muholo ya 10%.

SWA1

★ ★ ★

U dzulela u dzhenisa masheleni binduni ndi zwithu zwa ndeme nga maanda. Mutambi a re na masheleni manzhi tshandani na banngani u wana 10% ya mbuelo ya nzwalalo.

SWA1

★ ★ ★

You take your management team for a planning meeting at a holiday resort. It costs C\$5 000. The session is successful. You may throw the dice again.

SWA1

★

Uthatha iqembu lakho lezimenenja uliyisa kumhangano wokuhlela endaweni yokungebeleka. Lokhu kubiza C\$5 000. Konke kuba yimpumelelo. Ungaphinda futhi uphonse idayisi.

SWA1

★

Thatha iqela lakho lolawulo ukuya kwindibano yokucwangcisa kwenye veendawo zokuchitha iholidi. Kubiza i-C\$5 000. Le ndibano inempumelelo. Ungaphosa idayisi kwakhona.

SWA1

★

Jy neem jou bestuurspan vir strategiees beplanning na 'n vakansieoord. Dit kos jou C\$5 000. Die sessie is suksesvol. Jy mag die dobbelsteen nog 'n keer gooi.

SWA1

★

Each player must list 1 positive and 1 negative element of each of the other players' businesses. Vote for the player who is healthiest financially. This player receives C\$50 000 in increased service income.

SWA1

★ ★ ★

Nolowo nalowo mdlali makasho okuhle nokubi ngebhizinisi lafowo nalowo mdlali. Votela lowo mdlali onethezekile ngasemalini. Lowo mdlali uthola ama-C\$-50 000 ngemali ekhushliwe ukusebenze kwakhe.

SWA1

★ ★ ★

Umdlali ngamnye kufuneka adwelise umba om-1 olungileyo nom-1 ongalunganga kumashihini omdlali ngamnye. Votela umdlali oyena uphile ngokugqibeleleyo ngezemali. Lo mdlali ufumana ama-C\$50 000 yenkonzo yengeniso enyukileyo.

SWA1

★ ★ ★

Elke speler moet 1 positiewe en 1 negatiewe element van elke ander speler se besigheidstelsel. Stem vir die speler wat finansieel die gesondste is. Dié speler ontvang C\$50 000 uit verhoogde dienste-inkomste.

SWA1

★ ★ ★

O isa sehlopha sa gago sa taolo kopanong ya peakanyo ya boikhuso. Ditsheenyagalelo e ba C\$5 000. Kopano e a atlega. O ka foša tease gape. C\$ 50 000. Kopano e atlegile. O ka foša tease gape.

SWA1

★

O tsaya sethlopha sa gago sa bolao di go ya kopanong ya thulaganyo kwa rsotong ya boikhuso. E ja C\$5 000. Tiro e a atlega. O ka lathelela tease gape.

SWA1

★

U teka mlawa wa wena wa vafambisi ku ya eka nhangano wo pulana eka ndzawu ya vuvisele. Swi teka C\$5 000. Nguva yi famba kahle. U nga hoxa dayizi nakambe.

SWA1

★

Vha isa tshigwada tsha ndangulo ya mabindu avho kha mutangano wa u pulana une wa farelwa kha mhehu (risotho) ha vhuawelo (holode). Zwi ita C\$5 000. Mushumo wo tshimbila zwavhudi vhumama. Vha naga dovha hafu vha posa daisi.

SWA1

★

SM01 *
Pay your insurance premium of C\$10 000. Keep this ticket as proof of payment. This ticket may only be used to claim for one set of damages.

SM01 *
Khokhela umshuwelense wakho ibinza elidwa eleyi-C\$10 000. Ligcine lelo thikithi libe ubtakazi bokukhokha. Le thikithi lingasbenza kuphela lapho ufuna isinxephezelo esisodwa.

SM01 *
Hlwula umrhumo wakho we-Insihoransi ngama-C\$10 000. Gcina eleyi thikithi njengobungqina bokuhawula. Eleyi thikithi lingasbenza kuphela ukubanga umonakalo weseli enye.

SM01 *
Beta! Jou verskeringspremie van C\$10 000. Hou hierdie kaartjie as bewys van betaling. Die kaartjie kan slegs gebruik word om vir een keer se skade te eis.

SM01 *
Hama Pego ya Mošomo bakeng sa kgwebo ya gago. Go ya ka teko ya pego ya gago, babapadi ba bangwe ba ka akanya go go fa moutso wa magareng ga C\$ 5 000 le C\$ 10 000.

SM01 *
Thama setlamente sa makemisetso sa kgwebo ya gago. Fa ba lebile bhekatsheko ya setlamente sa gago, batshameki ba bangwe ba ka swetsa go atswa ka sekgole sa tšhelele e e magareng ga C\$5 000 le C\$10 000.

SM01 *
Endla xitlamente xa xivono xa matirhele ya bindzu ra wena. Hi ku ya hi nkambisiso wa vona wa xitlamente xa wena, vallangi lavan'wana va nga ha teka xiboho xo ku nyika exikarhi ka C\$5 000 na C\$10 000 tani hi mali ya sagwadi.

SM01 *
Kha vha fomuleithe tshtatamende tsha mishini tsha bindu lavho. Zwi tsh bva kha tsenguliso yo itwaho kha tshtatamende tsavho, vhanwe vhatambi vha nga tshe ur l vha vha the pufho ya masheleni a re vhuwati ha C\$5 000 na C\$10 000.

SM01 *
Leta tefo ya inšense ya gago ya C\$10 000. Boloka thekete ya bjaio bohats'e bja tefo. Thekete ye e ka šomšetšwa tefo go kšema sete e tee ya dšshenyagalelo.

SM01 *
Duela portimamo ya gao ya inšense ya C\$10 000. Tshola thekete e jaaka sesupo sa tuelo. Thekete e ka dšstšwa tefo go lopa sete e le nngwe ya dšshenyegelo.

SM01 *
Hakela dimali ba ndzindza-khombo ya wena ta C\$10 000. Hayisa thikithi leri tani hi xikombiso xa ku hakela. Thikithi leri ri nga dšstšwa ku koxa sete yin'we ya ku onhakeriwa nšena.

SM01 *
Kha vha baele mbadelo ya C\$10 u itela nindakhombo yavho. Kha vha vhalunge heyi thikithi sa vhuantzi ha mbadelo. Heyi thikithi i madamedzhiš! (šhinyalelo).

SM01 *
Continuous professional development is important, therefore you send your workers for training at a cost of C\$5 000 plus C\$1 000 for each worker in your employ.

SM01 *
Ukhlale njalo unomkhakaso wokuthuthukisa uhlumela abasbenzi bakho ngenkokhele ngobungoti kubalulekile, ngakho-ke ulale engama-C\$5 000 kanye ne-C\$1 000 emunye umbenzi omqashile.

SM01 *
Uphuhliso oluqhubekayo lobungcali lubalulekile, ngako oko thumela abasbenzi bakho kuqeqesho ngeandleko ezilyi-C\$5 000 kunye ne-C%1 000 yombenzi ngamnye oqeshiweyo.

SM01 *
Duurpoude professionele ontwikkeling is van die opletting leen C\$5 000 plus C\$1 000 per werker in jou diens.

S.W.A.T.

All players vote for the top chief executive officer from among the players. This player's business receives C\$20 000 in royalties from the sale of his/her success story.

★
★

S.W.A.T.

Bonke abadlali bavotela umphathi-hhovisi omkhulu phakathi kwabadlali. Ibhizinisi lalo mdlali lithola C\$50 000 okungamroyalithi aqhamuka ekudayiseni kwakhe indaba yakhe eyimpumelelo.

★
★
★

S.W.A.T.

Bonke abadlali bavotela igosa eliphezulu elilawulayo ukuphuma phakathi kwabadlali. Ishishini lalo mdlali lifumana ama-C\$20 000 kwizabelo zentengiso yempumelelo yakhe.

★
★
★

S.W.A.T.

Al die spelers stem vir die top hoof-uitvoerende beampite uit al die spelers. Dié speler se onderneming ontvang C\$20 000 uit tantième vir die verkoop van sy/haar suksesstorie.

★
★
★

S.W.A.T.

Babapadi ka moka ba boutela mohlankedimogolephethiso gare ga babapadi. Kgwebo ya mmapadi yo e amogela C\$20 000 ya mašokotošo go tšwa thekišong ya katlego ya kanegelo ya gagwe.

★
★

S.W.A.T.

Batshameki botlhe ba boutela motihankedimokhuduthamaga mogolo yo o kwa godimo go tswa mo batshameking. Kgwebo ya motshameki o e amogela C\$20 000 e le dikatso go tswa mothekisong ya katlego ya gagwe.

★
★
★

S.W.A.T.

Vatlangi hinkwavo va hlwula mulawuri nkulu exikarhi ka vatlangi. Bindzu ra mutlangi loyi ri kuma C\$20 000 ya tihakelo ta mali yo huma eka switori swo humelela swa yena leswi nga xaviswiwa.

★
★
★

S.W.A.T.

Vhatambi vhothe vha khetha muofisiri muhulwane wa ekizekethivi wa maimo a ntha heneho vhuhati havho. Bindu la mutambi ane a nangiwa li do wana C\$20 000 sa ndambedzo ya thengiso ya tshitori tshawe tsho bvelelaho.

★
★
★

S.W.A.T.

Give a motivational speech to your workers to increase productivity. If the other players feel that you were convincing, you receive C\$25 000 from increased service income.

★

S.W.A.T.

Ethulela abasebenzi bakho inkulumo ekhuthazayo ukukhuphula umkhiziso wakho. Uma abanye abadlali bekuthola uthembisa ngampela, uthola ama-C\$25 000 ngenxa yokukhuphuka kwemali engeniswa umsebenzi omuhle.

★

S.W.A.T.

Yenza intetho ekhuthazayo kubasebenzi bakho ukwandisa ukuvelisa. Ukuba abanye abadlali babona ukuba uthetha ngokukholisayo, ufumana ama-C\$25 000 ukuphuma kwinkonzo yengeniso yokukhula.

★

S.W.A.T.

Lever 'n motiveringstoepspraak vir jou werkers om hulle produktiwiteit te verhoog. Indien die ander spelers voel dat jy oortuigend was, ontvang jou onderneming C\$25 000 uit verhoogde dienste - inkomste.

★

255

S.W.A.T.

Efa bašomi ba gago polelo ya tihohleletšo go oketša tšwelopele. Ge babapadi ba ekwa gore o be o kgodiša, o amogela C\$ 25 000 go tšwa go ditseno tša ditirelo tšeo di oketšegilego.

★

S.W.A.T.

Neelana ka puo e e rotloetsang go badiri go oketsa go dira thata. Fa batshameki ba bangwe ba bona gore o ne o rotloetsa, o amogela C\$25 000 go tswa mo lotseno lo lo okeditsweng lwa tirelo.

★

S.W.A.T.

Nyika mbulavulo wo hlohotela eka vatirhi va wena ku engetela tirhelo ra kahle. Loko vatlangi lavan'wana va vona leswaku leswi uswi endlaka swi ri kahle, u ta kuma C\$25 000 yo huma eka muholo wa ntrho wo engetela.

★

S.W.A.T.

Kha vha fhe tshipitshi tsha thuthuwedzo kha vhashumi vhavho uri hu vhe na nyengedzedzo kha zwibvedzwa. Arali vhanwe vhatambi vha pfa uri tshipitshi tshavho tshi a nyaula, vha wana C\$25 000 u bva kha mbuelo ya tshumelo yo engedzedzeaho.

★

S.W.A.T.

You decide to hire a human-resources specialist to improve your personnel department and to find qualified personnel. The costs amount to C\$10 000. You may also hire up to 10 labourers at C\$4 000 each.

★

S.W.A.T.

Unquma ukuqasha unongoti wezindaba zabasebenzi ukwenza ngocono isimo somnyango wakho wezabasebenzi. Izindleko zalokhu ziyi-C\$10 000. Ungase uphinde futhi uqashe basebenzi abayi-10 ngenani eliyi-C\$4 000 emunye.

★

S.W.A.T.

Wenza isigqibo sokuqasha ingcali ngezamancedo abasebenzi ukuphucula isebe lakho labasebenzi nokufumana amagosa afanelekileyo. Iindleko ziba li-C%10 000. Kananjalo ungaqasha abasebenzi ukuya kutsho kwabali-10 ngamnye efumana i-C\$4 000.

★

S.W.A.T.

Jy besluit om 'n menslikehulpbronspesialis aan te stel om jou personeelafdeling reg te ruk en gekwalifiseerde werkers te verkry. Die koste beloop C\$10 000. Jy kan ook tot 10 arbeiders aanstel teen C\$4 000 elk.

★

S.W.A.T.

O akanya go go hira setsebi sa tša bašomi go kaonafatša goro ya gago ya tša bašomi le go hwetša bašomi bao ba kgonago. Ditsheyagalelo di fihla go C\$ 10 000. O ka hira gape bašomi ba ka fihlago 10 ka C\$ 4 000 o tee.

★

S.W.A.T.

O swetsa go hira motseanape wa tsa badiri go tokafatsa lefapha la badiri le go batla badiri ba ba siametseng tiro. Ditsheyageto di fithelela go C\$10 000. O ka thapa gape ba dira ba le kanaka 10 ka C\$4 000 a le mongwe.

★

S.W.A.T.

U ehleketa ku thola mutivi wa timhaka ta vatirhi ku antswisa ndzawulo ya timhaka ya vathoriwa na ku kuma mutirhi wa swa vathoriwa la nga fanela. Ntsengo wa kona wu va C\$10 000. U nga ha thola ku fikela 10 wa vatirhi hi C\$4 000 ha un'we.

★

S.W.A.T.

Vho dzhia tseho ya u hayara vhashumi-makone uri vha khwinise muhasho wavho wa zwa vhashumi khathihi na u thola kana u kona u wana vhashumi vhane vha vha na ndalukano. Mutengo wo vha C\$10 000. Vha nga hayara vhashumi vhane vha swika 10, hune muthihi a vha a khou ita C\$34 000.

★

SWAZI ★
Pay your workers bonuses to improve productivity. The cost of the bonuses is C\$3 000 for each labourer. However, you receive 1 product for each labourer in your employ because of increased productivity.

SWAZI ★
Abasebenzi bakho bakhokhele amabhonasi ukubakhuthazakusebenza ngokuzinikela. Izindleko zamabhonasi ziyi-C\$3 000 ngalowo nalowo msebenzi. Kodwa-ke, uthola umkhqizo oworda ngalowo nalowo msebenzi omqashile ngenxa yokukhuphuka kwezinga lomsebenzi abawukhuzizayo.

SWAZI ★
Hlawula abasebenzi bakho ilibhonasi ukuphucula ukuvelisa. Iindleko zaebhonasi yi-C\$3 000 malunga nomebenzi ngamnye. Nangona kunjalo, ufumana imveliso yomsebenzi ngamnye ngenxa yokukhula kokwelisa.

SWAZI ★
Betaal jou werkers bonusse ten einde produktiwiteit te verbeter. Die koste van die bonusse is C\$3 000 per arbeider. Jy ontvang egter 1 produk vir elke arbeider in jou diens weens verhoogde produktiwiteit.

SWAZI ★ ★ ★
Diyunione di dira dipoleliano tsa dikhologo tse kaone. Mmapadi yo mongwe le yo mongwe o swanetse go iefela mošomi yo mongwe le yo mongwe C\$5 000 goba a hlaele ke sebaka ka baka la seteraeke.

SWAZI ★ ★ ★
Mekgathlo e buisanela ditshiamelo tse di botoka. Motshameki mongwe le mongwe o tshwanetse go duela C\$5 000 modiri a le mongwe kgotisa go lola ke tshameko ka ntha ya ditraeke.

SWAZI ★ ★ ★
Minhlangano ya vatirhi yi vula vulela ku kuma mimbuyelo yo antswa. Mutlangi un'wana na un'wana u fanele ku hakela C\$5 000 hi mutirhi kumbe a lahleketeriwa hi mbuyelo hikwalaho ka xiterekoko.

SWAZI ★ ★ ★
Madzangano a vhashumi a ita nyambedzano ya mbuelo oza khwine kha vhashumi. Mutambi munwe na munwe u tea u badeia C\$5 000 nga mushmani nga mushmani kana u tea u sa tamba luta ulwo nga nithami ha tshitereke.

SWAZI ★
Lefa bašomi ba gago dibonase go kaonafatša tšwešopele. Ditsihenyagalelo tša dibonase ke C\$3 000 mošomong yo mongwe le yo mongwe. Le go go le bjalo, o amogela setšweletšwa se 1 bakeng sa mošomi yo mongwe le yo mongwe mošomong wa gago ka baka la kokešo ya tšweletšo.

SWAZI ★
Duela badiri ba gago dibonase go tokafatša tiro ya bone. Tlhwathwa ya dibonase ke C\$3 000 modiri mongwe le mongwe. Le gale, o amogela kuno e le nngwe ya modiri mongwe le mongwe wa gago ka ntha ya tiro e e tokafaditsweng.

SWAZI ★
Hakela vatirhi va wena tibonasi leswi antswisaka tirhelo ra kahle. Tihakalo ta tibonasi i C\$3 000 hi mutirhi un'we. Hambiswiriano, u kuma xikumtiwa xin'we hi mutirhi loyi u nga n'wi thola. Hikwalaho ka ku tlakuka ka matirhelo.

SWAZI ★
Kha vha badele bonasi vhashumi vhavho u itela uri hu khwinifadzele kushumele. Mushmani mutirhi u tea u wana bonasi C\$3 000. Fhedzi vha fhadzisela vha khou wana tshibveledzwa tshithithi u bva kha mushmani munwe na munwe zwi tshi khou ritwa nga u engedzedzea ha mveledziso.

SWAZI ★
One of your workers was unfairly dismissed. The court rules against you and you must pay C\$8 000 in compensation. The legal fees amount to a further C\$4 000.

SWAZI ★
Omunye wabasebenzi bakho uxoshwe ngokungesilona iqiniso. Inkantolo ikulahlia ngecala ngakho kufanel ukhokhe C\$8 000 oyisinxephelelo. Izindleko zabameleli zona zengeza ana-C\$4 000.

SWAZI ★
Omnye wabasebenzi ugxofhwe ngokungenabulungisa. Inkundit'ya kugweba yaye kufuneka ubhalele i-C\$8 000 njengembuyekozo. Iindleko zasemthethweni zibiza esinye isixa se-C\$4 000.

SWAZI ★
Een van jou werkers is onregmatig ontslaan. Die hof se bevinding is teen jou en jy word beveil om C\$8 000 skadevergoeding te betaal. Jou regskoste beloop 'n verdere C\$4 000.

SWAZI ★ ★ ★
Unions negotiate for better benefits. Each player must pay C\$5 000 per labourer or miss a turn due to strikes.

SWAZI ★ ★ ★
Izinyunyana zixoxisaana ngezinzuzo ezingcono. Lowo nalowo mdlali makakhokhe C\$5 000 ngalowo nalowo msebenzi kumbe adluliwe yithuba lakhe ngenxa yeziiteleka.

SWAZI ★ ★ ★
Imibutho yenza uthethathethwano lokwenza amancedo abengcono. Umdlali ngamnye kufuneka ahlawule i-C\$5 000 ngomsebenzi ngamnye okanye aphose ukujika ngenxa yochanqalazo.

SWAZI ★ ★ ★
Vakbonde beeding vir beter voordele. Elke speler moet C\$5 000 per arbeider betaal of n beurt mis weens stakings.

SWAZI ★
Yo mongwe wa bašomi ba gago o rakiwe mošomong ka ntle le molao. Kgorisiteko e go bona molato gomme o lefa C\$ 8 000 ya pušetšo. Ditefo tša semolao di rihla go C\$4 000.

SWAZI ★
Yo mongwe wa badiri ba gago ga a ntšhiwa sentle mo thronng. Kgotiatšatšheko e dira kgaithanong le wena mme o tshwanetse go duela C\$8 000. Dituelo tsa semolao di dira C\$4 000.

SWAZI ★
Wun'wana wa vatirhi wa wena u hlongorilele swi nga ri enawini. Khonto vl ku vona nandzu naswona u fanelo ku hakela C\$8 000 ya ndziho. Mali ya vuyimari yi fike ka C\$4 000.

SWAZI ★
Munwe wa vhashumi wavho o thathiwa nga ndika i sa pfadzho. Khothe a yo ngo ima navho ju vha feival kha isheo yayo. Vha tea u badeia C\$8 000 ya ndiliso. Masheleni a zwa mulayo ndi inwe C\$4 000.

The good internal control measures you have implemented pays off. Receive C\$5 000 in damages from employees who were found guilty of fraud.

S.W.A.T.

★

Indlela yolawulo ngaphakathi oqalile wayisebenzisa iyasebenza. Amukela C\$5 000 kulabo basebenzi okufanele bakukhokelele izinxephezelo ngenxa yokulahlwa amacala okukhwabanisa.

S.W.A.T.

★

Amanyathelo amahle angaphakathi olawulo owafakileyo asebenza kakuhle. Ufumana i-C\$5 000 yomonakalo evela kubasebenzi abafunyenwebenetyala lokwenza ubumenemene.

S.W.A.T.

★

Die goete interne beheermaatréels wat jou onderneeming ingestel het, werp vrugte af. Ontvang C\$5 000 in skadevergoeding vanaf werknemers wat aan bedrog skuldig bevind is.

S.W.A.T.

★

Magato a ka gare a taolo a utulisa gore ditirelo tsa bokaalo bja C\$ 30 000 di be di sa begwa. Humana tshetelele gona bjale.

S.W.A.T.

★

Dikgato tsa taolo tsa mo gare di thagisa fa ditirelo tsa bokanaka C\$30 000 di sa kwadiwa. Amogela tshetelele eo jaanong

S.W.A.T.

★

Mimpimo ya malawulelo ya xiyimo xa misava hinkwayo yi kombile leswaku mintirho yo fika kwala ka C\$30 000 a yi nga rhekodiwang. Kuma mali sweswi.

S.W.A.T.

★

Maga a ndangulo a nga ngomu o dzumbuluta uri tshumelo ya mashelani ane a edana C\$30 000 a yo ngo rakhodiwa. Kha vha wane mashelani ayo zwino.

S.W.A.T.

★

Dikgato tse boitse tsa ka gare tseo o di phethagadisego di a lefa. Amogela C\$ 5 000 ya ditsheenyegelo go tswa baomong bao ba bonwengo molato wa bomenetsa.

S.W.A.T.

★

Dikgato tsa ka mo gare tse di siameng tse o di dirisitsweng di a duela. O amogela C\$5 000 ya ditsheenyegelo go tswa go badiri ba ba bonweng molato wa tsietsi.

S.W.A.T.

★

Mimpimo ya malawulelo ya xiyimo xa misava hinkwayo lawa u nga ya simaka ya ku vuyerisa. Kuma C\$5 000 ya ndzino ya vatirhi la ya nga voniwa nandzu wa vuxisi.

S.W.A.T.

★

Maga a ndangulo a nga ngomu avhudi e vha a shumisa a khou thoma u vhuisa mbuelo. Kha vha wane tshinyalelo ya C\$5 000 u bva kha vhasumi vho waniwatho mutandu wa vhuvhavba.

S.W.A.T.

★

Pay your insurance premium of C\$10 000. Keep this ticket as proof of payment. This ticket may only be used to claim for one set of damages.

S.W.A.T.

★

Khokhele umshuwalense wakho ibinza ellodwa eilyi-C\$10 000. Ligcine lelo thikithi libe ubufakazi bokukhokha. La fithikithi lingasebenza kuphela lapho ufuna isinxephezelo esisodwa.

S.W.A.T.

★

Hiawula umrhumo wakho we-inshorensi ongama-C\$10 000. Gcina eli tikitli njengobungqina bokuhlawula. Eli tikitli lingasebenziswa kuphela ukubanga umonakalo waseti enye.

S.W.A.T.

★

Betaal jou versekeringspremie van C\$10 000. Hou hierdie kaartjie as bewys van betaling. Die kaartjie kan slegs gebruik word om vir een keer se skade te eis.

S.W.A.T.

★

Internal control measures revealed that services in the amount of C\$30 000 were not recorded. Receive the money now.

S.W.A.T.

★

Ulawulo langaphakathi lukhombisa ukuthi umsebenzi owenziwe obiza C\$30 000 awubhalwe phansi. Amukela leyo mali manje.

S.W.A.T.

★

Amanyathelo olawulo kwangaphakathi abonisa ukuba iinkonzo ezixabisisa ama-C\$30 000 bezingabhalwanganga. Yamkela imali ngoku.

S.W.A.T.

★

Interne beheermaatréis het aantoon dat dienste gelewer ter waarde van C\$30 000 nie te boek gestel is nie. Ontvang nou die geld.

S.W.A.T.

★

Lefa lefo ya inshorensi ya gago ya C\$10 000. Boloka thekete ye bjalo bohlatse bja lefo. Thekete ye e ka somisetwa feia go kleima sete e tee ya ditsheenyegalelo.

S.W.A.T.

★

Duela poruliamo ya gao ya inshorensi ya C\$10 000. Tshola thekete e jaaka sesupo sa luelo. Thekete e ka dirisiwa feia go lopa sete e le mngwa ya ditsheenyegalelo.

S.W.A.T.

★

Hakela imali ta ndzindza-khombi ya wena ta C\$10 000. Hayisa thikithi leri (ani) hi xikombiso xa ku hakea. Thikithi leri ri nga tshisiwa ku koxa sete yin'we ya ku onhakeriwa ntsena.

S.W.A.T.

★

Kha vha badele mbadelo ya C\$10 u lela ndindakhombo yavho. Kha vha vuhlunga hoyi thikithi sa vutanzu ha mbadelo. Heyi thikithi i nga shumiswa fhedzi u vhlala seeethe nthihi ya madamedzhisi (tshinyalelo).

S.W.A.T.

★

The competitors board penalises construction companies. Construction Group's shares decrease by 1 level.

★ ★ ★

Ibhodi yokuhudlelana ihawulisa izinkampani ezakhayo. Amasheya Ezinkampani Ezakhayo ehla ngezinga eli-1.

★ ★ ★

Ibhodi yokhuphiswano ikhupha izohlwayo zeenkampani zokwakha. Izabelo ze-Construction Group ziyehla ngomgangatho om-1.

★ ★ ★

Die mededingingsraad penaliseer konstruksiematskappye. Construction Group se aandele daal met 1 vlak.

★ ★ ★

Go lemojiwe kopanong gore ditsheenyagalelo tsa tekanyetso ya gago di felle tekanyo. O swanetse go tswelela lekala la peeletso ya gago. Rakisa disere tsa gago ka moka ka fase ga nthla e 1.

★

Kwa kopang go ne ga filihelwa e le gore tekanyetso tsa gago ya ditsheenyagalelo e felle tekanyo. O tshwanetse go tswelela lekala la peeletso la kgwebo. Rakisa disere tsothe tsa gago mo maemong a 1 a kwa tlase ga tlhathwa ya mmaraka. Disere tse di ya tlase ka maemo a 1.

★

Swi kumiwile eka nhlango leswaku mpjmanyeto wa matiriseho ya mali wu hundze mpimo. U lava ku plala mavi ra vuvekisi ra binouu. Xavisa minkaveho ya wena hinkwayo hi levhele ya 1 leyi nga hansi ka nxavo wa makete. Minkaveho keyi yi hungutaka hi levhele ya 1.

★

Mutanganoni ho tumbulwa uri msheleni o shumiswano a thira e vha o batshethelwa (gagananya). Vha khou tea u vala davhi la mbiungelala bindu. Kha vha rengise mikovhe yavho yotho i fhasi nga levele nthlhi (1) kha mutengo wa makete. Heyi mikovhe tshleme tshayo tshi a tsa fhasi nga levele nthlhi (1).

★

Boto ya diphelelano e oha khampani ya go aga. Disere tsa Khampani ya go Aga di fokotsega ka nthla e 1.

★ ★ ★

Boto ya dikgaisano e latofatsa ditlamo tsa go aga. Disere tsa Construction Group di fokotsega ka maemo a 1.

★ ★ ★

Huvo ya mimphelelano yi rithisa tikhamphani to aka. Minkaveho ya Ntlawa wa Vaaki wu ya ehansi hi levhele ya 1.

★ ★ ★

Boto ya mutatisano (khomphelelano) i latisa khampani dsa zwa vhuufhati. Mikovhe ya Tshigwada tsa Vhuufhati i a fhuungudzea nga levele nthlhi (1).

★ ★ ★

You decide to have less complicated packaging. Keep this card and save C\$1 000 on all future overheads.

★

Unquma ukugoca ngendlela engenamciliishi. Gcina le lithadi bese wonga C\$1 000 kuzona zonke izindleko zokuhuba ibhizinisi esikhathini esizayo.

★

Yenza isigqibo sengokolela engekho mbaxa. Gcina eli khadi za silondolozo LC\$1 000 kuzo zonke izindleko zokusebenza zexesha elizayo.

★

Jy besluit om jou verpakkingsmateriaal te vereenvoudig. Hou hierdie kaartjie en bespaar C\$1 000 op alle toekomstige bokoste.

★

It was established at a meeting that your expense budget has been exceeded. You need to close the investment branch of the business. Sell all your shares at 1 level lower than the market price. These shares depreciate by 1 level.

★

Emhlanganweni kwatholakala ukuthi ibhalajethi yezindleko yeqilie. Kufanele uvale igatsha lotshalomali ebhizinisini. Thenga amasheya akho wonke weise nenan ngezinga eli-1. la masheya ehla ngezinga eli-1.

★

Kumisewi kwindibano ukuba iindleko zakho zidulele uhlalo lwabiwo-mali. Kufuneka uvale icandelo lotyalomali lweshishini. Thengisa zonke izabelo ngomgangatho om-1 ngaphantsi kwexabiso lemali. Ezi zabelo zehla ngomgangatho om-1.

★

Op 'n vergadering is bevind dat jou uitgawebegroting oorsy is. Jy moet die aandelebeleggingsbeen van die onderneming sluit. Verkoop al jou aandele teen 1 vlak laer as die huidige markprys. Die aandelepryse daal met 1 vlak.

★

O tšea sephetho sa gore o be le go paka go go sa raraganago kudu. Boloka karata ye gomme o boloke C\$1 000 ya ditsheenyagalelo tše di itago.

★

O swetsa go nna le dipakana tse di sa tlhakathakang thata. Tshola karata e nme o somarele C\$1 000 ya tšhelele e e dirisiwang mo kgwebong mo isagong.

★

U ehlelete ku va na ku paka loku nga karhateki. Hlayisa khadi leri naawona u hlalisa C\$1 000 eka matiriseho ya mali ya nkarni lowu taka.

★

Vho dzha tsho u shumisa zwiputelel zwo leluwaho zwi sa dini. Kha vha fare heyi garata vha vhuunge C\$1 000 kha zwithu swothe zwa ndeme zwa vhumatshelo.

★

S.M.A.T. ★
You have the opportunity to pay C\$20 000 for a television advertisement in order to sell 5 products at C\$40 000 each, or to pay C\$10 000 for a newspaper advertisement in order to sell up to 5 manufactured products at C\$25 000 each.

S.M.A.T. ★
Unethuba lokukhokhelela umkhangiso kamabonakude ongama-C\$20 000 ukuze ukwazi ukuthengisa imikhqizo emihlanu ngenani elingama C\$40 000 umunye, kumbe ukhokhelela iphephabhuku i-C\$10 000

S.M.A.T. ★
Unethuba lokuhlawula ama-C\$20 000 malunga nopenasho lwentengiso kumabonakude ukuze uthengise imveliso ezi-5 ngama-C\$40 000 ngemveliso nganye, okanye uhlawule i-C\$10 000 kwiphephendaba malunga nopenasho lwentengiso ukuze uthengise ukuya kutsho kwimveliso ezi-5 ezivelisiweyo ngama-C\$25 000 ngemveliso nganye.

S.M.A.T. ★
Jy het die geleentheid om C\$20 000 te spandeer aan 'n televisie-advertensie sodat jy tot 5 voltooides produkte teen C\$40 000 elk kan verkoop, of om C\$10 000 te betaal vir 'n koerantadvertensie om tot 5 vervaardigde produkte teen C\$25 000 elk te verkoop.

S.M.A.T. ★
O na le sebaka sa go lefa C\$20 000 ya papatšo ya thelebišene gore o rekisa ditšweletšwa tše 5 ka C\$40 000 e tee goba go lefa C\$10 000 ya papatšo ya kuranta go rekisa ditšweletšwa tše di dirilwego ka \$25 000 e nngwe le e nngwe.

S.M.A.T. ★
O na le tšhono ya go duela C\$20 000 ya papatšo ya thelebišene go ka kgona go rekisa dikuno tše 5 ka C\$40 000 e lengwe, kgotsa go duela C\$10 000 ya papatšo ya kuranta go ka kgona go ka rekisa dikuno tše di dirilweg tše 5 ka C\$25 000 e lengwe.

S.M.A.T. ★
U na nikarhi wo hakeia C\$20 000 ya xinavetiso xa thelevhiximi leswaku u ta kota ku xavisa swikumiwa swa 5 hi C\$40 000 hi xin'we. Kumbe ku hakeia C\$10 000 ya xinavetiso xa phepha-hungu leswaku u ta kota ku xavisa ku filka 5 wa swikumiwa leswi nga endliwa hi C\$25 000 xin'we.

S.M.A.T. ★
Vha na khondzeo ya u badela C\$20 000 ya khunguwedzo ya TV ine ya do ita uri vha kone u rengisa zwiibeledzwa zwiitanu zwine tshithihi tshazwo tsha vha C\$40 000 kana vha badale C\$10 000 ya khunguwedzo ya guramda ine ya do ita uri vha kone u rengisa zwiibeledzwa zwa vhumagi zwine zwa

S.M.A.T. ★
You do market research on letting property. You may buy a property not yet owned by someone else for 80% of the current market value.

S.M.A.T. ★
Wenza ucwaningo lokuqashisa unqathenga indawo engakaze ingaba ngeyamuntu ngenani elingama-80% emalini okuthengwa ngayo ngateso sikhati.

S.M.A.T. ★
Yenza uphando lwemalike malunga nokuqashisa ipropati. Ungathenga ipropati engakabiyoyamntu ngama-80% ngexabiso langoku lemali.

S.M.A.T. ★
Jy doen marknavorsing oor verhuingselendom. Jy kan 'n eiendom wat nog nie aan iemand anders behoort nie bekom teen 80% van die huidige markwaarde.

S.M.A.T. ★

S.M.A.T. ★
O dira dinyaktišo tša mebaraka ka ga go hiriša thoto. O ka no reka thoto yeo e sego ya ba ya moitho ka 80% ya theko ya bjale ya mmaraka.

S.M.A.T. ★
O dira patlišo ya mmaraka mo thotong e e sa direng. O ka reka thoto e e iseng e ruiwe ke ope ka 80% ya boleng jwa ga jaana jwa mmaraka.

S.M.A.T. ★
U endia ndzavisiso wa makete eka ku hirisiwa muako. U nga ha xava muako lowu nga se tshamaka wa wa wa munhu hi 80% ya nika wa wona wa nikarhi wa sweswi wa makete.

S.M.A.T. ★
Vho fisa risetše ya makete ya malugana na u renthisa ndaka. Vha nga kha di renga ndaka ine ya vha i saathu dzuiwa nga munhu na muthihi. Kda iyo vha nga i renga nga 80% ya tshilime tsha makete tshi re hone zwa zwino.

S.M.A.T. ★
One of your clients immediately wants to buy 5 products from you at C\$30 000 each. You may buy the product from a competitor if you do not have it. If you cannot provide it, you have to pay damages amounting to C\$5 000 per product that you could not deliver.

S.M.A.T. ★
Omunye wamaklayenti akho ufuna umthengisele imikhqizo emi-5ngenani elingama C\$30 000 umkhqizo umunye. Ungawuthenga koqhudeiana naye umkhqizo lowo uma wean ungenawo. Uma ungakwazi ukuwuthola, kufanele ukhokhele isinxephezelo esi-5 C\$5 000 umkhqizo umunye ongakwazi ukuwuthola.

S.M.A.T. ★
Omnye wabaxumi bakho ufuna ukuthenga imveliso ezi-5 kuwe ngokukhawuleza ngama-C\$30 000 ngemveliso nganye. Ungathenga imveliso kumntu okhuphisa naye ukuba awunayo. Ukuba awukwazi ukubonelela ngayo, kufuneka uhlawule umonakalo we-C\$5 000 ngemveliso nganye ongakwazanga ukubonelela ngayo.

S.M.A.T. ★
Een van jou kliente wil onmiddelik 5 produkte teen C\$30 000 elk aankoop. Indien jy nie die produk het nie, kan jy dit by 'n mededinger aankoop of anders moei jy C\$5 000 skadevergoeding betaal per produk wat jy nie kan lewer nie.

S.M.A.T. ★

S.M.A.T. ★
O tee wa badirelwa ba gago o nyaka go reka ditšweletšwa tše 5 go tšwa go wena ka C\$30 000 e tee. O ka no reka setšweletšwa go tšwa go mophadiŋi ge o se na sona. Ge o sa kgone go fana ka sona, o swanetše go lefa dišhenyagalelo tše di lekano go C\$5 000 setšweletšwa se sengwe le se sengwe seo o sitlilwego ke go se tliša.

S.M.A.T. ★
Yo mongwe wa barekedi ba gago o batla go reka dikuno di le 5 mo go wena ka C\$30 000 e lengwe. O ka reka kuno mo mogaisaneng fa o sena yone. Fa o sa kgone go heelana ka yona, o tla tšhwanela ke go duela dišhenyagalelo tše di kanaka C\$5 000 kuno e o sa kgonang go e dira.

S.M.A.T. ★
Wun'wana wa tikhasitama ta wena u tsakeia ku xava swikumiwa swin'wana na swin'wana swa 5 hi C\$30 000 ha xin'we. U nga ha xava xikumiwa lexi eka muphikizani loko u nga ti na xona. Loko u nga xi nykeli, u fanele ku hakeia ndziho wa C\$5 000 he xikumiwa lexi u nga xi humesiki.

S.M.A.T. ★
Munwe wa khasitama dzavho u khou toda u renga zwiibeledzwa zwa vho zwiitanu hune tshithihi tsha renga tshibeledzwa kha mukhaedu arali vha si na tsho. Arali vha tshi kundelwa u fisa nzudzanyo dzatiso, vha do tea u badela tshinyalelo ine ya nga lingana C\$5 000 kha tshibeledzwa tshinwe na tshinwe tše vha kundelwa u tshi netshedza.

S.M.A.T. ★

SMAT *
Pay your insurance premium of C\$10 000. Keep this ticket as proof of payment. This ticket may only be used to claim for one set of damages.

SMAT *
Khothela umshuwalense wakho ibinza elilodwa eIiyi-C\$10 000. Ligcine lelo thikithi libe ubufakazi liphokha. Le lthikithi lapho ufuna isinxephezelo

SMAT *
Hawula umrhumo wakho we-*inshorensl ongama-* C\$10 000. Gcina eli tikithi ngobungqina kuphela ukubanga umonakalo weseti enye.

SMAT *
Betaal jou versekeringspremie van C\$10 000. Hou hierdie kaartjie as bewys van betaling. Die kaartjie kan slegs gebruik word om vir een keer se skade te eis.

SMAT *
Lefa tefo ya *inso*ense ya gago ya C\$10 000. Bologa thekete ye bjaio bohlatse bja tefo. Thekete ye e ka *zomise*tswa feia go kleima sete e tee ya ditshenyagalelo

SMAT *
Duela porliamo ya gao ya *inso*ense ya C\$10 000. Tshola thekete e jaaka sesupo sa tuelo. Thekete e ka diriswa feia go lopa sete e le nngwe ya ditshenyageilo.

SMAT *
Hakela timali ta ndzinda-khombo ya wena ta C\$10 000. Hayisa thikithi leri tani hi xikombiso xa ku hakela. Thikithi leri ri nga tirhiswa ku koka sete yin'we ya ku onhakeriwa ntsena.

SMAT *
Kha vha badele mbadelo ya C\$10 u itela indakhombo yavho. Kha vha vhu lung e heyi thikithi sa vhu anzi ha mbadelo. Heyi thikithi i nga shumiswa medzi u vha see the nthi ya madamedzhis (tshinyalelo).

SMAT *
Bologa thekete ye bjaio bohlatse bja tefo. Thekete ye e ka *zomise*tswa feia go kleima sete e tee ya ditshenyagalelo.

SMAT *
Duela porliamo ya gao ya *inso*ense ya C\$10 000. Tshola thekete e jaaka sesupo sa tuelo. Thekete e ka diriswa feia go lopa sete e le nngwe ya ditshenyageilo.

SMAT *
Hakela timali ta ndzinda-khombo ya wena ta C\$10 000. Hayisa thikithi leri tani hi xikombiso xa ku hakela. Thikithi leri ri nga tirhiswa ku koka sete yin'we ya ku onhakeriwa ntsena.

SMAT *
Kha vha badele mbadelo ya C\$10 u itela indakhombo yavho. Kha vha vhu lung e heyi thikithi sa vhu anzi ha mbadelo. Heyi thikithi i nga shumiswa thedzi u vha see the nthi ya madamedzhis (tshinyalelo).

SMAT *
Pay your insurance premium of C\$10 000. Keep this ticket as proof of payment. This ticket may only be used to claim for one set of damages.

SMAT *
Khothela umshuwalense wakho ibinza elilodwa eIiyi-C\$10 000. Ligcine lelo thikithi libe ubufakazi bokuhokha. Le lthikithi lingasbenza kuphela lapho ufuna isinxephezelo esisodwa.

SMAT *
Hawula umrhumo wakho we-*inshorensl ongama-* C\$10 000. Gcina eli tikithi ngobungqina bokuhawula. Eli tikithi lingasetyenziswa kuphela ukubanga umonakalo weseti enye.

SMAT *
Betaal jou versekeringspremie van C\$10 000. Hou hierdie kaartjie as bewys van betaling. Die kaartjie kan slegs gebruik word om vir een keer se skade te eis.

SMAT *
Lefa tefo ya *inso*ense ya gago ya C\$10 000. Bologa thekete ye bjaio bohlatse bja tefo. Thekete ye e ka *zomise*tswa feia go kleima sete e tee ya ditshenyagalelo

SMAT *
Duela porliamo ya gao ya *inso*ense ya C\$10 000. Tshola thekete e jaaka sesupo sa tuelo. Thekete e ka diriswa feia go lopa sete e le nngwe ya ditshenyageilo.

SMAT *
Hakela timali ta ndzinda-khombo ya wena ta C\$10 000. Hayisa thikithi leri tani hi xikombiso xa ku hakela. Thikithi leri ri nga tirhiswa ku koka sete yin'we ya ku onhakeriwa ntsena.

SMAT *
Kha vha badele mbadelo ya C\$10 u itela indakhombo yavho. Kha vha vhu lung e heyi thikithi sa vhu anzi ha mbadelo. Heyi thikithi i nga shumiswa thedzi u vha see the nthi ya madamedzhis (tshinyalelo).

SMAT *
Pay your insurance premium of C\$10 000. Keep this ticket as proof of payment. This ticket may only be used to claim for one set of damages.

SMAT *
Khothela umshuwalense wakho ibinza elilodwa eIiyi-C\$10 000. Ligcine lelo thikithi libe ubufakazi bokuhokha. Le lthikithi lingasbenza kuphela lapho ufuna isinxephezelo esisodwa.

SMAT *
Hawula umrhumo wakho we-*inshorensl ongama-* C\$10 000. Gcina eli tikithi ngobungqina bokuhawula. Eli tikithi lingasetyenziswa kuphela ukubanga umonakalo weseti enye.

SMAT *
Betaal jou versekeringspremie van C\$10 000. Hou hierdie kaartjie as bewys van betaling. Die kaartjie kan slegs gebruik word om vir een keer se skade te eis.

SMAT *
Lefa tefo ya *inso*ense ya gago ya C\$10 000. Bologa thekete ye bjaio bohlatse bja tefo. Thekete ye e ka *zomise*tswa feia go kleima sete e tee ya ditshenyagalelo

SMAT *
Duela porliamo ya gao ya *inso*ense ya C\$10 000. Tshola thekete e jaaka sesupo sa tuelo. Thekete e ka diriswa feia go lopa sete e le nngwe ya ditshenyageilo.

SMAT *
Hakela timali ta ndzinda-khombo ya wena ta C\$10 000. Hayisa thikithi leri tani hi xikombiso xa ku hakela. Thikithi leri ri nga tirhiswa ku koka sete yin'we ya ku onhakeriwa ntsena.

SMAT *
Kha vha badele mbadelo ya C\$10 u itela indakhombo yavho. Kha vha vhu lung e heyi thikithi sa vhu anzi ha mbadelo. Heyi thikithi i nga shumiswa thedzi u vha see the nthi ya madamedzhis (tshinyalelo).

SWATI ★
You may buy the sole right to sell the products of a well-known trademark. The cost is C\$15 000. Keep this ticket and receive an additional C\$2 000 per product each time you sell to retailers.

SWATI ★
Ungathenga ilungelo lokuba nguwe kuphela othengisa imveliso zophawu lwentengiso elidumileyo. Iindleko ziya kuba yi-C\$15 000. Gcina eli tikiti ze ufumane isongezo se-C\$2 000 ngemveliso ngethuba ngalinye xa uthengisela usovenkile.

SWATI ★
Ungathenga ilungelo lokuba nguwe kuphela othengisa imveliso zophawu lwentengiso elidumileyo. Iindleko ziya kuba yi-C\$15 000. Gcina eli tikiti ze ufumane isongezo se-C\$2 000 ngemveliso ngethuba ngalinye xa uthengisela usovenkile.

SWATI ★
Jy kan die alleenreg bekom om 'n bekende handelsnaam se produk te verkoop. Die koste is C\$15 000. Hou hierdie kaartjie en ontvang C\$2 000 per produk ekstra elke keer as jy aan kleinhandelaars verkoop.

SWATI ★
Ngwala ithagiso ya kuranta ka ga dintsha tše tshetele a kwebo ya gago gomme o amogele diteno tsa rente tseo di okeletsilego tsa magareng ga C\$2 000 le C\$10 000 go ya ka thekotekanyetšo ya baraloki ba bangwe.

SWATI ★
Kwala moaletsa wa kwa kuranteng ka ga maemo a dithelete tsa kwebo ya gago mme o amogele magareng ga C\$2 000 le C\$10 000 ya loitseno lo lo okeletsiweng lwa rente go ya ka tshetatsheko ya batshameki ba bangwe.

SWATI ★
Tsaala kumbe hangalasa mahungu hi xiyimo xa swa timali xa bindzu ra wena naswona u kuma ntakuso wale xikarhi ka C\$2 000 wa ku mali yo rhentisa hi ku ya hi ku kamberwa hi vatlangi lava n'wana.

SWATI ★
Kha vha nwale lunwalo luno lwa do tea u andadzwa nga vhoranahungo nga ha tshilimo tsha masheleni tsha bindu urti vha kone u wana nyenqedzedzo ya mbuelo masheleni a rennde a re vhubakhi ha C\$2 000 na C\$10 000, zwi tshi bva kha tsenguluso ya vhanwe vhatambi.

SWATI ★
O ka reka ditokelo tša gago o nnoši tša go rekisa ditšweletšwa tša teswao la papatšo la go tsebagala kudu. Theko ya lona ke C\$15 000. Boloka thekete ye gomme o amogele koketšo ya C\$2 000 setšweletšweng se sengwe le se sengwe nako ye nngwe le ye nngwe ge o rekisetša rakgwabjana.

SWATI ★
O ka reka tshwanelo yotlhe ya go rekisa dihuno tsa letshwaotsho le le itsegeng thata. Tihwathlwa ke C\$15 000. Tshola thekete e mme o amogele gape C\$2 000 luno e lenngwe nako le nako fa o rekisetša dikgwabopotlana.

SWATI ★
U nga ha xava tinfanelo ta wena ntsena ta ku xavisa swikumiwa swa vito leri tšvekaka ngooptu. Hakelo ya kona ku ta va C\$15 000. Hlayisa thikithi leri naswona u kuma C\$2 000 yo engetela hi xikumiwa nkarhi hinkwawo loko u xavisele vazavisi.

SWATI ★
Vha nga renga pñanelo yavho vha vhothe ya u rengisa zwiiveledzwa zwa luswayo luno lwa divhea vhubakuma. Murengo ndi C\$15 000. Kha vha tare heyi thikithi, vha dovhe vha ngwe nga C\$2 000 kha tshibeledzwa tshinwe na tshinwe tshifhiga tshinwe na tshinwe tshine vha rengisele vharengisi.

SWATI ★
You can take up a loan immediately if you do not have any other loans, to allow you to move closer to an optimal capital structure.

SWATI ★
Ungaboleka imali ngaleso sikhathi uma ungenaso esinye isikweletji, ukuze ukwazi ukwakha imali yokuqala elinye ibhizinisi

SWATI ★
Ungenza imbolekomali ngoko nargoko ukuba awunazo ezinye imbolekomali, ukukumela ukusondela ngamandla kwisakhelo semali yentisusa.

SWATI ★
Jy kan onmiddelik 'n lening aangaan indien jy geen ander lenings het nie, ten einde nader aan 'n optimale kapitaalstruktuur te beweeg.

SWATI ★
Write a press release on your business's financial position and receive between C\$2 000 and C\$10 000 increased rental income depending on the evaluation of the other players.

SWATI ★
Bhala futhi ukhiphe ephandabeni ngesimo sakhokwezmali base uthola phakathi kwe-C\$2 000 nama-C\$10 000 ngenxa yokukhula kwemali engeniswa ukugqibisa ngendawo kuye ngokuthi bona abanye abadlalali lokho bakubuka kanjani.

SWATI ★
Bhala ingxelo epapashiwa kwiphaphandaba ngemo yezemali yeshishini lakho ze ufumane phakathi kwe-C\$2 000 ne-C\$10 000 yengeniso ekhulileyo yokugqibisa ngokuthome keke kuhlalutyo lwa banye abadlalali.

SWATI ★
Skrif 'n persverklaring oor jou besigheid se finansiële posisie en ontvang tussen C\$2 000 en C\$10 000 verhoogde huurinkomste na gelang van die ander spelers se beoordeeling daarvan.

SWATI ★
O ka tšea loune ka bonako ge e le gore o na le dioune tše dingwe, go go dumelela go batamela popego e kaone ya letlotlo

SWATI ★
O ka kopa kadimo ka bonako tša fa o sena dikamo tše dingwe, go go kgonitšha go sutelela kwa pejana mo sebopeong sa katlego sa kapetele.

SWATI ★
U nga teka xikweletji hi nkarhi wolowo loko u nga ri na swikweletji swin'wana, ku ku pfumelela ku tshunela kusuthi na xivumbeko xa mali xo antiswa

SWATI ★
Vha nga dzhia lounu na zwenzwo arali vha si na inwe lounu, u itela urti vha kone u vha tšini na tshivhumbeko tsha khephihala

SWA.T ★
The bank increases your overdraft by C\$50 000.

SWA.T ★
Ibhange ikhulisa imalimboleko yakho ngama-C\$50 000.

SWA.T ★
Ibhanki ikhulisa ilungele lakho lokusebenzisa i-overdraft ngama-C\$50 000.

SWA.T ★
Die bank vergroot u oortrokke fasiliteit met C\$50 000.

SWA.T ★
Panka e okeisa oubadrafte ya gago ka C\$50 000.

SWA.T ★
Banka e okeisa overdraft ya gago ka C\$50 000.

SWA.T ★
Bangl yi tiakusa mali ya xikweletl xa wena (overdraft) hi C\$50 000.

SWA.T ★
Bannga i engedza ovadiratluthi yavho nga C\$50 000.

Economic news cards



Economic News
Izindaba zomnotho
lindaba zoqoqosho
Ekonomiese Nuus
Ditaba tša ekonomi
Dikgang tsa ikonomi
Mahungu ya ikonomi
Marhango a zwa ikonomi



If share prices increased with the previous news on overall share prices, all share prices increase by 3 levels, otherwise share prices decrease by 3 levels.

★
★
★



Uma inani lamasheya likhuphuka ezindabeni ezedlule lapho kumanani amasheya ewonke, wonke amanani amasheya akhuphuka ngamabanga amathathu, ngaphandle kwaloko amanani amasheya ehla ngamazinga amathathu.

★
★
★



Ukuba amaxabiso esabelo anyukile kwiindaba ezidlulileyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngemigangatho emi-3, kungenjalo amaxabiso esabelo ehla ngemigangatho emi-3.

★
★
★



Indien aandeelpryse met die vorige nuus oor algehele aandeelpryse opwaarts beweeg het, neem alle aandeelpryse toe met 3 vlakke, so nie neem aandeelpryse af met 3 vlakke.

★
★
★



Ge theko ya dišere e oketšega ka ditaba tše di fetilego go ditheko tša dišere ka kakaretšo, ditheko ka moka tša dišere di oketšega ka dintlha tše 3, go sego bjalo ditheko tša dišere di fokotšega ka dintlha tše 3

★
★
★



Fa ditlhwathwa tsa dišere di thatlogiile le dikgang tse di fetileng tsa dišere tsothle, ditlhwathwa tsa dišere tsothle di namelela ka maemo a le 3, go seng jang ditlhwathwa tsa dišere di ya tlase ka maemo a le 3

★
★
★



Loko minxavo ya nkavelo yi tlakuka na mahungu lama nga hundza hi minxavo ya nkavelo hinkwayo, minxavo hinkwayo ya minkavelo yi tlakuka hi tilevhele ta 3, hambiswiritano minxavo ya minkavelo yi ya ehansi hi tilevhele ta 3.

★
★
★



Huno arali mitengo ya mikovhe ya engedzea na mafhungo o fheleho kha mitengogole ya mikovhe, mitengo yothe ya mikovhe i a engedzea nga levele tharu (3), zwa sa ralo mitengo ya mikovhe i a fhungudzea nga levele 3.

★
★
★



The holiday season has arrived. Traders receive C\$ 5 000 more on all product sales to wholesalers and retailers. Supermart's share price increases by one level.

★
★
★



Isikhathi sehohle sesifikile. Abahwebi bathola imali engaphezulu nge-C\$-5 000 kuyo yonke inikhiqizo ethengiselwa abezindali nabadayisi basezitolo. Inani lesheya lika-Supermat likhuphuke nginga elilodwa.

★
★
★



Ixesha leehohle lifikile. Abarhwebi bafumana ama-C\$5 000 ngaphezulu kuzo zonke iintengiso zemveliso kwiithoiseyile nabathengisi ngamasuntswana (oosovenkile). Ixabiso lesabelo se-Supermart linyuka ngomgangatho om- 1.

★
★
★



Die vakansieseisoen het aangebreek en handelaars ontvang C\$5 000 meer op alle produkverkope aan groot- en kleinhandelaars. Supermart se aandeelprys styg met 1 vlak.

★
★
★



Sehla sa makhutšo se fihlile, Bagwebi/babapatši ba amogela C\$5 000 go fetiša ditšweletšweng ka moka tša thekišo go diholosele le borakgwebjana. Ditheko tša dišere tša Suparmat

★
★
★



Setlha sa bolkhutšo se fihlile. Bagwebi ba amogela C\$5 000 go feta mo dithekisong tsa dikgwebokgole le dikgwebopotlana. Tlhwathwa ya šere ya Supermart e thatloga ka maemo a 1

★
★
★



Tinguva ta ku wisa ti fikile. Na vaxavisi va kuma C\$5 000 ku tlula eka swikumliwa hinkwaswo leswi xavisiwaka eka tlholisele na vaxavisi. Nxavo wa nkavelo wa Supermart wu ya ehentlha hi levhele ya 1.

★
★
★



Khalanwaha ya maduvha a vhuawelo yo swika. Murengisi o wana C\$5 000 ntha ha thengiso ya zwibveledzwa zwothe zwa a rengisela holosele na vharengisi. Mutengo wa mukovhe wa Supermart wo engedzea nga levele nthini (1).

★
★
★



Drought conditions lead to an increase in raw material and product prices by C\$2 000 per item. The demand for diesel decreases and East Oil's share price decreases by 1 level.

★
★
★



Isomiso senza ukuthi izinto zemvelo zokhuphuke Kanti namanani emikhiqizo akhuphuka nge-C\$2 000 umkhiqizo ngamunye. Kanti nokudingeka kwedizili kuyehla kanjalo nenani lesheya kaWoyela waseMpumatanga lehla nginga elilodwa.

★
★
★



limeko zembalela zikhokelela ekubeni amaxabiso esiveliso sendalo nawemveliso anyuke ngama-C\$2 000 ngento nganye. Intswelo yedizili iyehla nexabiso lesabelo se-East Oil lehla ngomgangatho om-1.

★
★
★



Droogtetoestande lei daartoe dat die kosprys van grondstof en produkte met C\$2 000 per item styg. Die vraag na diesel neem af en East Oil se aandeelprys daal met 1 vlak.

★
★
★



Maemo a komelelo a tliša koketšo ya materiale wo o sa songwago le ditheko tša ditšweletšwa ka C\$2 000 selong se sengwe le se sengwe. Nyako ya disele e a fokotšego gomme dišere tša ditheko tša Oil ya Bohlabela di fokotšega ka nthi e 1

★
★
★



Maemo a leuba a dirile gore go nne le koketsego ya ditlhwathwa tsa diretala le dikuno ka C\$2 000 nthlana. Tlhokego ya go fologa ga disele le tlhwathwa ya šere ya East Oil di fologa ka maemo a 1

★
★
★



Xiyimo xa dyandza xi vangela ku tlakuka ka minchumu yi mbisi na minxavo ya swikumliwa hi C\$2 000 hi nchumu. Xidingo xa disele xi ya ehansi naswona nxavo wa nkavelo wa Oyili ya le Vuxeni wu ya ehansi hi levhele ya 1.

★
★
★



Nyimele ya gomelelo i ita uri mitengo ya zwibveledzwa na zwishumiswa zwo tou raloho i engedzee nga C\$2 000 nga tshitenwa nga tshitenwa. Thodea ya disijili a tsa na uri mitengo wa mukovhe wa Ole ya Vhubvaduvha u a tsa nga levele nthini (1).

★
★
★



Growth in Eastern markets leads to the increase of raw material prices by C\$5 000 per item. East Oil's share price increases by 1 level.

- ★
- ★
- ★



Ukudlondlobala kwezimakethe zaseMpumalanga kukhuphula amanani ezinto eziyimvelo ngenani eliyi-C\$ 5 000 impahla iyinye. Inani lesheya kaWoyela waseMpumalanga likhuphuka ngezinga elilodwa.

- ★
- ★
- ★



Ukukhula kwimallke zaseMpuma (zase-Eastern) kukhokelela ekunyukeni kwamaxabiso eziveliso zendalo ngama-C\$5 000 ngemveliso nganye. Ixabiso lesabelo se-East Oil linyuka ngomgangatho om-1.

- ★
- ★
- ★



Groei in Oosterse markte laat die pryse van grondstof met C\$5 000 per item styg. East Oil se aandeelprys styg met 1 vlak.

- ★
- ★
- ★



Go gola ga mebaraka ya Bohlabela go hlola gore dithoko tša materiale wo o sa šongwago di oketšega ka \$5 000 selong se sengwe le se sengwe. Theko ya dišere tša Oli ya Bohlabela e oketšega ka ntlha e 1

- ★
- ★
- ★



Kgolo mo mebarakeng ya Bophirima e isa go koketsego ya dithwatlhwa tsa diretala ka C\$5 000 ntlhana. Sere ya tlhwatlhwa ya East Oil e oketsegile ka maemo 1

- ★
- ★
- ★



Ntlakuko eka timakete ta le Vexeni wu endla leswaku ku va na ku tlakuka eka minxavo ya swindliwa swi mbisi hi C\$5 000 hi xin'we. Nxavo wa nkavelo wa Oyili ya le Vuxeni wu tlakuka hi levhele ya 1.

- ★
- ★
- ★



Nyaluwo kha mimakete ya Vhubvaduvha i ita uri hu vhe na u gonya ha mitengo ya zwishumiswa zwo tou raloho nga C\$5 000 tshitenwa tshinwe na tshinwe.

- ★
- ★
- ★



Government spending increases due to extended infrastructure programmes. You may sell up to 10 products for C\$35 000 each. Construct Group's share price increases by 1 level.

- ★



Uchithomali lukahulumeni lona luyakhuphuka ngenxa yokukhula kwezinhlelo zezingalazizinda. Ungathengisa imikhiqizo efinyelele kweyishumi ngenani eliyi-C\$-35 000 umkhiqizo umunye. Inani lesheya lika-Construct Group likhuphuke

- ★



Iindleko zikaRhulumente zenyukile ngenxa yokwandiswa kweenkqubo zezibonelelo zokusebenza. Ungathengisa iimveliso ezili-10 ngexabiso lama-C\$35 000 ngemveliso nganye. Ixabiso lesabelo se-Construct Group linyuka ngomgangatho om-1.

- ★



Regeringsbesteding neem toe weens uitgebreide infrastruktuurprogramme. Jy kan tot 10 produkte vir C\$35 000 elk verkoop. Construct Group se aandeelprys styg met 1 vlak.

- ★



Ditshenyagalelo tša Mmušo di a oketšega ka baka la mananeo a infrastruktshe ao a oketšegago. O ka rekiša ditšweletšwa tše di ka fihlago go 10 ka

- ★



Go duela ga Puso go oketsegile ka ntlha ya manaane a dithulaganyetso tsa kago. O ka rekisa go fitlha dikuno tse 19 ka C\$35 000 e le nngwe. Tlwatlhwa ya šere ya Construct Group e

- ★



Ku tšhisa ka mali hi mfumo ka tlakuka hikwalaho ka ku engeteleka ka minongonoko ya switirhisiwa. U nga xavisa ku fika ka swikumiwa swa 10 hi C\$35 000 ha xin'we. Nxavo wa nkavelo wa Ntlawa wo Aka wu tlakuka hi levhele ya 1.

- ★



Tshumiso ya masheleni nga muvhuso i a ya ntha zwi tshl khou itlswa nga mbekanyamushumo dza inifurasitirakitsha dzo engedzwaho. Vha nga rengisa zwibvedzwa zwine zwa swika zwa fumi (10) nga

- ★



The government wants to build a new highway and nationalise one of your buildings for this purpose. Return any one of your property investments to the bank at 100% of the current value.

- ★



Uhulumeni ufuna ukwakha umgwaqo omusha omkhulu ngakho ufuna ukuthatha isakhiwo sakho kulokhu. Buyisela ebhange noma iyiphi enye yezindawo zakho ngenani eliyi 100% ngokwenani lamanje.

- ★



Urhulumente ufuna ukwakha uhloa wendlela entsha nokuthathela kwisizwe esinye sezakhiwo zakho ukuhlangabezana nale njongo. Buyisa naluphi na utyalomali twepropati yakho ebhankini ngexabiso langoku le-100%

- ★



Die regering wil 'n nuwe snelweg bou en nasionaliseer een van jou geboue. Gee enige eiendomsbelegging terug vir die bank teen 100% van die huidige waarde.

- ★



Mmušo o nyaka go aga tselakgolo ya setšhaba gomme o dira gore o tee wa meago ya gago o ba wa setšhaba ka baka le bušetša ye nngwe le ye nngwe ya e tee ya dithoto tša gago pankeng ka 100% ya theko ya bjale

- ★



Puso e batla go aga tselakgolo e ntšha le go dirakago e nngwe ya gago ya bosetšhaba ka ntlha ya lebaka le. Busetsa e nngwe ya dipelelto tsa gago tsa thoto kwa bankeng ka boleng ba ga jaana ba 100%.

- ★



Mfumo wu lava ku aka gonzo ra le henhla (highway) na ku endla wun'we wa mlako ya wena wu va wa rixaka hi xikongomelo lexi. Vuyisela vuvekisi bya wena bya muako ebangini hi 100% wa nkoka wa wona wa nkarhiwa sweswi.

- ★



Muvhuso u khou toda u fhata bada ntswa ya haiwei, ngauralo, hu khou todou dzhwiwa tshithi tsha zwifhato zwavho u itela hayo mafungo. Kha vha vhuisele murahu nthihi ya mbulungelo ya ndaka yavho kha bannga, musi hu tshi khou shumiswa 100% ya tshilleme tshire hone zwa zwino.

- ★

The government wants to encourage traders. Each player receives a subsidy of C\$1 000 for each product or raw material item that he/she owns.

Uhlumeni ufuna ukukhuthaza abahwebi. Lowo nalowo mhwebi ulhola umxhaso oyi- C\$1 000 ngalowo nalowo mikhqizo kumbe impahla eyimvelo anayo.

Urhulumente ufuna ukukhuthaza abahwebi. Umdlali ngamnye ufumana inkxasomali eic\$1 000 malunga nemveliso nganye okanye isiveliso sendalo anaso.

Die regering wil handelaars aanspoor. Elke speler ontvang C\$1 000 subsidie vir elke produk of roumateriaalitem waaroor hi/sy beskik.

Koketšo ya setšweletšwa e hlola difeise e goba phokoleiso. Infeise e fase ka 5%. Dihoko tša dihokotšo tša ditšweletšwa le tšona di fokotšega ka C\$2 000 setšweletšweng se sengwe le se sengwe

Go tihaglaa dikuno go go kwa godimo go baka kwetlase. Infeise e ya 5% e kwa tlase. Dithwathwa tsa thekiso ya dikuno di ta fokotšega ka C\$2 000 kuno

Ku tlakua ka matirhelo swi yisa eka ku ya ehansi. Infeise e hansi hi 5%. Nxavo wa le hansi wa swikumiwa na wona wu ya ehansi hi C\$2 000 hi xikumiwa.

Nyengedzedzo ya vhubveledzi zwi livhisa kha u tsa ha tshileme. Infeiseni i thasi nga 5%. Mitengo ya thengiso na yone yo tsa nga C\$2 nga tshibveledzwa nga tshibveledzwa.

Mimušo o nyaka go hloleletša borakwebjana. Mmapadi yo mongwe le yo mongwe o amogela thuso ya C\$1 000 setšweletšweng goba materialeng o mongwe le o mongwe wo o sa šongwago seo a nago le sona

Puso e batla go rotloetsa bagwebi. Motshameki mongwe le mongwe o amogela ketletšo ya C\$1 000 ya kuno mongwe le nngwe kgoisa mthana ya seretela seo a nang le sone.

Mfumo wu tsakela ku hlohlela vaxavisi. Mutlangi ha wun'we u ta kuma mali ya mpitšeto ya C\$1 000 hi xikumiwa ha xin'we kumbe xiendlwa xi mbisi lexi u nga na xona.

Muvhuso u toda u tutuwedza mafhungo a zwa makweho. Mutambi muuwe na muuwe u wana sabusidi ya C\$1 000 ya tshilenwa tshinwe na tshinwe tsha tshibveledzwa kana tshishumiswa tsho tou raloho

If share prices increased with the previous news on overall share prices, all share prices increase by 1 level, otherwise share prices decrease by 1 level.

Uma amanani amasheya ekhuphukile ezindabeni ezidlulileyo ezimaqondana namasheya ewonke, amanani amasheya akhuphuka ngezina elilodwa, ngaphandle kwalokho amanani amasheya ehla ngezina eli 1

Ukuba amaxabiso esabelo anyukile kwiindaba ezidlulileyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngomgangatho om-1, kungenjalo amaxabiso esabelo ehla ngomgangatho om-1.

Indien aandeelpryse met die vorige nuus oor algehele aandeelpryse opwaars beweeg het, neem alle aandeelpryse toe met 1 vlak, so nie neem pryse af met 1 vlak.

Increased production leads to deflation. Inflation is 5% lower. Sales prices of products also decrease by C\$2 000 per product.

Ukukhuphuka komkhqizo kudala ukwehla kwamanani. Ukwehla kwamandla emali kwehla ngama 5%. Mamanani enengiso ayehla nge-C\$2 000 umkhqizo umunye.

Ukukhula kwemveliso kukhokelela ekwehleni kwexabiso. Ukunyuka kwexabiso kunganawo kwe-5%. Amaxabiso okuthengisa limvelisonawo ayehla ngama-C\$2 000 ngemveliso nganye.

Beter produksie lei tot deflasie. Inflasie is 5% laer. Verkoopspryse van produkte daal ook met C\$2 000 per produk.

Ge theko ya dišere e okešega ge dilaba tša peleng o ditheko tša kakaretšo ya dišere, ditheko ka moka tša di okešega ka nth e 1, go sego bjalo ditheko tša dišere di fokotšega ka nth e 1

Fa dithwathwa tsa dišere di tlhathogile mo dikgang tse di fetileng mo dithwathweng tsa dišere tsothe, dithwathwa tsa dišere tsothe di tlhathoga ka maemo 1, go seng jalo dithwathwa

Loko nxavo wa nkavelo wu tlakua na mahungu la ma nga hundza eka minxavo hi ku angahela ya nkavelo, minxavo hinkwayo ya nkavelo ya tlakua hi levhele ya 1. Hambliswritano, nxavo wa nkavelo wu

Huno arali mitengo ya mikovhe yo gonyo na mathungo o fheleho kha mitengogute ya mikovhe, mitengo yothe ya mikovhe i do gonyo nga levele nthih (1), zwa sa ralo mitengo ya mikovhe i do tsa nga

Each player must pay 25% of his/her cash to the bank as income tax.

Lowo nalo wo mdiall kufanele akhokhe ama-25% kwimall yakhe ebhange njengamali yakhe engentle.

Umdlali ngamnye kutuneka ahlawule ama-25% emali yakhe ebhankini njengerhafu yengeniso.

Elke speler moet 25% van sy/haar kontant as inkomstebelasting aan die bank betaal.

Mmapadi yo mongwe le yo mongwe o swanetse go lefa 10% theko ya thoto ya gagwe ya bjale pankeng bjalo ka metshelo ya thoto

Motshameki mongwe le mongwe o tshwanetse go duela 10% ya boleng jwa thoto ya gagwe ya ga jana kwa bankeng jaaka lekgetho la thoto.

Mutlangi ha un we u ta hakele 10% ebangl ya nko ka ya mako wa yena wa nkarti wa swewi tani hi swibalo swa mako.

Mutambi munwe na munwe u tea u badela banna ga 10% ya tshilemu tshi re hone zwa zwino tsha ndaka yawe sa mthelo ya ndaka.

Mmapadi yo mongwe le yo mongwe o swanetse go lefa 25% ya tshelote ya gagwe pankeng bjalo ka motshelo wa ditseto

Motshameki mongwe le mongwe o tshwanetse go duela 25% ya madi a seateng kwa bankeng jaaka lekgetho la letseto

Mutlangi ha un we u fanele ku hakele 25% ebangl ya kheke ya yena tani hi kibalo.

Mutambi munwe na munwe u tea uri a badele 25% ya masheni awe kha banna ga sa mthelo wa mbuelo.

There is an increase in taxes on dividends. The listed companies decide no longer to pay dividends when players pass start.

Ikhuphukile intela kwimali eyizabelo. Izinkampani ezisulihwini zinqume ukungasayikhokhi imali eyizabelo uma ababambe iqhaza sebedullile ekugqeni.

Kukho ukwenyuka kweerhafu zezahlulo. Inkampani ezibhaliselweyo zifikelele isigqibo sokuyeka ukuhlawula izahlulo xa abadlali bedlula indawo yokugqalisa.

Daar is 'n verhoging in belasting op dividende. Die genoemde maatskappye besluit om nie meer dividende te betaal as spelers verby die begin gaan nie.

Each player must pay 10% of his/her current property value to the bank as property taxes.

Lowo nalo wo mdiall kufanele akhokhe ama-10% kwisiqil somhamba nomuzi anako akhokhele ibhange njengentela yomhamba nomuzi.

Umdlali ngamnye kutuneka ahlawule i-10% yexabiso langoku lepropati yakhe ebhankini njengerhafu yepropati.

Elke speler moet 10% van sy/haar huidige eiendomswaarde as eiendomsbelasting aan die bank betaal.

Go na le koketso ya makgetho dikarolong. Dikhamphani tseo di hlitlwego di tseba sepheto sa go sa lefa dikarolo ge barakhi ba feta go thoma

Go na le lithatogo ya makgetho mo dikaroganyong. Ditlamo tse di hlitlweg di sweetsa ka go sa duete dikaroganyo fa batshameki ba feta mo tshimologong

Ku na ku takuka ka swibalo eka masalewa Tikhaphanti lefi nga kaxameliwa ti teka xiboho xa ku ka ti nga ha hakeriwi masalewa loko vatlangi va hundza masungulo.

Hu na u engedzwa ha mthelo kha mikovhe (dividensi). Khamphani dzi re kha mutevhe dzo tshae fhu ngo la u sa tsha badela mikovhe musti vhatambi vha tshi pfuka fhehu ha u thoma



If share prices increased with the previous news on overall share prices, all share prices increase by 2 levels, otherwise share prices decrease by 2 levels.

★
★
★



Uma amanani amasheya ekhuphuka ezindabeni ezidlule kuwo wonke amanani amasheya, onke amanani amasheya enyuka ngamazinga ama-2, ngaphandle kwalokho amasheya ehla ngamazinga ama-2.

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Ukuba amaxabiso esabelo anyukile kwiindaba ezidlulileyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngemigangatho emi-2, kungenjalo amaxabiso esabelo ehla ngemigangatho emi-2.

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Indien aandeelpryse met die vorige nuus oor algehele aandeelpryse opwaarts beweeg het, neem alle aandeelpryse toe met 2 vlakke, so nie neem pryse af met 2 vlakke.

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Ge ditheko tša dišere di oketšega ge ditaba tša peleng go ditheko tša dišere tša kakaretšo, ditheko ka moka di oketšega ka dintlha tše 2, go sego bjalo ditheko tša dišere di fokotšega ka dintlha tše 2.

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Fa ditlhwathwa tsa dišere di oketšega le dikgang tse di fetileng mo ditlhwathweng tsa dišere tsothe, ditlhwathwa tsa dišere tsothe di oketšega ka maemo a 2, go seng jalo ditlhwathwa tsa dišere di fokotšega ka maemo a 2

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Loko minxavo ya nkavelo yi tlakuka na mahungu la ma nga hundza eka minxavo hi ku angarhela ya nkavelo, tihakelo hinkwato ta minkavelo ti tlakuka hi tilevhele ti 2, hambiswiritano, nxavo wa nkavelo wu ya ehansi hi tilevhele ti 2.

★
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Huno arali mitengo ya mukovhe ya gonya na mathungo o fhelaho a malugana na mitengogute ya mikovhe, mitengo yotho ya mikovhe i do gonya nga levele mbiii (2), zwa sa ralo mitengo ya mikovhe i do

★
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★



The reserve bank is worried about the economy and wants to reduce debt. If a player has more than one loan, one must be redeemed. Supermart's share price decreases by 1 level.

★
★
★



Ibhangwe likahulumeni likhathazekile ngezomnotho ngakho lifuna ukwehlisa isikweletu. Uma umdlali enesikweletu esingaphuzulu kwesisodwa, kufanele esisodwa sixolelwe. Inani lamasheya ka-Supermart lehla ngezinga eli-1.

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★



Ibhanki enguvimba ixhalabile malunga noqoqosho yaye ifuna ukuphunguza ityala. Ukuba umdlali unemboleko yemali engaphaya kwenye, kufuneka enye ipheliswe. Ixabiso lesabelo se-Supermart lehla ngomgangatho om-1.

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Die reserwebank is bekommerd oor die stand van die ekonomie en wil skuld verminder. As 'n speler meer as een lening het, moet een afgelos word. Supermart se aandeelprys daal met 1 vlak.

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Panka ya resefe e tshwenywa ke ekonomi gomme e nyaka go fokotšha sekoloto. Ge mmapadi a na le loune ya go feta e tee, motho o swanetše go fetotšwa theko ya šere ya Supermart ka ntlha e 1

★
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★



Banka ya rasefe e tshwenyegile ka ga ikonomi le ditlokego tsa go fokotsa molato. Fa motshameki a na le dikadimo tse di fetang nngwe, yo mongwe o tshwanetše go gololwa. Tlhwathwa ya šere ya Supermart e fokotšega ka maemo a 1

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Bangi ya le xikarhi yi vilela hi ikhonomi naswona ya lava ku hunguta xikweletu. Loko mutlangi a ri na swikweletu swo tiula xin'we, u fanele ku hundziseriwa hakelo ya nkavelo wa Supermart wu ya ehansi hi levele ya 1.

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★
★



Bannga ya Riseva (Vhukati) i khou vhaiaedzwa nga ha tshimo tsha ikonomi. I khou lwisa u fhelisa tshikolodo. Arali mutambi a na loune dzi no thira nthihi, nthihi yadzo i tea uri i range u llihiwa. Mutengo wa mikovhe ya Supermart yo tsa nga levele nthihi (1).

★
★
★



Strikes occur in the property sector due to poor circumstances in the city centre. Rent payments are stopped. No player will receive

★
★
★



Iziteleka ezibakhona kumkhakha wezindlu kungenxa yesimo esibi maphakathi nedolobha. Intela yezindlu ziyama. Kungasabikhona umdlali oqhubeka nokuthola imali eyintela yezindlu.

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Iintshukumo zoqhanqalazo ziyenzeka kwicandelo lepropati ngenxa yeemako ezingekho mgangathweni kumbindi wesixeko. Iintlawulo zokuqeshisa zimisiwe. Akukho mdlali uya

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Daar is stakings in die eiendomsektor weens swak toestande in die middestad. Huurbetalings word opgeskort. Geen speler sal enige verdere huurinkomste ontvang nie.

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Seteraeke se ba gona lekaleng la dithoto ka baka la mabaka a mabe toroponggare. Ditefo tša rente di a emišwa. Gago mmapadi yo a tlogo amogela ditseno tša rente

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Go a seteraeklwa mo setheong sa dithoto ka ntlha ya maemo a a bokoa mo bogareng jwa teropo. Dituelo tsa rente di a emišwa. Ga go motshameki yo o ka bonang lotseno lo longwe hwa rente.

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Switerekho swi humelela eka xiyenge xa miako hikwalaho ka leswi humelalaka exikarhi ka doroba. Ku hakeriwa ka rente ka yimisiwa. A ku na mutlangi la nga ta kuma rente yin'wana.

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Hu na tshitereke kha sekithara ya zwa ndaka zwi tshi khou itiswa nga nyimele mmbi ya maimo a fhasi kha senthara kana vhukati ha dorobo. Mbanelo dza rennde dzo imiswa. A hu na mutambi ane a do wana inwe mbuelo ya rennde.

★
★
★



An increase in the occurrence of HIV leads to increased absences from work. Pay C\$10 000 for temporary workers. Construction companies are severely affected. Construction Group's share price decreases by 1 level.

★
★
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Ukwanda kokhtasela kwesifo seNgculazi kudala ukuphutha okuningi emsebenzini. Inkokhelo ingu C\$10 000 kubasebenzi besikhashana. Izinkampani ezakha izakhiwo zithikamezeke kakhulu. Iqembu lezokwakha inani lalo lesheya lehla ngezinga eli-1.

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Ukwanda kokubakho kwe-HIV kukwanda kokungabikho emsebenzini. Hlawula ama-C\$10 000 kubasebenzi bethutyana. Iinkampani zokwakha zichaphazeleka kakubi. Ixabiso lesabelo se-Construct Group lehla ngomgangatho om-1.

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'n Toename in die voorkoms van HIV verhoog afwesighede by die werk. Betaal C\$10 000 vir tydelike werkers. Konstruksiematenskappe word swaar getref. Construction Group se aandeelprys daal met 1 vlak.

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Koketšo mo go hlaleng ga HIV go hlola koketšo ya go se be gona mošomong. Lefa bašomi ba lebakanyana C\$10 000. Dikhamphani tša go aga di amega o šoro. Theko ya dišera tša Sehlopha sa go Aga e fokotšega ka ntlha e 1.

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Koketsego ya tihagelelo ya HIV e baka go lofa go go kwa godimo kwa tirong. Go duelwa C\$10 000 ya badiri ba nakwana. Ditlamo tsa go aga di amiwa thata ke go ya tlase ga tihwathwa ya šere ya Construction

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Ku tlakuka ka xiyimo xa HIV ku vengela ku tlakuka ka ku xwa entirhweni. Ku hakeriwa ka C\$10 000 ka vatirhi va nkarhi nyana. Tikhamphani to aka ta khumbheka swinene. Nxavo wa nkavelo wa Mintlawa yo Aka wu ya ehansi hi levhele ya 1.

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U engedzea ha tshivhale tsha vhatu vhane vha vha na tshitsihli tsha HIV zwi vhangana uri hu loviwe mushumo nga vhezhi. Kha vha badale vhashumi vha tshifhinyanya C\$10 000. Khamphani dza vhuftati dzo kwamea vhuftati nga nyimele heyi. Mutengo wa mikovhe ya Tshigwada tsha Vhuftati wo fhungudzea nga levele nthihi (1).

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Speculation leads to large profit margins and inflation increases by 5%. Share prices increase by 1 level.

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Ukuqagela kuholela kwinzuzo enkulu ebekiwe bese namandla emali ehla ngama-5%. Amanani amasheya akhuphuka ngezinga eli-1.

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Ukuthengisa ngethemba lenzuzo kukhokelela kwimida emikhulu yenzuzo yaye nexabiso lemali lehla nge-5%. Amaxabiso ehla ngomgangatho om-1.

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Spekulatie lei tot groot winsmarges en inflasie neem toe met 5%. Aandeelprys styg met 1 vlak.

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Kakanyo e hlola bokaalo bja tšelete bjo bogolo bja poelo gomme infleišene e oketšega ka 5%. Ditheko tša dišere di oketšega ka ntlha e 1.

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Phopholetso e baka mela e megolo ya poelo le koketsego ya infleišene ka 5%. Dithwathwa tsa šere di oketšega ka maemo 1.

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Ku ehleketelela ku vengela mbuyelo wa le henhla wa timajini na ku tlakusa inflexini hi 5%. Minxavo ya nkavelo yi tlakuka hi levhele ya 1.

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U humbulela zwi ita uri hu vhe na phurofiti nanzhi vhuftati, na uri inifuleshene i a engedzea nga 5%. Mitengo ya mikovhe i a engedzea nga levele nthihi (1).

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The stronger US\$ puts pressure on profit margins. Receive C\$4 000 less per item on product sales to wholesalers and retailers. Supermart's share price decreases by 1 level.

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I-\$ eli-1 laseMelika lifa ka ingcindezi kwinzuzo enkulu ebekiwe. Thola ama- C\$4 000 ehlile kulokho nalokho kudayisela izindawo zezindali nabadayisi. Inani lesheya ka-Supermart lehla ngezinga eli-1.

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I-US\$ enamandla ixinzelela imida yenzuzo. Fumana ama-C\$4 000 nganeno kwintengiso nganye yemveliso kwihoiseyile nabathengisi ngamasuntswana (oosovenkile). Ixabiso lesabelo se-Supermart lehla ngomgangatho om-1.

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Die sterker VSA\$ plaas druk op winsmarges. Ontvang C\$4 000 minder per item op produkverkope aan groot- en kleinhandelaars. Supermart se aandeelprys daal met 1 vlak.

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Dolara ya US ye e matlafetšego e bea kgatelelo poelony bokaalo bja tšelete. Amogela phokotšego C\$4 000 selong se sengwe le se sengwe ditšweletšweng tšeo di rekišetšwago

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US\$ e e maatia e gatelela mela ya poelo. E amogela C\$4 000 kwa tlase nthana e lenngwe mo dithekisong tsa dikuno go dikgwebokgolo le dikgwebopotlana. Tihwathwa ya šere ya Supermart e fokotšega ka maemo a 1

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Ku tlakuka ka US\$ ku vengela ntshikelelo eka mbuyelo wa timajini. Kuma nchumu hi nxavo wa le hansi hi C\$4 000 ya minxavo ya le hansi ya swikumisa eka tiholosele na vaxavisi. Minxavo ya nkavelo wa Supermart wu ya ehansi hi levhele ya 1.

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U khwatha ha US\$ (Dolara ya Amerika) zwi vhangana mutsiko kha mafhungo a mbuelo. Kha vha wane masheleli ane a vha fhasi nga C\$4 000 nga tshitenwa nga tshitenwa kha thengiso ya zwibvelodzwa

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Trade agreements make exports easier. You may now export up to 10 products at normal export prices.



★

Izivumelwano zohwebo zenza kube lula ukuthumela ngaphandle impahla. Manje usungathumel imikhqizo eFika kweyi-10 ngamanani alwazetyekile.



★

Izivumelwano zohwebo zenza ukuthumela ngaphandle kube lula. Ngoku ungathumela ngaphandle ukuya kuma kwimveliso ezili-10 ngamaxabiso aqhelekileyo okuthumela ngaphandle.



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Handelssooreenkomsten maak uitvoere makliker. Jy mag nou tot 10 produkte uitvoer teen normale uitvoerpryse.



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Ge thoko ya disere e okefega go ditaba tsa peleng go ditheko tsa kakaretso ya disere, ditheko ka moka tsa di okefega ka nthla e 1, go sego bjalo ditheko tsa disere di fokotsega ka nthla e 1



★★★

Fa dithathwa tsa disere di tlhathogile mo dikgang tse di feleng mo dithathheng tsa disere tsothe, dithathwa tsa disere tsothe di tlhathoga ka maemo 1, go seng jalo dithathwa tsa disere di fokotsega ka maemo 1.



★★★

Loko nxavo wa nkavelo wu tlakuka na mahungula ma nga hundza eka minxavo hi ku angarhela ya nkavelo, minxavo hinxavo ya nkavelo ya tlakuka hi levhela ya 1. Hambiswirilano, nxavo wa nkavelo wu ya ehansi hi levhela ya 1.



★★★

Huno arali mitengo ya mikovhe yo gonya na mafhungo o fhelaho kha mitengogute ya mikovhe, mitengo yotho ya mikovhe i do gonya nga levele nthihi (1), zwa sa ralo mitengo ya mikovhe i do tsa nga



★★★

Ditumelano tsa kgwebo di dira gore diyantle di be bonolo. Gabjale o ka isa ntle ditwetswa tse di ka fihlago go 10 ka ditheko tse ditlwaegilego tsa go isa ntle



★

Ditumelano tsa kgwebo di dira bonolo go romelantle. Jaanong o ka romelantle go filha dikuno tse 10 ka tlhathwa e e siameng ya ditromelwantle.



★

Mintwanano ya mabindzu yi endla nxaviselano na matiko wu olova. Sweswi u nga xavisela matiko ya le handle ku fika ka 10 wa swikumiwa hi minxavo ya ntlovelo yo xavisela matiko ya le handle.



★

Thendelano ya zwa makwehvo zwi ita uri mathungo a zwa u lunda thundu dzi tshi ya mastangoni a nnda. Zwa zwiho vha nga tunda zwiweledzwa zwiine zwa swika 10 nga mutengo wa u lunda wo doweleatho une wa pfeesesa.



★

Trade unions demand better benefits. No products may be produced unless a manufacturer is prepared to pay C\$10 000 in bonuses before he/she buys any raw material or hires any labourers.



★★★

Izinyunyana zifuna izinzuzo ezingcono. Ingenziwe imkhqizo ngaphandle uma abakhqizi bezimisele ukukhokha C\$10 000 kube amabhonasi ngaphambi kokuthenga izinto eziyimvelo kumbe baqashe abasebenzi.



★★★

Imibutho yabasebenzi ifuna linzuzo ezingcono. Akukho zimveliso zinokuveliswa ngaphandle xa umvelisi ezimisele ukuhlawula i-C\$ 10 000 ngeebhonasi phambi kokuba athenge naziphi izivelliso zendalo okanye aqashe nabaphi na abasebenzi.



★★★

Vakbonde eis beter voordede. Geen produkte mag vervaardig word nie tensy'n vervaardiger bereid is om C\$10 000 se bonusse te betaal voordat hy/sy enige grondstof aankoop of enige arbeiders huur.



★★★

If share prices increased with the previous news on overall share prices, all share prices increase by 1 level, otherwise share prices decrease by 1 level.



★★★

Uma amanani amasheya ekhuphukile ezindabeni ezadlule ezimaqondana namasheya ewonke, wonke amanani amasheya akhuphuka ngezinga elifodwa, ngaphandle kwalokho amanani amasheya ehla ngezinga eli 1



★★★

Ukuba amaxabiso esabelo anyukile kwiindaba ezidlulileyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngomgangatho om-1, kungenjalo amaxabiso esabelo ehla ngomgangatho om-1.



★★★

Indien aandeeipryse met die vorige nuus oor algehele aandeeipryse opwaarts beweeg het, neem alle aandeeipryse toe met 1 vlak, so nie neem pryse af met 1 vlak.



★★★

Mekgato ya bašomi e nyaka dikholego tše kaone. Gago ditwetswa tše di ka tšweletšwago ntle le ge e le gore modiri o ikemiseditše go lefa diponase tša C\$10 000 pele a reka materiale o wo sa šongwago goba a hira bašomi bafe goba bafe.



★★★

Mekgatho ya badiri e batla ditshiamelo tse di botoka. Ga go na dikuno tse di ka ntshiwang ntle le fa mothlami a ikaeletse go ka duela C\$10 000 ya dibonase pele a reka seretela sengwe kgotša a hira badiri bangwe.



★★★

Minhlango yo yimela vatirhi yi lava mimbuyelo yo aniswa. A ku na swikumiwa leswi nga endlilwaka handle ka loko muendli wa swona a tlulamiserele ku hakela C\$10 000 hi tibonasi loko a xava nchumu wu'hwana na wu'hwana wu mbisi kumbe ku thola vatirhi.



★★★

Madzangano a vhashumi a toda mbuelo mbuya. A hu na tshibveladzwa tshine tsha nga bveladzwa nga nnda ha musi mumsagi o ditimisele u badela bonasi ya C\$10 000 murahu ha musi a tshi nga renga tshinwe tshibveladzwa tsho tou ralo ho kana u hayara vhanwe vhashumi.



★★★



An increase in the money supply leads to an inflation increase of 5%. Traders take advantage of the situation and this leads to a further inflation increase of 5%.



Ukwanda kwemali kuholela ekwihlwi kwamandla emali ngama-5%. Abahwebi bayasisebenzisa isimo lokho bese kwenza isimo siba sibi ngamanye ama-5%.



Ukwanda kokubonelelwa kwemali kukhokelela ekukhuleni kwamaxabiso nge-5%. Abahwebi bathatha ihuba lemeko yaye oku kukhokelela kokunye ukukhula nge-5% kwamaxabiso.



'n Toename in die geldvoorraad veroorsaak dat inflasie met 5% styg. Handelaars buit die situasie uit en veroorsaak 'n verdere inflasiestyging van 5%.



Koketšo go kabo ya ditšhelete go hlola koketšo ya infleišene ka 5%. Bagwebi ba holega ka maemo gomme se se holagape koketšo ya infleišene ya 5%.



Koketsego ya theso ya tšhelete e baka koketsego ya infoleišene ya 5%. Bagwebi ba dirisa tšhono ya maemo a mme se se baka koketsego e nngwe ya infoleišene ya 5%.



Ku tlakuka ka ku humesiwa ka mali ku vangela ku tlakuka ka inflexini hi 5%. Vamabindzu va tirhisa xiyimo lexi naswona leswi swi vangela ku tlakuka ko ya emahlweni ka inflexini hi 5%.



Nyengedzedzo ya neshedzo ya masheleni zwi itisa uri inifulesheni i engedzee nga 5%. Vharengisi vha a mbo di tavhanya vha shumisa nyimele iyo, zwa itisa uri hu dovhe hafu hu vhe na u engedzea ha inifulesheni nga 5%.



Because of an increase in unemployment, sales in the informal sector increase as more people turn to this sector for providing an income. Sales prices of products to retailers decrease by



Ngenxa yokweseleka kwemisebenzi, ukuthengisa kumkhakha ongamisiwe ngokomthetho kuyakhula ngenxa yokuthi iningi labantu yilapho likwazi ukubalekela khona ukuze bakwazi ukuziphilisa. Amanani abathengisi wona abe esehla ngama-C\$-2 000 impahla ngayinye.



Ngenxa yokunyuka kokuswela ingqesho, iintengiso kwicandelo elingekho sikweni ziyakhula njengoko abantu abaninzi besiya kweli candelo ukubonelela ngengeniso. Amaxabiso okuthengisa iimveliso koosovenkile ayehla ngama-C\$2 000 ngemveliso nganye.



Weens 'n toename in werkloosheid neem verkope in die informele sektor toe soos wat meer mense hulle tot die sektor wend vir 'n inkomste. Verkoopspryse van produkte aan kleinhandelaars daal met C\$2 000 per item.



Ka baka la koketšo ya tlokego ya mošomo, dithekišo dikarolong tšeo e sego tša tlwaelo di oketšega ge batho ba bantši ba eya dikarolong tše go fana ka ditseno. Ditheko tša dithekišo tša ditšweletšwa go borakgwebjana di fokotšega ka C\$2 000 selong se sengwe le se sengwe.



Ka ntlha ya koketsego ya botlhokatiro, dithekišo mo setheong se se sa rulaganang di oketsega fa batho ba bantši ba tla mo setheong se go neelana ka lotseno. Ditlhwatlhwa tsa dithekišo tsa dikuno tsa bagwebipotlana di fokotsega ka C\$2 000 ntlhana.



Hikwalaho ka ku ya ehenhla ka ku pfumaleka ka mintirho, minxavo eka timakete to ka tl nga ri ta ximfumo ta tlakuka hi laha vanhu va jikelaka eka xiyenge lexi ku kuma ku hanya. Minxavo ya le hansi ya swikumiswa eka vaxavisi yi ya ehansi hi C\$2 000 hi cnhumu.



Nyengedzedzo ya vhusayamishumo i lisa uri thengo kha sekithara dzi e dza tshiofisi dzi engedzee sa izwi vhnzhi ha vhatu vha tshi gidimela kha sekithara idzi uri vha kone u vhuvelwa. Mitengo ya thengiso ya zwibveledzwa kha vharengisi i a fhungudzea nga C\$2 000 nga tshitenwa nga tshitenwa.



The government wants to promote job creation. If you have no debt, you may take out a maximum of 2 loans.



Uhulumeni ufuna ukwakha amathuba emisebenzi. Uma ungenasikweleti, ungenza izikweleti ezimbili.



Urhulumente ufuna ukukhuthaza ukudalwa kwemisebenzi. Ukuba awunalo ityala, ungathatha amatyala ama-2 okulelona nani liphezulu.



Die regering wil werkskepping aanmoedig. Indien jy geen skuld het nie mag jy tot en met 2 lenings aangaan.



Mmušo o nyaka go tšwetšapele tlokego ya mešomo. Ge o se na sekoloto o ka tšea maksimamo wa diloune tše 2.



Puso e batla go rotletsa tlhomo ya ditiro. Fa o se na sekoloto, o ka tsaya maksimamo ya dikadimo tse 2.



Mfumo wu lava ku tlakusa ku vangwiwa ka mintirho. Loko u nga ri na xikweleti, u nga teka xikweleti xa makzimamu ya swikweleti swi 2.



Muvhuso u khou todou tutuwedza vhusimamishumo. Arali vha si na tshikolodo, vha nga dzhia lonu mbili (2).



The demand for foreign currency increases due to more capital goods imports. The exchange rate depreciates and increases with 0,25 to the US\$.



★ ★ ★

Ukufuneka kwemali yangaphandle kuya kukhula ngenxa yokungeniswa kwempahla yokusimamisa ibizininisi ezweni. Izinga lokushinisa imali iyehla bese likhula nge-0,25 kwi-US\$.



★ ★ ★

Intswelo yemali yangaphandle iyakhula ngenxa yeempahla ezongezelelweyo ezinkulu ezingenayo. Ireyithi yotshintshiselano iyehla yaye inyuka nge-0,25 kwi-US\$.



★ ★ ★

Die vraag na buitelandse valuta neem toe weens meer kapitaalgoedere-invoere. Die wisselkoers deprimeer en styg met 0,25 teen die VSA\$.



★ ★ ★

Ge theko ya disere e oketsega ge ditaba tsa peleng go diheko tsa kakaretso ya disere, diheko ka moka tsa di oketsega ka nthla e 1, go sego bjalo ditheko tsa disere di fokotsega ka nthla e 1



★ ★ ★

Fa dithwathwa tsa disere di thathogile mo dikgang tse di fetileng mo dithwatheng tsa disere tsothe, dithwathwa tsa disere tsothe di thathoga ka maemo 1, go seng jalo dithwathwa tsa disere di fokotsega ka maemo 1.



★ ★ ★

Loko nxavo wa nkavelo wu tlakuka na mahungu la ma nga hundza eka minxavo hi ku angarhela ya nkavelo, minxavo hinkxavo ya nkavelo ya tlakuka hi levhele ya 1. Hambiswirritano, nxavo wa nkavelo wu ya ehansi hi levhele ya 1.



★ ★ ★

Huno arali mitengo ya mikovhe yo gonya na mafungo o fheleho kha mitengogute ya mikovhe, mitengo yothle ya mikovhe i do gonya nga levele nthihi (1), zwa sa ralo mitengo ya mikovhe i do tsa nga levele nthihi.



★ ★ ★

Myakego ya tshelate e seie e oketsega ka baka la tshelate ya dithoto tsa go rekwa ka ntle. Tekanyetso ya phetošišo e fokotšega ka theko gomme ya oketsega ka 0,25 kgahlanong le dolara ya US



★ ★ ★

Thokego ya madi a dinaga di seie e a oketsega ka nthla ya dithoto tse diromelwangteng tsa tsa kapetlele e ntsi. Kelo ya kanaanyo e ya tšase mme oketsega ka 0,25 go US\$.



★ ★ ★

Xidingo xa timali ta matiko ya le handle xa tlakuka hikwajaho ka ku xavisela matiko ya le handle swimakwiwa. Nkaviselano wa timali wa hunguteka naswona wa tlakuka hi 0, 25 eka US\$.



★ ★ ★

Thodesa ya mashelani a mnda i a engdeza zwi tshi khou, itiswa nga vhumzhi ha thundu dzine dza tundwa mashangoni a mnda. Tshikalo tsha mutshinshano tshi a sekana na u engdeza nga 0,25 mus!



★ ★ ★

Due to the approaching election fewer foreigners invest in the country. The exchange rate depreciates and is 0,25 higher against the US\$.



★ ★ ★

Ngenxa yokhethe oluzayo bayancipha abantu abaqhamuka ngaphandle abafuna ukutshala imali ezweni. Izinga lokushinshisa imali iyehla futhi selikhuphuke ngo 0,25 uma liqhathaniswa ne-US\$.



★ ★ ★

Ngenxa yokhethe oluzayo bambalwa abezizwe abityala imali elizweni. Ireyithi yotshintshiselano iyehla yaye inyuka nge-0,25 kwi-US\$.



★ ★ ★

Weens die naderende verkiesing investeer minder buitelanders in die land. Die wisselkoers deprimeer en styg met 0,25 teen die VSA\$.



★ ★ ★

If share prices increased with the previous news on overall share prices, all share prices increase by 1 level, otherwise share prices decrease by 1 level.



★ ★ ★

Uma amanani amashaya ekhuphukile ezindabeni ezedlule ezimazondana namashaya ewonke, wonke amanani amashaya akhuphuka ngezinga ellodwa, ngaphandle kwalokho amanani amashaya ehla ngezinga eli 1



★ ★ ★

Ukuba amaxabiso esabelo anyukie kwilindaba ezidlulileyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngomgangatho om-1, kungenjalo amaxabiso esabelo ehla ngomgangatho om-1.



★ ★ ★

Indien aandeelepryse met die vorige nuus oor algehele aandeelepryse opwaarts beweeg het, neem alle aandeelepryse toe met 1 vlak, so nie neem pryse af met 1 vlak.



★ ★ ★

Ka baka la go batamela ga dikgetho batswantle ba bannyane ba beelata ka nageng. Tekanyetso ya phetošišo e fokotšega ka theko gomme ya ba godimo ka 0,25 kgahlanong le dolara ya US.



★ ★ ★

Ka nthla ya dithopho tse di liang basele ba le mmalwa ba beelata mo nageng. Kelo ya kanaanyo e ya tšase mme e kwa godimo ka 0,25 kgathlanong le US\$.



★ ★ ★

Hikwajaho ka nhlawulo lowu taka, vavekisi va matiko ya le handle i va ntsongo laha tlweni. Nkaviselano wa timali wa hunguteka naswona wu va ehantsha hi 0, 25 eka US\$.



★ ★ ★

Tshivhalo tshikutukuku tsha vhatshu vhasiili vha ita mbulungelo fhamo shangoni zwi tshi khou itiswa nga khetho dzine dza khou da hu si kale. Tshikalo tsha mutshinshano tshi a sekana tsha vha nthla nga 0,25 mus! zwi tshi vhambedzwa na US\$.



★ ★ ★

The economy is in recession. The demand for foreign products decreases. The exchange rate appreciates and is 0.25 lower against the US\$. Share prices decrease by 2 levels.



★ ★ ★

Ziyantengantenga Ezomnotho. Kuyehla ukufuneka kwemikhiqizo yangaphandle. Intela yokushintshisana ngemali iya iba ngocono futhi yehle ngo 0.25 uma iqhathaniswa ne-US\$. Amanani amashaya ehle ngamazanga ama-2.



★ ★ ★

Uqoqosho lurhoxile. Intswelo yeeveliso zangaphandle iyehla. Ireyithi yotshintshiselano iyenyuka yaye iyi-0.25 ngaphantsi kwe-US\$. Amaxabiso esabelo ehla ngemgangatho emi-2.



★ ★ ★

Die ekonomie is in 'n recessie. Die vraag na buitelandse produkte daal. Die wisselkoers appreëteer en daal met 0.25 teen die VSA\$. Aandeelpryse daal met 2 vlakke.



★ ★ ★

Go theko ya disere e oketséga go ditaba tsa peleng go ditheko tsa kakarato ya disere, ditheko ka moka tsa di oketséga ka nthla e 1, go sego bjalo ditheko tsa disere di fokotšega ka nthla e 1



★ ★ ★

Fa ditlhwathwa tsa disere di tlhathogile mo dikgang tse di fetileng mo ditlhwatheng tsa disere tsothe, ditlhwathwa tsa disere tsothe di tlhathoga ka maemo 1, go seng jalo ditlhwathwa tsa disere di fokotsa



★ ★ ★

Loko nxavo wa nkavelo wu tlakuka na mahungu la ma nga hundza eka minxavo hi ku angarhela ya nkavelo, minxavo hinkwayo ya nkavelo ya tlakuka hi levhele ya 1. Hambiswirritano, mxavo wa nkavelo wu ya ehansi hi levhele ya 1.



★ ★ ★

Humo arali mitengo ya mikovhe yo gonya na mafhungo o hlahlo kha mitengogule ya mikovhe, mitengo yovhe ya mikovhe i do gonya nga levele nthlhi (1), zwa sa ralo mitengo ya mikovhe i do tsa nga nga



★ ★ ★

Ekonomi e resefeneng goba e theogong. Nyako ya ditlhwatlwa di šele e a theoga. Tekanyetšo ya phetošeto e oketséga gomme e ba fase ka 0.25 kgathlanong le dolara ya US. Dithekišo tša disere di fokotšega ka dintlha tše 2.



★ ★ ★

Ikonomi e mo boikhušong. Tlhokego ya dikuno tsa kwa nthle e a fokotšega. Kelo ya kanaanyo e kwa tlase ka 0.25 kgathlanong le US\$. Dithlwathwa tsa disere di fokotšega tsa maemo a 2.



★ ★ ★

Ikhonomi ya tikerwa. Xidingo xa swikumiwa swa matlko ya le handle wu ya ehansi. Nxaviselano wa timali wa engeteleka naswona wu va 0.25 eka US\$. Minxavo ya nkavelo yi ya ehansi hi tilevhele timbirhi.



★ ★ ★

Ikonomi i kha tšhimo tšhivhi vhekuma. Thodea ya zwilveldzwa zwi bvaho mashangoni a nnda i a fhungudzea. Tshikalo tsha mutshintshano tshi a khwatha tsha vha fhasi nga 0.25 musu zwi tshi vhambe



★ ★ ★

The exchange rate depreciates due to speculation, and increases by 0.25 against the US\$. Vast Exploration's share price increases by 2 levels and East Oil's share price decreases by 1 level.



★ ★ ★

Intela yokushintshisana ngemali iyakhuphuka ngenxa yokuqeqela, futhi ikhuphuke ngo 0.25 uma iqhathaniswa neUS\$. Amanani amakhulu okukhankasela uwoyela akhuphuke ngamazanga ama-2 kanti nenani lesheya laseMpumalanga lehle ngezanga eli-1.



★ ★ ★

Ireyithi yotshintshiselano yehla ngenxa yokuhenga ngethemba lenzuzo, yave linyuka nge-0.25 kwi-US\$. Ixabiso lesabelo seVast Exploration linyuka ngemgangatho emi-2 ze Ixabiso lesabelo se-East Oil lehle ngomgangatho om-1.



★ ★ ★

Weens spekulasie depressieer die wisselkoers, en stig met 0.25 teen die VSA\$. Vast Exploration se aandeelprys stig met 2 vlakke en East Oil se aandeelprys daal met 1 vlak.



★ ★ ★

If share prices increased with the previous news on overall share prices, all share prices increase by 1 level, otherwise share prices decrease by 1 level.



★ ★ ★

Uma amanani amashaya ekhuphukile ezindabeni ezedlule ezimaqondana namashaya ewonke, wonke amanani amashaya akhuphuka ngezanga ellidwa, ngaphandle kwalokho amanani amashaya ehla ngezanga eli 1



★ ★ ★

Ukuba amaxabiso esabelo anyukile kwilindaba ezidluleyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngomgangatho om-1, kungenjalo amaxabiso esabelo ehla ngomgangatho om-1.



★ ★ ★

Indian aandeelpryse met die vorige nuus oor algehele aandeelpryse opwaarts beweeg het, neem alle aandeelpryse toe met 1 vlak, so nie neem pryse af met 1 vlak.



★ ★ ★

Tekanyetšo ya phetošeto e fokotšega ka theko ka baka la dikakanyo, gomme e oketséga ka 0.25 kgathlanong le dolara ya US. Thekišo ya disere tša Tihlotšeto e Kgoro e oketséga ka dintlha tše 2 gomme theko ya disere tša Oil ya Bohlabela di fokotšega ka nthla e 1.



★ ★ ★

Kelo ya kanaanyo e ya kwa tlase ka nthla ya fopholeiso, mme e oketséga ka 0.25 kgathlanong le US\$. Thlwathwa ya šere ya Vast Exploration e oketséga ka maemo a 2 mme šere ya East Oil e fokotšega ka maemo a 1.



★ ★ ★

Xiyimo xa nxaviselano wa timali xa hunguteka hikwalaho ko ehleketela naswona wu tlakuka hi 0.25 eka US\$. Nxavo wa nkavelo wa Vulavavisi Lebyikulu wu tlakuka hi tilevhele ti 2 naswona nxavo wa nkavelo wa Oylil ya Vuxa wu ya ehansi hi levhele ya 1.



★ ★ ★

Tshikalo tsha mutshintshano tshi a sekena zwi tshi khou litswa nga khumbulela, zwa sia i tshi engedzea nga 0.25 musu zwi tshi vhambedzwa na US\$. Mitengo ya mikovhe ya "Vast Exploration" i a engedzea nga levele mbili (2). Mitengo ya mikovhe ya Oilil ya Vhubvadvuwa i a fhungudzea nga levele nthlhi (1).



★ ★ ★

★ ★ ★ ★ ★
 The exchange rate appreciates and decreases by 0,25 against the US\$. This enables the reserve bank to decrease the interest rate by 5%.

★ ★ ★ ★ ★
 Intela yokushintshisana ngemali yehle ngo 0-25 uma iqhathaniswa neUS\$. Lokhu kwenza ukuthi ibhange likhulumeni likwazi ukwehlisa inzalo ngezinga elinga-5%.

★ ★ ★ ★ ★
 Ireythi yotshintshiselano iyenyuka ze yehle nge-0,25 kwi-US\$. Oku kwenza ibhanki enguimba yehise ireythi yenza nge-5%.

★ ★ ★ ★ ★
 Die wisselkoers appresieer en daal met 0,25 teen die VSA\$. Dit stel die reserwepank in staat om rentekoerse met 5% te verlaag.

★ ★ ★ ★ ★
 Tekanyetso ya pheletošo e a fokotšega gomme ya oketšega ka 0-25 kgathlanong le dolara ya US. Panka ya resefe e swanetše go oketša tekanyetso ya tswalo ka 5%.

★ ★ ★ ★ ★
 Kelo ya kanaanyo e ya base mme e oketšega ka 0,25 kgathlanong le US\$. Banka ya resefe e tshwanela ke go oketša kelo ya morokotso ka 5%.

★ ★ ★ ★ ★
 Mpmo wa naxaviselano wa timali wa hunguleka naswona wu tlakuka hi 0,25 eka US\$. Bangi ya le xikarhi yo fanela ku tlakusa mpmo wa mbuyelo hi 5%.

★ ★ ★ ★ ★
 Tshikalo tsha mutshintshano tshi sekena tsha engedzea nga 0,25 musi hu vhambedzwa na US\$. Hezwi zwi ita uri bannga ya riseva i engedze tshikalo tsha nzwalalo nga 5%.

★ ★ ★ ★ ★
 Tekanyetso ya tswalo e oketšega gomme ya fokotšega ka 0-25 kga. hlanong le dolara ya US Se sekgontšha panke ya resefe go fokotša tekanyetšo ya tswalo ka 5%.

★ ★ ★ ★ ★
 Kelo ya kanaanyo e ya kwa godimo mme fokotšega ka 0,25 kgathlanong le US\$. Se se kgontšha banka ya rasafe go fokotša kelo ya morokotso ka 5%.

★ ★ ★ ★ ★
 Xiyimo xa naxaviselano xa engetleka naswona xi ya ehansi hi 0,25 eka US\$. Leswi swi endla leswaku bangi ya le xikarhi yi yisa ehansi xiyimo xa mbuyelo hi 5%.

★ ★ ★ ★ ★
 Tshikalo tsha mutshintshano tshi a khwalha tsha thungudzea nga 0,25 musi hu vhambedzwa na US\$. Hezwi zwi ita uri bannga ya riseva i thungudze tshikalo tsha nzwalalo nga 5%.

★ ★ ★ ★ ★
 To promote investment, the reserve bank decreases the interest rate by 5%. All share prices increase by 2 levels.

★ ★ ★ ★ ★
 Ukukhuzaza utshalomali, ibhange likhulumeni lehisa izinga lenzalo ngamaphuzzu angama-5%. Onke amanani amashaya akhuphuke ngamazinga ama-2.

★ ★ ★ ★ ★
 Ukukhuzaza utyalomali, ibhanki enguimba yehisa ireythi yenza nge-5%. Onke amaxabiso esabelo anyuka ngemgangatho emi-2.

★ ★ ★ ★ ★
 Ten einde investering aan te moedig, verlaag die reserwepank rentekoerse met 5%. Andeelpryse styg met 2 vlakke.

★ ★ ★ ★ ★
 The exchange rate depreciates and increases by 0,25 against the US\$. The reserve bank has to increase the interest rate by 5%.

★ ★ ★ ★ ★
 Intela yokushintshisana ngemali iya iba yimbi futhi ikhuphuke ngo 0-25 uma iqhathaniswa ne-US\$. Ibhange likhulumeni kwafanele likhuphule intela ngama-5%.

★ ★ ★ ★ ★
 Ireythi yotshintshiselano iyenyuka ze inyuke nge-0,25 kwi-US\$. Ibhanki enguimba kufuneka inyuse ireythi yenza nge-5%.

★ ★ ★ ★ ★
 Die wisselkoers deprecieer en styg met 0,25 teen die VSA\$. Dit noodsaak die reserwepank om rentekoerse met 5% te verhoog.

★ ★ ★ ★ ★
 Go tšwetšapele dipeelo, panke ya resefe e fokotša tekanyetšo ya tswalo ka 5%. Ditheko ka moka tša dišere di oketšega ka ntlha e 1.

★ ★ ★ ★ ★
 Go rotloetsa peeletso, banka ya rasafe e fokotša kelo ya morokotso ka 5%. Ditlithwathwa tsa dišere tsothe di oketšega ka maemo a 2.

★ ★ ★ ★ ★
 Ku tlakusa vuvekisi, bangi ya le xikarhi yi yisa ehansi mpmo wa mbuyelo hi 5%. Minxavo hinkwayo ya nkavelelo yi tlakuka hi tlivhele timbirhi.

★ ★ ★ ★ ★
 Bannga ya riseva i a thungudza tshikalo tsha nzwalalo nga 5% hu u itela u kungaka kana u lutuwedza mathungo a zwa mbulungelo. Mitengo yotho ya mikovhe i a engedzea nga lebele mbili (2).



Consumer spending increases dramatically and inflation increases by 5%. Share prices increase by 1 level. The reserve bank increases the interest rate by 5%.



Abathengi basebenzisa imali eningi bethenga bese amandla emali ehla ngama-5%. Amanani amasheya akhuphuka ngezina eli-1. Ibhange likahulumeni likhuphula inzalo ngama-5%.



Abasebenzisi benyusa intsebenziso kakhulu yaye kukhula amaxabiso nge-5%. Amaxabiso anyuka ngomgangatho om-1. Ibhanki enguvimba inyusa ireyithi zenzala nge-5%.



Verbruikersbesteding neem skerp toe en inflasie styg met 5%. Aandeelpryse styg met 1 vlak. Die reserwebank verhoog rentekoerse met 5%.



Tšhomišo ya tšhelete ka bašomiši e oketšega kudu gomme le infleišene e oketšega ka 5%. Ditheko tas dišere di oketšega ka ntliha e 1. Panka ya resefe e oketša tekanyetšo ya tswalo ka 5%.



Dittheko tsa badirisi di ya kwa godimo thata mme infoleišene e oketšega ka 5%. Ditlhwatlhwa tsa dišere di oketšega ka maemo 1. Banka ya rasefe e oketsa kelo ya morokotso ka 5%.



Ku tirhisa ka timali hi vaxavi ku ya ehenhla hi xihalla naswona inflexini yi tlakuka hi 5%. Minxavo ya nkavelo yi tlakuka hi levhele ya 1. Bangi ya le xikarhi yi tlakusa mpimo wa mbuyelo hi 5%.



Kurengele kha vharengi ku a engedzea nga ndila i mangadzaho. Inifulesheni i a engedzea nga 5%. Mitengo ya mikovhe i a engedzea nga levele nthihi. Bannga ya riseva i a engedza tshikalo tsha nzwalelo nga 5%.



To manage credit provision the reserve bank increases interest rates by 5%. Share prices decrease by 1 level.



Ukulawula indlela okuphethwe ngayo isikweleti, ibhange likahulumeni likhuphula inzalo ngama-5%. Amanani amasheya ehla ngezina eli-1.



Ukulawula ukubonelela ngetyala ibhanki enguvimba yenyusa ireyithi zenzala nge-5%. Amaxabiso esabelo ehla ngomgangatho om-1.



Om kredietverlening te bestuur verhoog die reserwebank rentekoerse met 5%. Aandeelpryse daal met 1 vlak.



Go laola tihagišo ya sekoloto panki ya resefe e oketsa ditekanyetšo tša tswalo ka 5%. Ditheko tša dišere di fokotšega ka ntliha e 1.



Go laola go neelana ka mokitlana banka ya rasefe e okeditse dikelo tsa morokotso ka 5%. Ditlhwatlhwa tsa dišere di fokotsegile ka maemo a 1.



Ku lawula ku nyiketwa ka xikweleti, bangi ya le xikarhi yi tlakusa mpimo wa mbuyelo hi 5%. Minxavo ya nkavelo wu ya ehansi hi levhele ya 1.



U itela u kona u langula nzudzanyo ya tshikolodo, bannga ya riseva i a engedza zwikalo zwa nzwalelo nga 5%. Mitengo ya mikovhe i a fhungudzea nga levele nthihi.



The reserve bank wants to encourage consumers to save, and increases interest rates by 5%.



Ibhange likahulumeni lifuna ukukhuthaza ukungwa kwemali kubathengi ngakho likhuphula inzalo ngama-5%.



Ibhanki enguvimba ifuna ukukhuthaza abasebenzisi ukugcina imali, yaye inyusa ireyithi zenzala nge-5%.



Die reserwebank wil verbruikers aanmoedig om te spaar en verhoog rentekoerse met 5%.



Panka ya resefe e nyaka go hlohetša bašomiši go boloka, gomme ba oketše ditekanyetšo tša tswalo ka 5%.



Banka ya rasefe e rata go rotloetsa badirisi go somarela, le go oketsa dikelo tsa morokotso ka 5%.



Bangi ya le xikarhi yi lava ku hlohotela vaxavi ku hlalisa naswona yi yisa ehenhla mimplmo ya mbuyelo hi 5%.



Bannga ya riseva i khou todou tutuwedza marengi uri vha didzhenise kha mafhungo a u vhlungu. Yo engedza zwikalo zwa nzwalelo nga 5%.





If share prices increased with the previous news on overall share prices, all share prices increase by 2 levels, otherwise share prices decrease by 2 levels.



Uma amanani amasheya ekhuphuka ezindabeni ezidlule kuwo wonke amanani amasheya, onke amanani amasheya enyuka ngamazinga ama-2, ngaphandle kwalokho amasheya ehla ngamazinga ama-2.



Ukuba amaxabiso esabelo enyukile kwilindaba ezidlulileyo zamaxabiso esabelo ngokubanzi, onke amaxabiso esabelo anyuka ngemigangatho emi-2, kungenjalo amaxabiso esabelo ehla ngemigangatho emi-2.



Indien aandeelpryse met die vorige nuus oor algehele aandeelpryse opwaarts beweeg het, neem alle aandeelpryse toe met 2 vlakke, so nie neem pryse af met 2 vlakke.



Ge ditheko tsa dišere di oketšega ge ditaba tša peleng go ditheko tša dišere tša kakaretšo, ditheko ka moka di oketšega ka dintlha tše 2, go sego bjalo ditheko tša dišere di fokotšega ka dintlha tše 2.



Fa dithwathwa tsa dišere di oketšega le dikgang tse di fetileng mo dithwathweng tsa dišere tsothe, dithwathwa tsa dišere tsothe di oketšega ka maemo a 2, go seng jalo dithwathwa tsa dišere di fokotšega ka maemo a 2



Loko minxavo ya nkavelo yi tlakuka na mahungu la ma nga hundza eka minxavo hi ku angarhela ya nkavelo, thakelo hinkwato ta minkavelo ti tlakuka hi tilevhele ti 2, hambiswiritano, nxavo wa nkavelo wu ya ehansi hi tilevhele ti 2.



Huno arali mitengo ya mukovhe ya gonya na mafhungo o fhelaho a malugana na mitengogute ya mikovhe, mitengo yothe ya mikovhe i do gonya nga levele mbili (2), zwa sa ralo mitengo ya mikovhe i do



To stimulate the economy, interest rates are reduced by 5%. Bad debt decreases. Supermart's share price increases by 1 level.



Ukukhuthaza umnotho, inzalo lyehliswa ngama-5%. Izikweleti ezingakhokhwa ziyehla. Inani lamasheya ka-Supermart likhuphuka ngezinga eli-1.



Ukukhuthaza uzoqoqoso, ireythi yenzala iphungulwa nge-5%. Amatyala amabi ayaphunguka. Ixabiso lesabelo se-Supermart linyuka ngomgangatho om-1



Ten einde die ekonomie te stimuleer word rentekoerse met 5% verlaag. Siegte skuld neem af. Supermart se aandeelprys neem toe met 1 vlak.



Go tsoša ekonomi, ditekanyetšo tša tswalo di fokotšwa ka ka 5%. Dikoloto tše mpe di a fokotšega. Ditheko tša dišere tša diSupermart di oketšega ka ntlha e



Go bebofatsa ikonomi, dikelo tsa morokotso di fokoditswe ka 5%. Molato o o maswe o a fokotsega. Tihwathwa ya šere ya Supermart e fokotsega ka maemo a 1.



Ku pimanisa ikonomi, mimpimo ya mbuyelo wu yisiwa ehansi hi 5%. Xikweleti xo biha xl ya ehansi. Nxavo wa nkavelo wa Supermart wu tlakuka hi levhele ya 1.



U itela u sengenedza ikonomi, zwikalo zwa nzwalelo zwi a fhungudza nga 5%. Tshikolodo tshivihi tshi a fhungudzea. Mitengo ya mikovhe ya Supermart i a engedzea nga levele nthi.



Consumer spending drops and inflation decreases by 5%. The reserve bank reduces interest rates by 5%.



Liyehla izinga lokuthenga kubathengi kanti namandla emali ayakhula. Ibhange likahulumeni lehlisa inzalo ngama-5%.



Abasebenzisi behlisa intsebenziso yaye kwehla amaxabiso nge-5%. Ibhanki enguvimba yehlisa ireythi yenzala nge-5%.



Verbruikersbesteding neem af en inflasie daal met 5%. Die reserwebank verlaag rentekoerse met 5%.



Ditshenyagalelo tša mošomiši di a theoga gomme infleišene e fokotšega 5%. Panka ya resefe e fokotša tekanyetšo ya tswalo ka 5%.



Ditheko tsa badiris di ya tšase mme infleišene e fokotsega ka 5%.Banka ya rasefe e fokotsa kelo ya morokotso ka 5%.



Ku tirhisa ka timali hi vaxavi ku ya ehansi naswona inflexini ya ehansi hi 5%. Bangi ya le xikarhi yi hunguta mpimo wa mbuyelo hi 5%.



Kurengele kha vharengi ku a tsa. Inifulesheni i a fhungeuzwa nga 5%. Bannga ya riseva i a fhungudza tshikalo tsha nzwalelo nga 5%.





A better world economy, followed by increased consumer spending, leads to an increase of 5% in inflation. The exchange rate appreciates and is 0,25 lower to the US\$ due to more exports.

- ★
- ★
- ★



Isimo esingcono somnotho, esilandelwa ukuthenga okukhulu kubatheni, kuholela ekwehlwini kwamandla emali kube ngama-5%. Intela yokushintshisana ngemali iba ngcono ibe ngu 0-25 ukuba uma

- ★
- ★
- ★



Uqoqosho olungcono lwehlabathi, lulandelwa kukunyuka kwentsebenziso yabasebenzisi, ekholelela kukwenyuka kwamaxabiso nge-5%. Ireyithi yotshintshiselano iyenyuka yaye iyi-0,25 ngaphantsi kwe-US\$ ngenxa yezinto ezithunyelwa ngaphandle ezongezelelweyo.

- ★
- ★
- ★



'n Beter wêreldekonómie, gevolg deur verhoogde verbruikersbesteding, veroorsaak dat inflasie met 5% styg. Die wisselkoers appresieer en daal met 0,25 teen die VSA\$ weens meer uitvoere.

- ★
- ★
- ★



Ekonomi ya lefase e kaone, e latelwa ke koketšo ya tšhomišo ya tšhelete ke bašomiši, e hloa koketšo ya 5% ya infleišene. Tekanyetšoya phetošetšo e a gola gomme e ka fase ga 0-25 go e na le dolara ya US ka baka la dītšwantle tša go fetiša.

- ★
- ★
- ★



Ikonomi e e botoka ya lefatshe, e e latelwang ke go reka ga badirisi, e baka koketsego ya 5% mo infoleišeneng. Kelo ya kanaanyo e a oketsega mme e kwa tlase ka 0,25 go US\$ ka ntle ya diromelwantle tse dintsi.

- ★
- ★
- ★



Ikonomi ya kahle ya misava, yi landzeriwa hi ku tirhisa ka timali loku nga ehenhla ka vaxavi ku vangela ku tlakuka ka infexini hi 5%. Mpimo wa nxaviselano wa timali wa wu va ehansi hi 0,25 eka US\$ hikwalaho ka nxaviselano wa lehandle na matiko yak le handle.

- ★
- ★
- ★



Ikonomi ya lifhasi ya khwine khathihi na kurengela kwa vharengi ku re ntha, zwi ita uri hu vhe na nyengedzedzo ya 5% kha inifulesheni. Tshikalo tsha mutshintshano tshi a khwatha tsha vha fhasi nga 0,25 musi zwi tshi vhambedzwa na US\$, zwi tshi khou itiswa nga u tundwa hunzhi.

- ★
- ★
- ★

Investment cards

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Vast Exploration

5

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Construction Group

1

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Supermart

5

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

East Oil

1

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Vast Exploration

5

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Construction Group

2

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Supermart

5

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

East Oil

2

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Vast Exploration

10

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Construction Group

5

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Supermart

10

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

East Oil

5

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Vast Exploration

10

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Construction Group

10

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

Supermart

10

Shares certificate
Isiifikei samashya
Izafikei zezabelo
Difikehi isa disere
Setfikei sa disere
Xifikehi xa minkavelo
Thanziela ya mikovhe

East Oil

10

Property cards

Nelson's Place

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi

INF	😊	INT	☹️
0	C\$ 22 000	5	C\$ 219 000
5	C\$ 33 000	10	C\$ 193 000
10	C\$ 44 000	15	C\$ 175 000
15	C\$ 55 000	20	C\$ 158 000
20	C\$ 66 000	25	C\$ 131 000

- For current rent and costs, refer to tables and market indicators.
 - Maqondana nemali yokuqasha nezindleko, bheka amathebuli nezinkomba zezimakethe.
 - Malunga nemali yengqesho yangoku neendleko, khangelwa kwizintlu nezalathi zemalike.
- Vir huidige huur en koste, sien tabelle en markaanwysers.
 - Mabapi le rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraaka.
 - Ka ga rente ya ga jaana le ditshenyagelo, leba lenane le dibontshi tsa mmaraaka.
 - Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalula na swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Commerce Tower 1

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi

INF	😊	INT	☹️
0	C\$ 13 000	5	C\$ 125 000
5	C\$ 19 000	10	C\$ 110 000
10	C\$ 25 000	15	C\$ 100 000
15	C\$ 31 000	20	C\$ 90 000
20	C\$ 38 000	25	C\$ 75 000

- For current rent and costs, refer to tables and market indicators.
 - Maqondana nemali yokuqasha nezindleko, bheka amathebuli nezinkomba zezimakethe.
 - Malunga nemali yengqesho yangoku neendleko, khangelwa kwizintlu nezalathi zemalike.
- Vir huidige huur en koste, sien tabelle en markaanwysers.
 - Mabapi le rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraaka.
 - Ka ga rente ya ga jaana le ditshenyagelo, leba lenane le dibontshi tsa mmaraaka.
 - Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalula na swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Commerce Tower 2

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi

INF	😊	INT	☹️
0	C\$ 13 000	5	C\$ 125 000
5	C\$ 19 000	10	C\$ 110 000
10	C\$ 25 000	15	C\$ 100 000
15	C\$ 31 000	20	C\$ 90 000
20	C\$ 38 000	25	C\$ 75 000

- For current rent and costs, refer to tables and market indicators.
 - Maqondana nemali yokuqasha nezindleko, bheka amathebuli nezinkomba zezimakethe.
 - Malunga nemali yengqesho yangoku neendleko, khangelwa kwizintlu nezalathi zemalike.
- Vir huidige huur en koste, sien tabelle en markaanwysers.
 - Mabapi le rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraaka.
 - Ka ga rente ya ga jaana le ditshenyagelo, leba lenane le dibontshi tsa mmaraaka.
 - Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalula na swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Commerce Tower 3

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi

INF	😊	INT	☹️
0	C\$ 13 000	5	C\$ 125 000
5	C\$ 19 000	10	C\$ 110 000
10	C\$ 25 000	15	C\$ 100 000
15	C\$ 31 000	20	C\$ 90 000
20	C\$ 38 000	25	C\$ 75 000

- For current rent and costs, refer to tables and market indicators.
 - Maqondana nemali yokuqasha nezindleko, bheka amathebuli nezinkomba zezimakethe.
 - Malunga nemali yengqesho yangoku neendleko, khangelwa kwizintlu nezalathi zemalike.
- Vir huidige huur en koste, sien tabelle en markaanwysers.
 - Mabapi le rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraaka.
 - Ka ga rente ya ga jaana le ditshenyagelo, leba lenane le dibontshi tsa mmaraaka.
 - Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalula na swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Office Park 1

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi

INF	😊	INT	☹️
0	C\$ 19 000	5	C\$ 188 000
5	C\$ 29 000	10	C\$ 165 000
10	C\$ 38 000	15	C\$ 150 000
15	C\$ 48 000	20	C\$ 135 000
20	C\$ 57 000	25	C\$ 113 000

- For current rent and costs, refer to tables and market indicators.
 - Maqondana nemali yokuqasha nezindleko, bheka amathebuli nezinkomba zezimakethe.
 - Malunga nemali yengqesho yangoku neendleko, khangelwa kwizintlu nezalathi zemalike.
- Vir huidige huur en koste, sien tabelle en markaanwysers.
 - Mabapi le rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraaka.
 - Ka ga rente ya ga jaana le ditshenyagelo, leba lenane le dibontshi tsa mmaraaka.
 - Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalula na swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Office Park 2

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi

INF	😊	INT	☹️
0	C\$ 19 000	5	C\$ 188 000
5	C\$ 29 000	10	C\$ 165 000
10	C\$ 38 000	15	C\$ 150 000
15	C\$ 48 000	20	C\$ 135 000
20	C\$ 57 000	25	C\$ 113 000

- For current rent and costs, refer to tables and market indicators.
 - Maqondana nemali yokuqasha nezindleko, bheka amathebuli nezinkomba zezimakethe.
 - Malunga nemali yengqesho yangoku neendleko, khangelwa kwizintlu nezalathi zemalike.
- Vir huidige huur en koste, sien tabelle en markaanwysers.
 - Mabapi le rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraaka.
 - Ka ga rente ya ga jaana le ditshenyagelo, leba lenane le dibontshi tsa mmaraaka.
 - Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalula na swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Office Corner



INF	😊	😊	😊	😊	😊	😊	😊	😊	😊
0	C\$ 10 000	5	C\$ 94 000	5	C\$ 83 000	10	C\$ 75 000	15	C\$ 68 000
10	C\$ 19 000	15	C\$ 68 000	20	C\$ 56 000	20	C\$ 24 000	25	C\$ 29 000
20	C\$ 29 000	25	C\$ 56 000						

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportake
Mosomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhundi

- Magondana nemali yokuxhisa nezinleko.
- Malunga nemali yomqondo zezimakethe.
- bhaka amathubuli nezinkomba zezimakethe.
- khangela kwizintlu nezalithi zemalike.
- Vir hudidge huru en koste, sien tabelle en markaanwysers.
- Mabhapi le rente le dishenyagalelo isa bjale, lebelala lenaneo le dishenyagalelo, leba lenane le dishenyagalelo, leba lenane le dishenyagalelo.
- Ka ga rente ya ga jaana le dishenyagalelo, leba lenane le dishenyagalelo.
- Ku kuma thakelo la bhakethi la sweswi, languta matulala na languta matulala na swikomibiso swa makete.
- Malungana na mitengo ya dzimndu i re hone zwa zwino, kha vha lavhese thebulu na zwisumbedzi zwa makete.

Melrose Court 1



INF	😊	😊	😊	😊	😊	😊	😊	😊	😊
5	C\$ 50 000	10	C\$ 44 000	15	C\$ 40 000	20	C\$ 36 000	25	C\$ 30 000
25	C\$ 30 000								

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportake
Mosomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhundi

- Ngezindiko wzikhona, bhaka amathubuli nezinkomba zezimakethe.
- Malungana neendleko zangoku, khangela kwizintlu nezimakethe.
- Vir hudidge koste, sien tabelle en markaanwysers.
- Baking sa dishenyagalelo isa bjale, lebelala lenaneo le dishenyagalelo, leba lenane le dishenyagalelo.
- Ka ga dishenyagalelo isa ga jaana, leba lenane le dishenyagalelo, leba lenane le dishenyagalelo.
- Ku kuma thakelo la sweswi, languta matulala na swikomibiso swa makete.
- Malungana na mitengo ya dzimndu i re hone zwa zwino, kha vha lavhese thebulu na zwisumbedzi zwa makete.

Sim Ave 1



INF	😊	😊	😊	😊	😊	😊	😊	😊	😊
5	C\$ 44 000	10	C\$ 39 000	15	C\$ 35 000	20	C\$ 32 000	25	C\$ 26 000
25	C\$ 26 000								

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportake
Mosomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhundi

- Ngezindiko wzikhona, bhaka amathubuli nezinkomba zezimakethe.
- Malungana neendleko zangoku, khangela kwizintlu nezimakethe.
- Vir hudidge koste, sien tabelle en markaanwysers.
- Baking sa dishenyagalelo isa bjale, lebelala lenaneo le dishenyagalelo, leba lenane le dishenyagalelo.
- Ka ga dishenyagalelo isa ga jaana, leba lenane le dishenyagalelo, leba lenane le dishenyagalelo.
- Ku kuma thakelo la sweswi, languta matulala na swikomibiso swa makete.
- Malungana na mitengo ya dzimndu i re hone zwa zwino, kha vha lavhese thebulu na zwisumbedzi zwa makete.

Melrose Court 2



INF	😊	😊	😊	😊	😊	😊	😊	😊	😊
5	C\$ 50 000	10	C\$ 44 000	15	C\$ 40 000	20	C\$ 36 000	25	C\$ 30 000
25	C\$ 30 000								

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportake
Mosomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhundi

- Ngezindiko wzikhona, bhaka amathubuli nezinkomba zezimakethe.
- Malungana neendleko zangoku, khangela kwizintlu nezimakethe.
- Vir hudidge koste, sien tabelle en markaanwysers.
- Baking sa dishenyagalelo isa bjale, lebelala lenaneo le dishenyagalelo, leba lenane le dishenyagalelo.
- Ka ga dishenyagalelo isa ga jaana, leba lenane le dishenyagalelo, leba lenane le dishenyagalelo.
- Ku kuma thakelo la sweswi, languta matulala na swikomibiso swa makete.
- Malungana na mitengo ya dzimndu i re hone zwa zwino, kha vha lavhese thebulu na zwisumbedzi zwa makete.

Sim Ave 2



INF	😊	😊	😊	😊	😊	😊	😊	😊	😊
5	C\$ 38 000	10	C\$ 33 000	15	C\$ 30 000	20	C\$ 27 000	25	C\$ 23 000
25	C\$ 23 000								

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportake
Mosomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhundi

- Ngezindiko wzikhona, bhaka amathubuli nezinkomba zezimakethe.
- Malungana neendleko zangoku, khangela kwizintlu nezimakethe.
- Vir hudidge koste, sien tabelle en markaanwysers.
- Baking sa dishenyagalelo isa bjale, lebelala lenaneo le dishenyagalelo, leba lenane le dishenyagalelo.
- Ka ga dishenyagalelo isa ga jaana, leba lenane le dishenyagalelo, leba lenane le dishenyagalelo.
- Ku kuma thakelo la sweswi, languta matulala na swikomibiso swa makete.
- Malungana na mitengo ya dzimndu i re hone zwa zwino, kha vha lavhese thebulu na zwisumbedzi zwa makete.

Sarafina Street 1



INF	😊	😊	😊	😊	😊	😊	😊	😊	😊
5	C\$ 25 000	10	C\$ 10 000	15	C\$ 15 000	20	C\$ 20 000	25	C\$ 25 000
25	C\$ 25 000								

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportake
Mosomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhundi

- Ngezindiko wzikhona, bhaka amathubuli nezinkomba zezimakethe.
- Malungana neendleko zangoku, khangela kwizintlu nezimakethe.
- Vir hudidge koste, sien tabelle en markaanwysers.
- Baking sa dishenyagalelo isa bjale, lebelala lenaneo le dishenyagalelo, leba lenane le dishenyagalelo.
- Ka ga dishenyagalelo isa ga jaana, leba lenane le dishenyagalelo, leba lenane le dishenyagalelo.
- Ku kuma thakelo la sweswi, languta matulala na swikomibiso swa makete.
- Malungana na mitengo ya dzimndu i re hone zwa zwino, kha vha lavhese thebulu na zwisumbedzi zwa makete.

Clifton Drive 1

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi



INT	⊖
5	C\$ 63 000
10	C\$ 55 000
15	C\$ 50 000
20	C\$ 45 000
25	C\$ 38 000

- For current costs, refer to tables and market indicators.
- Ngezindleko wzikhona, bheka amathebuli nezinkomba zezimakethe.
- Malunga neendleko zangoku, khangela kwizintlu nezibonakaliso zemalike.
- Vir huidige koste, sien tabelle en markaanwysers.
- Bakeng sa diitshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraka.
- Ka ga diitshenyagalelo tsa ga jaana, leba lenane le ditsothshi tsa mmaraka.
- Ku kuma tihakelo ta sweswi, languta matafula na swikombiso swa makete.
- Malugana na mitengo ya dzinndu i re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Clifton Drive 2

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi



INT	⊖
5	C\$ 50 000
10	C\$ 44 000
15	C\$ 40 000
20	C\$ 36 000
25	C\$ 30 000

- For current costs, refer to tables and market indicators.
- Ngezindleko wzikhona, bheka amathebuli nezinkomba zezimakethe.
- Malunga neendleko zangoku, khangela kwizintlu nezibonakaliso zemalike.
- Vir huidige koste, sien tabelle en markaanwysers.
- Bakeng sa diitshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraka.
- Ka ga diitshenyagalelo tsa ga jaana, leba lenane le ditsothshi tsa mmaraka.
- Ku kuma tihakelo ta sweswi, languta matafula na swikombiso swa makete.
- Malugana na mitengo ya dzinndu i re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Clifton Drive 3

Deed of transport
Isivumelwano sezokuthutha
I-Deed yezothutho
Transportakte
Mošomo wa dinamelwa
Kano ya dipalangwa
Dokumente ya nawu ya vutleketli
Vhuendi



INT	⊖
5	C\$ 38 000
10	C\$ 33 000
15	C\$ 30 000
20	C\$ 27 000
25	C\$ 23 000

- For current costs, refer to tables and market indicators.
- Ngezindleko wzikhona, bheka amathebuli nezinkomba zezimakethe.
- Malunga neendleko zangoku, khangela kwizintlu nezibonakaliso zemalike.
- Vir huidige koste, sien tabelle en markaanwysers.
- Bakeng sa diitshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraka.
- Ka ga diitshenyagalelo tsa ga jaana, leba lenane le ditsothshi tsa mmaraka.
- Ku kuma tihakelo ta sweswi, languta matafula na swikombiso swa makete.
- Malugana na mitengo ya dzinndu i re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Express Couriers

Contract
Isivumelwano
Ikontraki
Kontrak
Kontraka
Konteraka
Ntwanano
Mbofho (khonthiraka)



INF	☺	INT	☹
0	C\$ 9 000	5	C\$ 63 000
5	C\$ 13 000	10	C\$ 55 000
10	C\$ 17 000	15	C\$ 50 000
15	C\$ 21 000	20	C\$ 45 000
20	C\$ 26 000	25	C\$ 38 000

- For current fees and costs, refer to tables and market indicators.
- Semali yomsebenzi nezindleko, bheka amathebuli nezinkomba zezimakethe.
- Malunga neentlawuliso zangoku neendleko, khangela kwizintlu nezalathu zemalike.
- Vir huidige fooie en koste, sien tabelle en markaanwysers.
 - Bakeng sa rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraka.
 - Ka ga dituelo tsa ga jaana le ditshenyegelo, leba lenane le dibontshi tsa mmaraka.
- Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalufa na swikombiso swa makete.
- Malugana na mitengo l re hone zwa zwino, kha vha lavhelese thebulu na zwisumbenzi zwa makete.

Melinium Computers

Contract
Isivumelwano
Ikontraki
Kontrak
Kontraka
Konteraka
Ntwanano
Mbofho (khonthiraka)



INF	☺	INT	☹
0	C\$ 19 000	5	C\$ 94 000
5	C\$ 29 000	10	C\$ 83 000
10	C\$ 38 000	15	C\$ 75 000
15	C\$ 48 000	20	C\$ 68 000
20	C\$ 57 000	25	C\$ 56 000

- For current fees and costs, refer to tables and market indicators.
- Semali yomsebenzi nezindleko, bheka amathebuli nezinkomba zezimakethe.
- Malunga neentlawuliso zangoku neendleko, khangela kwizintlu nezalathu zemalike.
- Vir huidige fooie en koste, sien tabelle en markaanwysers.
 - Bakeng sa rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraka.
 - Ka ga dituelo tsa ga jaana le ditshenyegelo, leba lenane le dibontshi tsa mmaraka.
- Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalufa na swikombiso swa makete.
- Malugana na mitengo l re hone zwa zwino, kha vha lavhelese thebulu na zwisumbenzi zwa makete.

National Cleaners

Contract
Isivumelwano
Ikontraki
Kontrak
Kontraka
Konteraka
Ntwanano
Mbofho (khonthiraka)



INF	☺	INT	☹
0	C\$ 8 000	5	C\$ 75 000
5	C\$ 11 000	10	C\$ 66 000
10	C\$ 15 000	15	C\$ 60 000
15	C\$ 19 000	20	C\$ 54 000
20	C\$ 23 000	25	C\$ 45 000

- For current fees and costs, refer to tables and market indicators.
- Semali yomsebenzi nezindleko, bheka amathebuli nezinkomba zezimakethe.
- Malunga neentlawuliso zangoku neendleko, khangela kwizintlu nezalathu zemalike.
- Vir huidige fooie en koste, sien tabelle en markaanwysers.
 - Bakeng sa rente le ditshenyagalelo tsa bjale, lebelela lenaneo le ditaetsi tsa mmaraka.
 - Ka ga dituelo tsa ga jaana le ditshenyegelo, leba lenane le dibontshi tsa mmaraka.
- Ku kuma timali na tihakelo ta nkarhi wa sweswi, languta matalufa na swikombiso swa makete.
- Malugana na mitengo l re hone zwa zwino, kha vha lavhelese thebulu na zwisumbenzi zwa makete.

Debt cards

Nelson's Place

Mortgage
Imalimboleko
Imboleko yokwakha
Verband
Peelo ya
Kadimo ya matlo
Xikweletl
Mothogeidzhi (khadzimiso)

C\$ 123 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe kwizalathi zemalike.
- Malunga neenyathi zenzala yangoku, khangelisa kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers. Bakeng sa ditsekanyetso tsa bjale tsa tswalo, libelela ditlaetši tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mopimo wa tlhakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulo na zwisumbedzi zwa makete.



Commerce Tower 2

Mortgage
Imalimboleko
Imboleko yokwakha
Verband
Peelo ya
Kadimo ya matlo
Xikweletl
Mothogeidzhi (khadzimiso)

C\$ 70 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe kwizalathi zemalike.
- Malunga neenyathi zenzala yangoku, khangelisa kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers. Bakeng sa ditsekanyetso tsa bjale tsa tswalo, libelela ditlaetši tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mopimo wa tlhakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulo na zwisumbedzi zwa makete.



Commerce Tower 3

Mortgage
Imalimboleko
Imboleko yokwakha
Verband
Peelo ya
Kadimo ya matlo
Xikweletl
Mothogeidzhi (khadzimiso)

C\$ 70 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe kwizalathi zemalike.
- Malunga neenyathi zenzala yangoku, khangelisa kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers. Bakeng sa ditsekanyetso tsa bjale tsa tswalo, libelela ditlaetši tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mopimo wa tlhakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulo na zwisumbedzi zwa makete.



Office Park 1

Mortgage
Imalimboleko
Imboleko yokwakha
Verband
Peelo ya
Kadimo ya matlo
Xikweletl
Mothogeidzhi (khadzimiso)

C\$ 105 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe kwizalathi zemalike.
- Malunga neenyathi zenzala yangoku, khangelisa kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers. Bakeng sa ditsekanyetso tsa bjale tsa tswalo, libelela ditlaetši tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mopimo wa tlhakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulo na zwisumbedzi zwa makete.



Office Park 2

Mortgage
Imalimboleko
Imboleko yokwakha
Verband
Peelo ya
Kadimo ya matlo
Xikweletl
Mothogeidzhi (khadzimiso)

C\$ 105 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe kwizalathi zemalike.
- Malunga neenyathi zenzala yangoku, khangelisa kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers. Bakeng sa ditsekanyetso tsa bjale tsa tswalo, libelela ditlaetši tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mopimo wa tlhakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulo na zwisumbedzi zwa makete.



Office Corner



Mortgage
Imalimboleko
Imboleko yokwakha
Verband
Peelo ya
Kadimo ya matlo
Xikweletl
Mothogedzhi (khadzimiso)

R\$ 53 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe
- Malinga neevuyuli zenzala yangoku, Khangela
- Vir hudiye conkecoso, karkaanvysors
- Bakeng sa ditokanyetso tsa bjale tsa tswalo, lebelela diiketisi tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leha icnane le difonshi tsa ninaraka.
- Ka kuma mpumo wa libakelo wa sweswi, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Sim Bank

Loan
Isikweleti
Imbolekomali
Lening
Loune
Kadimo
Xikweleti
Khadzimiso



C\$ 50 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe
- Malunga neereyithi zenzala yangoku, khangela kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers.
- Bakeng sa ditekanyetso tsa bjale tsa tswalo, lebelela ditaetsi tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mpimo wa tihakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Sim Bank

Loan
Isikweleti
Imbolekomali
Lening
Loune
Kadimo
Xikweleti
Khadzimiso



C\$ 50 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe
- Malunga neereyithi zenzala yangoku, khangela kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers.
- Bakeng sa ditekanyetso tsa bjale tsa tswalo, lebelela ditaetsi tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mpimo wa tihakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Sim Bank

Loan
Isikweleti
Imbolekomali
Lening
Loune
Kadimo
Xikweleti
Khadzimiso



C\$ 50 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe
- Malunga neereyithi zenzala yangoku, khangela kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers.
- Bakeng sa ditekanyetso tsa bjale tsa tswalo, lebelela ditaetsi tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mpimo wa tihakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Sim Bank

Loan
Isikweleti
Imbolekomali
Lening
Loune
Kadimo
Xikweleti
Khadzimiso



C\$ 50 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakethe
- Malunga neereyithi zenzala yangoku, khangela kwizalathi zemalike.
- Vir huidige rentekoerse, sien markaanwysers.
- Bakeng sa ditekanyetso tsa bjale tsa tswalo, lebelela ditaetsi tsa mmaraka.
- Ka ga dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka.
- Ku kuma mpimo wa tihakelo wa sweswi, languta swikombiso swa makete.
- Malugana na mitengo na rennde zwi re hone zwa zwino, kha vha lavhelese thebulu na zwisumbedzi zwa makete.

Sim Bank

Loan
Isikweleti
Imbolekomali
Lening
Loune
Kadimo
Xikweleti
Khadzimiso



C\$ 50 000

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- Maqondana nenzalo, bheka izinkomba zezimakethe
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- Bakeng sa ditekanyetso tsa bjale tsa tswalo, lebelela ditaetsi tsa mmaraka.
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Sim Bank



Loan
Isikweleti
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Lening
Loune
Kadimo
Xikweleti
Khadzimiso

C\$ 50 000

- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakehe
- Malunga neevithi zenzala yangoku, khangela kwizalath zembalike
- Viri hujugje ngezinye izinkomba zezimakehe
- Bakengiso dipheleli ka mmaraka lebelela diavisi ka mmaraka
- Ka ka dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka
- Ku kuma mpimo wa lihakelo wa sweswi, langida swikombiso swa makete zwa makete
- Malingana nenzalo, bheka izinkomba zezimakehe kha vha lavhelele thebulu na zwisumbedzi zwa makete.

Sim Bank



Loan
Isikweleti
Imbolekumali
Lening
Loune
Kadimo
Xikweleti
Khadzimiso

C\$ 50 000

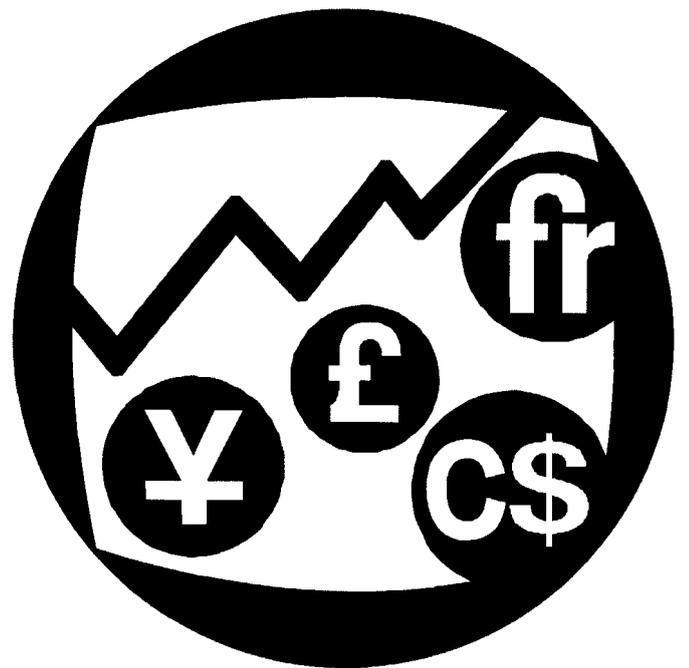
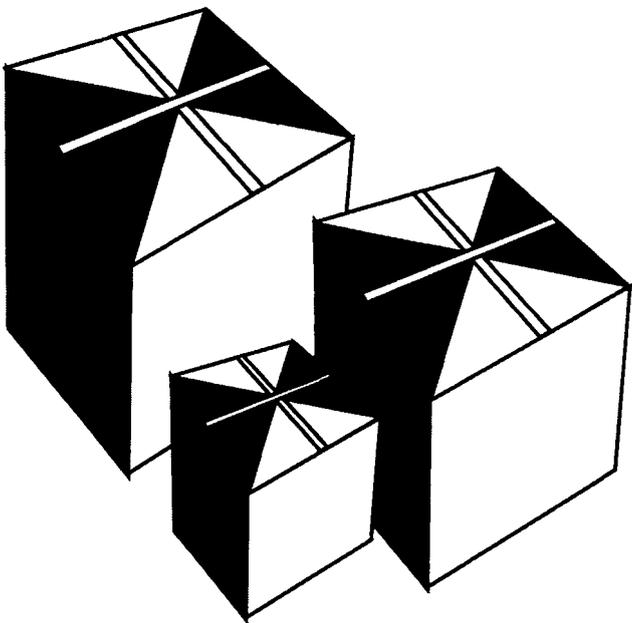
- For current interest rates, refer to market indicators.
- Maqondana nenzalo, bheka izinkomba zezimakehe
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- Bakengiso dipheleli ka mmaraka lebelela diavisi ka mmaraka
- Ka ka dikelo tsa morokotso tsa ga jaana, leba lenane le dibontshi tsa mmaraka
- Ku kuma mpimo wa lihakelo wa sweswi, langida swikombiso swa makete zwa makete
- Malingana nenzalo, bheka izinkomba zezimakehe kha vha lavhelele thebulu na zwisumbedzi zwa makete.

ANNEXURE C – TOKENS

Tokens are used to keep record of raw material and product inventory, as well as the number of labourers employed. Three sets of tokens are used:

- Raw materials – identify raw materials purchased;
- Labourers – identify labourers hired;
- Products – identify completed products.

These tokens are attached.



ANNEXURE D – BANK STATEMENT, BANK NOTES AND CHEQUES, AND OTHER SOURCE DOCUMENTS

The game uses cash and bank accounts for transactions. Players have chequebooks and bank accounts with overdraft facilities. This allows for cash and bank transactions (a requirement of the subject content) to be recorded. Bank reconciliations can also be performed as a bank statement is completed throughout the game.

Various source documents are used in recording transactions.

Copies of the cheques and bank statements and others source documents are attached.

Date / Datum:

To / Aan:

Balance b/f Saldo o/b			
Amount paid in Bedrag inbetaal			
Balance Saldo			
Other debits Ander debiete			
Balance Saldo			
This cheque Hierdie tjek			
Balance c/f Saldo o/d			

Cheque number / Tjeknommer

Cheque / Tjek

Nr. / No.

Date / Datum: dd/mm/yyyy

Pay / Betaal: _____

Amount / Bedrag: _____

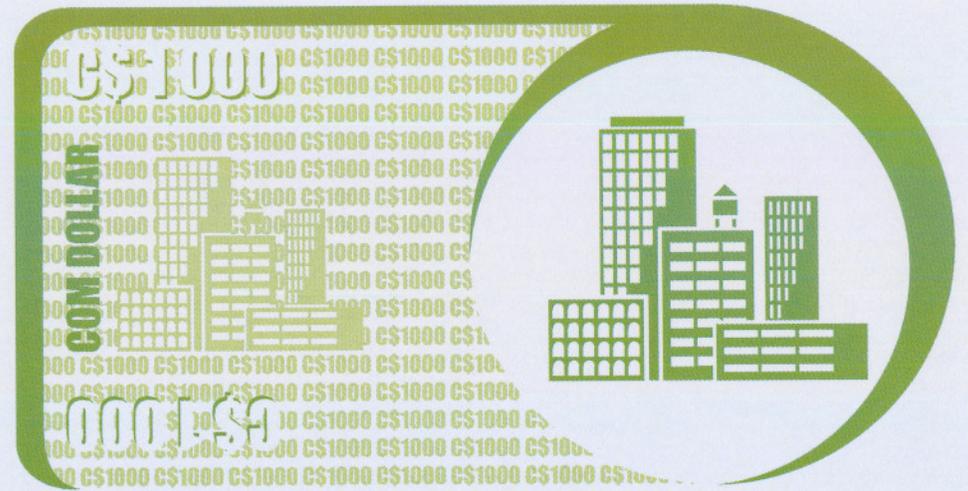
For / Vir: _____

Signature / Handtekening _____



I:12345I: 6789 012345 II 04





Cash Receipt / Kwitansie

Date / Datum: _____

No.
Nr.

Received From / Ontvang van: _____

Issued By / Uitgereik Deur: _____

The Sum Of / Die Bedrag Van: _____

In Payment Of / Ter Betaling Van: _____

Signature / Handtekening: _____



ANNEXURE E – RULES

The rules explain the game play. It states the aim of the game and explains the different spaces on the board, the cards and tokens. Certain terminology was also explained in the rules (given the context of the game) to enable learners from different backgrounds and with various levels of prior knowledge to be able to play and understand the game. The rules also explain the interaction between the different elements in the game.

A copy of the English rules is attached.

RULES - ENGLISH



The game of **Commercium™**
...the business world simulation game by Jaco Fouché

The Game

The aim of the game is to run the most profitable business by means of manufacturing, distributing and investing. All this real-world simulation takes place around the **Commercium** board. Players move around the board according to the throw of a dice. The game includes two dice and players may decide to use either one or two during any turn. A great deal of effort was put into making the game as realistic, entertaining and amusing as possible. However, to illustrate the effects of interest rates, inflation, etc. in the short time the game is played, these rates and changes thereto were inflated, and their effects are therefore more dramatic than in reality.

The game will not only provide an educational experience of the wheeling and dealing of the business world, but will also provide hours of fun for family and friends.

Setting Goals

As the game has no preset goals, players may set their own goals. Four kinds of goals can be set to give the game a fixed ending:

- 1) playing a certain number of rounds, e.g. 24
- 2) working towards a monetary goal, e.g. the first player to have net assets of C\$1 000 000
- 3) playing for a set time, e.g. 2 hours
- 4) playing until all Economic News cards have been covered.

Levels of play

The game may be played at different levels of complexity.

Level 1 Services provision and property rental

- Only property and other investments are made.
- Players may decide to exclude the effects of inflation and interest rate changes. In this case players will not use the Economic News cards.

Level 2 Adding inventory

- Retailing (buying and selling) products (finished goods) is added. Players may now also buy products from wholesalers and sell them to retailers.
- Players may decide to exclude the effects of inflation and interest rate changes. In this case players will not use the Economic News cards.

Level 3 Adding manufacturing

- Players may decide to take part in the manufacturing of products as well. Players buy raw materials, hire labour and sell finished products to wholesalers.
- Players may decide to exclude the effects of inflation and interest rate changes. In this case players will also not use the Economic News cards.

Level 4 Adding financial markets

- Players may decide to play the stock market and to participate in imports and exports.
- Players may further decide to allow selling and buying on credit among one another and/or taking up loans from the bank.

Contents

The equipment of the game includes:

- 1 Game board

- 40 Economic News cards
- 1 Economic News cover card
- 40 Opportunities and Threats cards
- 1 Opportunities and Threats cover card
- 7 Property Investment cards
- 3 Business Investment cards
- 8 House cards
- 7 Mortgage cards
- 8 Loan cards
- 16 Share Certificate cards
- 8 Play pieces (vehicles)
- 8 Bank statements
- 8 Cheque books of 5 pages each
- 2 Non-permanent pens
- 24 Raw-material tokens
- 24 Labourer tokens
- 24 Product tokens
- 7 Market tokens (round)
- 100 COM dollar (C\$) notes
- 1 Rules booklet
- 2 Dice

Adaptations to the rules

Various adaptations to the rules are possible. Players may decide to amend rules by mutual consent. Here are a few possibilities:

- Players may decide to buy assets and auction these themselves.
- Two or more players may merge their businesses to survive or even to try preventing another player from winning.

TERMINOLOGY

The following are some of the terms used in the game. These terms are freely defined as follows, specifically in line with the game:

- **Appreciate** To increase in value or to become stronger.
- **Bad debt** Debt that people are unable to pay or do not pay.
- **Capital structure** The amount of debt and own money used to finance the business determines the capital (funding) structure of the business.
- **Credit provision** Extending credit or loans.
- **Deflation** When prices decrease.
- **Demand** The need for products and services.
- **Depreciate** To decrease in value or to become weaker.
- **Dividends** When companies make a profit they distribute some of these profits to the owners (shareholders) by way of dividends paid to the owners.
- **Exchange rate** How much of a country's money is necessary to purchase another country's money unit.
- **Inflation** An increase in prices and costs. The inflation rate can be indicated as a percentage increase over a period such as a year.
- **Insolvent** Bankrupt. Having more liabilities (amounts owed to others) than assets (money, property, etc.).
- **Interest** The amount received or paid by someone on a cash investment or loan. The interest rate can be indicated as a percentage increase over a period such as a year.
- **Money supply** The amount of money available in the economy.
- **Nationalise** When the government takes a property by way of law.
- **Overdraft** A facility at a bank to spend more money than you have in the bank. It is a form of debt.
- **Recession** A time when the economy is not growing and

SUNDRY PAYMENTS AND PURCHASES



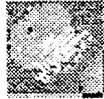
- The player landing on the block must pay the fees indicated.

AUCTIONS



- If a player lands here he/she may call an auction of any of the unsold property and other business investments. The investments are sold to the highest bidder.
- The player calling and administrating the auction receives a commission of 10% of the selling price from the bank.

PLAYING GOLF



- When landing here a player takes some time off to play golf and consequently misses a turn.

OPPORTUNITIES AND THREATS



- A player landing on this block picks up a card and executes the terms thereof.
- Keep the cover card on top so as not to reveal the content of the next card.
- Cards marked with a single star are for the specific player only. Cards marked with three stars should be executed by all players.

ECONOMIC NEWS



- A player landing on this block picks up a card and executes the terms thereof.
- Keep the cover card on top so as not to reveal the content of the next card.
- Cards marked with a single star are for the specific player only. Cards marked with three stars should be executed by all players

PROPERTY AND BUSINESS INVESTMENT



- When landing on this block the specific investment may be made at the current purchase price indicated in line with the current interest rate. For property investments (housing excluded) a mortgage may be taken out for the amount indicated on the corresponding Mortgage card. The mortgage amount is equal to 70% of the market value at an interest rate of 15%.
- The investment is indicated by a Transport deed card (property) and Contract card (business) that a player receives upon purchase. A corresponding Mortgage card is received if a player decides to take out a mortgage.
- The investment may be sold to the bank during a player's turn at the market rate indicated less 10% commission. Players may sell investments to one another at their own agreed-upon terms.
- When another player lands on a player's investment, that player must pay the owner the relevant rent or service fees in agreement with the current inflation rate.
- The transport deeds are explained below

Wilson's Place	
1	1000000
2	2000000
3	3000000
4	4000000
5	5000000
6	6000000
7	7000000
8	8000000
9	9000000
10	10000000

Read inflation rate from board to determine income. E.g.: If rate is 10%, rent income is C\$44 000. ☺

Read interest rate from board to determine price. E.g.: If rate is 15%, the cost price (market price) is C\$175 000. ☺

RAW MATERIAL PURCHASES



- This block is only applicable when playing with manufacturing (Level 3 and up).
- The player landing on this block may purchase raw materials at the indicated price. Economic News cards may alter the price.
- The player receives a token for each item purchased.
- A maximum of five raw materials may be bought during a single turn, unless Economic News cards indicate otherwise.
- If there is no token to purchase, a stock-out occurs and the players will have to continue with the game until tokens become available.



PAYING OVERHEADS



- This block is only applicable when playing with manufacturing (Level 3 and up).
- The player landing on this block must pay the required overheads. Economic News cards may alter the price.

HIRING LABOUR



- This block is only applicable when playing with manufacturing (Level 3 and up).
- The player landing on this block may hire labour at the indicated price. Economic News cards may alter the price.
- The player receives a token for each labourer hired.
- A maximum of five labourers may be hired during a single turn unless Economic News cards indicate otherwise.
- If there is no token to purchase, a labour shortage occurs and the players will have to continue with the game until tokens become available.



WHOLESALE



- This block is only applicable when playing manufacturing and/or inventories (Level 2 and up).
- Manufacturers sell finalised products here at the indicated price (one finished product item consists of 1 raw material token and 1 labourer token.).
- Retailers purchased products here at the same indicated price. A token is received for each item purchased.
- A maximum of 5 products may be sold or bought during a single turn unless economic news cards indicate otherwise.
- If there is no token to purchase a stock out occurs and the players will have to continue with the game until tokens become available.



RETAILING



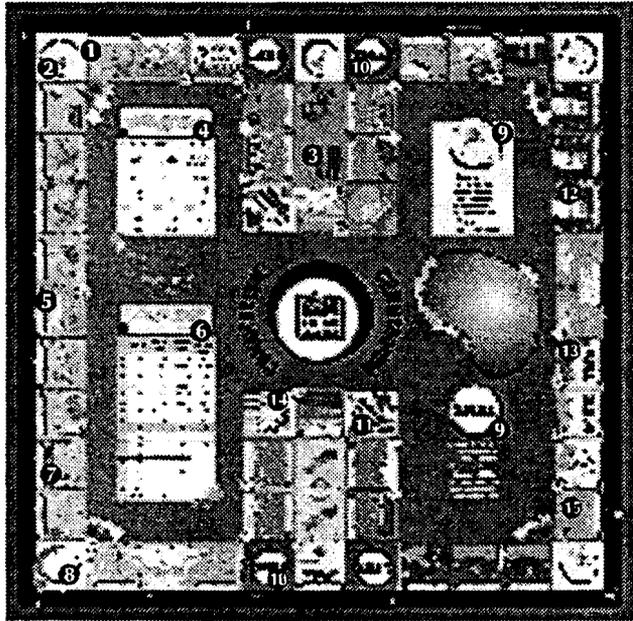
- The blocks are only applicable when playing with products (inventory)(Level 2 and up).
- Products purchased at wholesalers are sold to retailers on these spaces once a player lands on it.
- The price received is indicated on the block. Economic News cards may alter the price.
- A maximum of 5 products may be sold during a single turn unless Economic News cards indicate otherwise.

things are difficult.

- Speculate When a person ventures a guess about what will happen in the future and makes investments, etc. based on that prediction in an effort to make bigger profits.
- Subsidy A grant (amount given) by the government.
- Supply The provision of goods or services.

The board

The board consist of the following areas:



1. Playing area (blocks)
2. Economic News cards
3. Manufacturing area
4. Interest/Inflation and exchange rate indicator
5. Retail blocks
6. Stock exchange indicating share prices
7. Residential area
8. Bank (start)
9. Place for putting Economic News and Opportunities and threats cards
10. Opportunity and threats blocks
11. Import/Export blocks
12. Investment property blocks
13. Other payments
14. Vehicle block
15. Business investment blocks

Start of the game

- Place the board on the table and place the Economic News cards and Opportunities and Threats cards on the board. Put the market tokens on the highlighted squares in the market indicator and stock exchange sections.
- At the beginning of the game each player receives an amount of C\$150 000 (COM dollars). C\$100 000 is received in cash, while the remainder of the money is deposited in the bank account. Initial bank charges of C\$5 000 are charged immediately. Each player also has an initial overdraft facility of C\$20 000.
- Players take turns to throw one dice. The player with the highest score starts the game and play continues clockwise.
- Each player must choose a vehicle to start with, beginning with the player selected to start the game. The initial costs are:
Sedan C\$10 000
4X4 C\$15 000
Limo - C\$25 000



- All players start at the block with the red arrow and move in the direction of the arrow.
- Each player's first aim is to occupy a house to live in and from which to run his/her business. If a player has completed a turn through the residential area and has still not purchased a house, rent of C\$10 000 must be paid every time the start block is passed without owning a house.
- All transactions and action take place from the first round.
- Before play starts the players must select a banker who will act on the bank's behalf.

Spaces (Blocks) on the board

BANKING



- This block also serves as the start block.
- When a player lands on this block he/she may take out a loan. These loans may be repaid at any stage. At redemption (repayment) final interest as indicated on the board's market indicators must be paid. A single player may have a maximum of two loans at any time. Only eight loans are available (indicated by Loan cards). Players will have to wait for another player to first redeem (pay) his/her loan when no Loan cards are available.
- Interest on outstanding loans and mortgages is paid every time players land or pass here. Interest is paid at the rate indicated on the board.
- Every time a player passes here he/she receives C\$20 000 in service income as well as dividends at 10% of market value on shares held on the stock exchange. The player also receives interest on money in the bank account at an interest rate half of the rate indicated on the board. Amounts are rounded to the nearest C\$1 000.
- Every time a player passes this block an Economic News card must be picked up and the terms executed where necessary.

HOUSING



- To have housing is a requirement. If a player does not own a house and lands on a residential block, that property must be purchased. If a player does not land on a residential block, rent of C\$10 000 must be paid each time the start block is passed.
- The houses are indicated by a transport deed that a player receives upon purchase. No mortgages are allowed on houses.
- Houses may be sold at the market value less 10% commission during a player's turn, but a player must have purchased another house first during a previous turn.
- A house can only be bought if a player lands on the specific block.

TRAVELLING



- By paying the required amount a player may move to any block on the board and execute the requirements of that block during his/her current turn.

VEHICLES



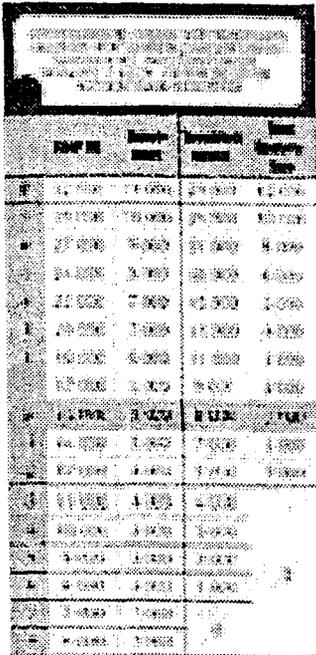
- A player may decide to purchase a new vehicle when landing on this space. The prices are:
Sedan C\$10 000
4X4 C\$15 000
Limo C\$25 000
- Players receive the following trade-in on used vehicles:
Sedan C\$4 000
4X4 C\$6 000
Limo C\$10 000

EXPORTING AND IMPORTING

- When a player lands here raw materials and finished goods may be bought at the following prices multiplied with the exchange rate:
 - Importing Raw materials @ US\$ 2 000. For eg. If the exchange rate is 1:1.5 is means that 1 US\$ equal 1.5 C\$ and 1 raw material will then cost C\$ 3000 (C\$ 2 000 x 1.5)
 - Importing Finished goods @ US\$ 6 000.
- Finished goods may also be sold at the following prices multiplied with the exchange rate:
 - Exporting Finished goods @ US\$ 30 000.
- A maximum of 5 products may be imported or exported during a players turn. They player may also only complete one import or export transaction during a turn.

Stock market

A player may purchase shares at any time during his turn. A broker fee of C\$ 1000 is payable for each purchase no matter the number of shares bought in the company.



COMPANY	BUY	SELL	MARKET	LAST
1	100000	100000	100000	100000
2	200000	200000	200000	200000
3	300000	300000	300000	300000
4	400000	400000	400000	400000
5	500000	500000	500000	500000
6	600000	600000	600000	600000
7	700000	700000	700000	700000
8	800000	800000	800000	800000
9	900000	900000	900000	900000
10	1000000	1000000	1000000	1000000

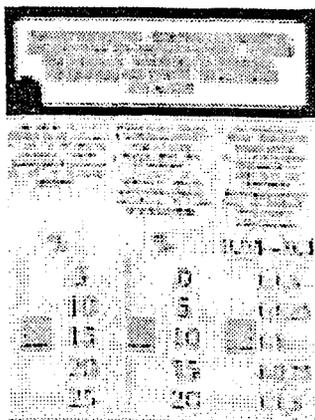
A player may also sell shares at any time during his turn. A broker fee of C\$ 1000 is payable for each purchase no matter the number of shares bought in the company.

Players will receive a corresponding share certificate. The number of shares is indicated on the certificate. A limited number of shares are available.

The share price (market) token is placed at level 0 (highlighted) at the start of the game and move up or down as indicated by the Economic news cards.

The price indicated is for 1 share.

Interest, inflation and exchange rates



INTEREST	INFLATION	EXCHANGE
0	0	1.0
10	5	1.5
15	10	2.0
20	15	2.5
25	20	3.0

The market tokens are put on the highlighted blocks at the beginning of the game and move up or down as indicated by the Economic news cards.

The interest rate level influences the market price of properties and business investments. It will also affect the interest received and paid when passing the start block.

The inflation rate influences the rent and service fee income for property and business investments.

The exchange rate influences the price at which goods are imported and exported.

Cash flow problems and bankruptcy

If a player cannot pay any amount owed to another player or the bank that player will have to sell his/her shares, property and other investments. This may be done to other players or the bank. Raw materials, labourers and products may only be sold to other players. Debt payments may also take place in the form of any of the above as agreed between the parties.

If the player still not has enough money the player must sell his/her house.

If the player still has insufficient funds he/she is regarded insolvent and has to remove their playing piece from the board.

Bankers and the bank

The player selected to be the banker will handle cash and other transactions on behalf of the bank. This player will also keep the bank statement of the other players up to date.

The following bank charges are applicable:

- C\$ 5 000 per chequebook of 5 pages. Cash can only be withdrawn by issuing a cheque. The first chequebook is charged at the beginning of the game.
- C\$ 1 000 per cash deposit.



About Commercium

Developer: Jaco Fouché
Graphic design studio: dcomm

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Cell: (+27) 82 924 4948

Bl. 285

Bl. 286

Bl. 287

MARKING PLAN
COMMERCIIUM PROJECT

Name:	Stud No.	TOTAL MARKS
Marker:		

The marking is negative. A cross is made in the block for each error and thus a mark is subtracted. In other instances marked is allocated according to the description in the block. Errors are marked on the project that was handed in. Each kind of error is only penalised once.

INDIVIDUAL 60

	1	2	3	4	5	6	7	8	9	10
1 Source document completion Accuracy/correctness	More than 8	8 errors	7 errors	6 errors	5 errors	4 errors	3 errors	2 errors	1 error	No errors
Manner of completion	Bad	Under average, incomplete	Reasonable, complete and readable	Good, complete, readable, neat	Well done, very neat, complete, clearly readable					
Filing	Moderate, stapled, pasted	Went through some trouble, stapled/pasted numerically with supporting documents	Very neat, stapled/pastes numerically, supporting documents attached, neat cover							
2 Journals Cashbook, CRU, CPU, Petty cash	More than 8	8 errors	7 errors	6 errors	5 errors	4 errors	3 errors	2 errors	1 error	No errors
Debtors and Creditors journals	4 errors	3 errors	2 errors	1 error	No errors					
General journal	2 errors	1 error	No errors							

3 Applied rules of game Applied general Commecium rules Tracked private expenses correctly VAT dealt with appropriately	No errors	Look to drawing	No errors
---	-----------	-----------------	-----------

4 General ledger Posting	1 error	No errors
Format	1 error	No errors
Balancing	1 error	No errors
Neatness	Average	Neat

5 Bank reconciliation Neatness	Neat	No errors
Balancing		

Evaluation of team members	Included
-----------------------------------	----------

7 General journal of team Format and neatness	Average	Neat
Depreciation adjustments	1 error	No errors
Other adjustments	1 error	No errors
Closing	1 error	No errors

8 Trial balance Format and neatness	Average	Neat
Clear calculations indicated	1 error	No errors
Accurate transfer from general ledger	1 error	No errors
Balancing	No errors	

9 Financial statements Income statement	7 errors	6 errors	5 errors	4 errors	3 errors	2 errors	1 error	No errors
Balance sheet	7 errors	6 errors	5 errors	4 errors	3 errors	2 errors	1 error	No errors
Neatness and presentation	Bad	Average	Neat	Very neat				

11 Minutes Completeness	1 error	No errors
Format	1 error	No errors
Neatness and clarity	Neat	

PEER EVALUATION RESULT	
12 According to evaluation sheet:	10

PEER EVALUATION

Name of evaluator:

Student number:

Provide a mark for each team member on the five criteria. Guideline are provided below:

		Name of team members									
		there student numbers									
Max*											
Preparation of team member	2										
Knowledge disclosed by the member	2										
Interest shown in the project	2										
Active participation in the project	2										
Ability to work in a team	2										
TOTAL	10										

*fractions may also be allocated

GUIDELINE FOR MARK ALLOCATION

	0	1	2
Preparation of team member	Did no preparation	Had a reasonable knowledge of rules and assignment	Had studies the rules and assignment and brought along all required documents etc
Knowledge disclosed by the member	Had no knowledge of the accounting topics involved	Had a reasonable knowledge of the accounting topics involved	Had excellent knowledge of the accounting topics involved
Interest shown in the project	Showed no interest, had a negative effect on the atmosphere	Showed a reasonable interest	Were very interested and provided motivation
Active participation in the project	Had not done his/her share	Did a reasonable share of the work	Did more than his/had part of the work
Ability to work in a team	Did not work together with the team	Showed reasonable corporation	Work together excellent

ANNEXURE G – ASSIGNMENT

The assignment paper is probably one of the most important documents, as it sets out the outcomes, what should be done and the assessment criteria.

RECP/REKP 111 – FINANCIAL ACCOUNTING
COMMERCIUM™ GROUP PROJECT - ASSIGNMENT

OUTCOMES

After you have completed the project you should be able to:

- Describe the accounting cycle as a whole;
- Give a broad description of the functioning of the business environment and general economic environment;
- Analyse transactions and be able to record it on source documents from practical scenarios;
- Record source documents in the subsidiary journals;
- Post subsidiary journals to the general ledger and the subsidiary ledgers;
- Prepare a trial-balance, income statement and balance sheet from the general ledger;
- Communicate in a business environment; and
- Work effectively in groups.

UPFRONT

- The class has already been divided into groups (A, B, C, D and E [REK Mrs. Weyers]).
- Groups A and C (as well as E) will participate in the week from 15-19 May 2006. Group B and D (and the rest of E) will participate from 22-26 May 2006.
- A list has been placed on the notice board, on which you fill in your name at the chosen session. As indicated on the list, two people will work together, and two groups of two people each form a team. Each must consist of learners of the same class.
- You should come together as a team before your scheduled session, and reach agreement with regard to the following (this should be documented in the form of minutes):
 - Who will be the team leader that will co-ordinate all the activities?
 - Which instruments will be necessary for the project? (Pens, calculators etc.)
 - How you are going to obtain the skills and instruments?
 - What will the team's business name be?
 - What will your strategy during the game be?

- When are the financial statements going to be prepared, and who will be responsible for which part of it?

The minutes should be handed in with the assignment.

BEFORE THE GAME BEGINS

- Report at least 10 minutes before the beginning of the session.
- Take a seat at the Table with the number that corresponds with that which is on the list you completed.
- The two people have chosen to play together should sit next to each other.
- You are welcome to bring any material with you (e.g. notes, books etc.).

THE GAME

- Every player will receive an amount of money that is stipulated in the rules of the game. This is your capital with which you can start your business. Remember that your capital contribution is your first transaction to be recorded.
- The players at each board can decide who will be the banker, and if it is possible to rotate.
- From every group of two players, one should throw the dice, and the one with the highest score can start.
- For the first 12 rounds of play, one of the two players (from each group on the board) will play the game, while the other one accurately completes the source documents. Thereafter positions will be exchanged for the next 12 rounds. The months will be monitored by the time sheet (2 rounds = 1 month).
- The normal *Commercium*TM rules apply (attached).
- Note the following additions:
 - You will play the game on level four;
 - Players may give credit at their own conditions;
 - VAT at 10% is included in all applicable amounts. You can assume that all businesses are registered for VAT;
 - If you would like to ask the facilitators for advice, then you'll pay a consultation fee of C\$10 000.
- The following is applicable to the recording:
 - The purchase and sale of property is handled as "asset disposal";
 - Any income tax paid during the game will be regarded as provisional income tax;
 - Seeing that you are acting as individuals, it may be taken to drawings;
 - Transactions which are uncertain, should be motivated on the basis of AC 000's definitions;

- The documents are used as follows:
 - Petty cash voucher – for any cash payments;
 - Cash invoice – for all incomes from other groups that are settled immediately;
 - Credit invoice – for all incomes from other groups that are not settled immediately (Terms of interest and repayment which have been agreed upon should be indicated on the invoice);
 - Receipts – for sundry receipts and payments from debtors;
 - Cheques – for all bank payments;
 - Bank deposit slips – for all deposits into the bank account;
 - All documents should be numbered and completed in duplicate. Remember that you give the original to the other party and you only keep the duplicate for your records.

AFTER THE GAME

- A facilitator will ensure that your **Commercium™** game is complete, and must also complete the control form before you may leave the Table. You will be penalised if there are pieces missing.
- Each pair (group of two) should count their cash and record it. They should also take the bank statement that will be held by the banker.
- Every player:
 - Must file his/her source documents as well as the supporting documents;
 - Prepare all the subsidiary journals (including CPJ; CRJ; DJ ;CJ and GJ);
 - Post to the general ledger;
 - Prepare the bank reconciliation statement and follow up differences; and
 - You should make sure about the format and structure of the above-mentioned and be able to do it yourself.
- Every team of four:
 - Should prepare one joint pre-adjustment trial balance of all the groups of two;
 - Do the following year end adjustments:
 - Write off depreciation on fixed property at 5% p.a. according to the straight line method, and 10% p.a. on vehicles, furniture and equipment according to the straight line method;
 - Provide for any interest and other payable expenses or receivable incomes;
 - Close off the nominal section;

- Prepare an income statement and the balance sheet (It may be necessary to also prepare a production cost statement). The financial statements should be neatly typed out on the computer. You may use Excel;
- You are welcome to take a look at a few real businesses' financial statements.

SUBMISSION

- Groups that participate during the first week have an opportunity to submit their assignments until 16:00 on Tuesday 23 May. The other groups have until 16:00 on 30 May 2006. Submissions should be made at the academic clerks in G05.
- During the game you will receive evaluation forms that you should use to evaluate the members of the team. These forms should be included with your assignment in a sealed envelope.
- The recommended front page is attached.
- Attached is also the suggested grading scheme.
- You will receive your marks (at the latest) on the last day of class.

You should have the attached “front pages” accompanying the assignment that you submit.

COMMERCIUM™ SIMULATION INDIVIDUAL ASSIGNMENT

NAME OF LEARNER:

LEARNER NUMBER:

PHONE NUMBER:

CLASS GROUP:

Prof. Jaco Fouche
Mrs. Magriet Weyers
Mr. Danie Schutte

INCLUDED ARE THE FOLLOWING:

1. Source documents and supportive documents
2. Subsidiary journals
3. Ledgers
4. Bank reconciliation
5. Evaluation form

COMMERCIUM™ SIMULATION TEAM ASSIGNMENT

NAME OF TEAM:

NAMES OF TEAM MEMBERS:

GROUP 1

NAME OF LEARNER:

LEARNER NUMBER:

NAME OF LEARNER:

LEARNER NUMBER:

GROUP 2

NAME OF LEARNER:

LEARNER NUMBER:

NAME OF LEARNER:

LEARNER NUMBER:

CLASS GROUP:

Prof. Jaco Fouche

Mrs. Magriet Weyers

Mr. Danie Schutte

INCLUDED ARE THE FOLLOWING:

1. Trial balance and calculation
2. General journal
3. Income statement
4. Balance sheet
5. Minutes

ANNEXURE H – QUESTIONNAIRE

Geagte RECP 111 / REKP 111 student / Dear RECP 111 / REKP 111 student

Die volgende vraelys vorm deel van my PhD studies in Rekeningkunde onderrig met die doel om die manier waarop Inleidende Rekeningkunde aangebied word te verbeter. U insette word waardeer.

The following questionnaire is part of my PhD studies in Accounting education with the purpose of enhancing the teaching of Introductory Accounting and your input is valued.

U word daarom versoek om die vraelys eerlik en na die beste van u vermoë te voltooi. Al die inligting bekom sal vertroulik bly.

You are therefore requested to complete it honestly and to the best of your ability. All the information obtained from this questionnaire will remain confidential.

U deelname word waardeer.

You participation is appreciated.

Prof Jaco Fouché

U het 'n antwoordblad ontvang waarop die toepaslike keuses in potlood vir die spesifieke vraag ingekleur moet word.

'n Voorbeeld van die korrekte aantekening van u keuses word op die antwoordblad verskaf.

U moet asb. u studente nommer ook voltooi vir kruisverwysingsdoeleindes.

You have received a answer sheet on which the answers must be recorded in pencil by colouring the appropriate choice for the specific question. An example of the correct recording is given on the answer sheet.

You must also complete your studentnumber to enable crossreferencing.

DEEL A / PART A

Voltooi die volgende biografiese gegewens: / Complete the following biographical information:

1	My geslag is: / My gender is:	Manlik/ Male	1	Vroulik/ Female	2
2	My klasgroep is: / My class group is:	REC	1	REK	2
3	My moedertaal is: / My mother tongue is:	English	1	Afrikaans	2
		Ander Afrika taal /Other African language	3	Ander/ Other	4
4	Ek het rekeningkunde op die volgende vlak/graad gehad in graad 12: / I had accounting on the following level/grade in grade 12:	Hoër/ Higher	1	Standaard/ Standard	2
		Ander/ Other	3		
5	My matriek punt vir rekeningkunde was: / My matric mark for accounting was:	>80%	1	70-80%	2
		60-70%	3	50-60%	4
		< 50%	5		
6	My semestertoets punt vir rekeningkunde een was: / My semester test mark for accounting one was:	>80%	1	70-80%	2
		60-70%	3	50-60%	4
		< 50%	5		
7	Ek woon (het skool gegaan) in die volgende provinsie: / I live (went to school) in the following province:	Oos-Kaap/ Eastern cape	1	Vrystaat/ Freestate	2
		Gauteng	3	Kwazulu Natal	4
		Limpopo	5	Mapuma- langa	6
		Noord- Kaap/ Northern Cape	7		
8	Ek woon (het skool gegaan) in die volgende provinsie: (vervolg) / I live (went to school) in the following province: (continue)	Noord- wes/ North- west	1	Wes-Kaap/ Western Cape	2
		Buiteland/ Outside SA	3		
9	Ek is in die volgende groep ingedeel vir die projek: / I was divided into the following group for the project:	A	1	B	2
		C	3	D	4
		E	5		

DEEL BT PART B

The manier waarop rekeningkunde aangebied is (onderrig metodologie) tot op hede (MET SPESIFIEKE VERWYSING NA DIE COMMERCIIUM PROJEK AS U AL DAARAAN DEELGENEEM HET) het my op die volgende gebiede ontwikkel: / The way accounting was taught (the teaching methodology) up to now (WITH SPECIFIC REFERENCE TO THE COMMERCIIUM PROJECT IF YOU HAVE ALREADY PARTICIPATED IN IT) enhanced the following in me:

	Verskil sterk / Strongly disagree	Stem nie saam nie / Disagree	Neutraal / Neutral	Stem saam / Agree	Stem heelhartig saam / Strongly Agree
B1 Die volgende tegniese vaardighede en bevoegdhede is bereik: / The following technical skills and competencies were obtained:					
10 Kritiese probleem-oplosvaardigheid / Critical problem solving skills	1	2	3	4	5
11 Mondelinge en geskrewe kommunikasie vaardighede / Oral and written communication skills	1	2	3	4	5
12 Effekiewe leervaardighede / Effective learning skills	1	2	3	4	5
13 Vermoë om tegnologie te gebruik / Being able to use technology	1	2	3	4	5
14 Tegniese vaardighede oor verskeie velde (vakgebiede) / Technical competencies over various fields (subject fields)	1	2	3	4	5
15 Analitiese vaardighede, logiese argumentering en opsomming / Analytical ability, logical argument and summarising	1	2	3	4	5
B2 Ek kan my vaardighede in die volgende rolle as rekenmeester demonstreer / I can demonstrate skills in the following roles as an accountant:					
16 Om entrepreneur te wees / Being an entrepreneur	1	2	3	4	5
17 Om algemene bestuurder te wees / Being a general manager	1	2	3	4	5
18 Om 'n internasionale deelnemer te wees / Being a global player	1	2	3	4	5
19 Om 'n mark analis te wees / Being a market analyst	1	2	3	4	5
20 Om 'n verkoops persoon te wees / Being a salesperson	1	2	3	4	5
B3 Die volgende sagte vaardighede is bereik: / The following soft skills are attained:					
21 Om effektief in groepe te werk (spanbou) / Effective functioning in group work (team building)	1	2	3	4	5
22 Persoonlike eienskappe soos motivering, selfbestuur ens. / Personal attributes such as motivation, selfmanagement, etc.	1	2	3	4	5
23 Effektiewe interpersoonlike kommunikasie / Effective interpersonal communication	1	2	3	4	5
24 Probleemoplossing (in terme van die gemeenskap se behoeftes) / Problem solving (in terms of society needs)	1	2	3	4	5
25 Evaluering of oorweging van etiese vraagstukke / Validation of ethic considerations	1	2	3	4	5
26 Om hoë waardes te hê - respek vir die gemeenskap en skepping, strewe na hoë kwaliteit, lojaliteit en integriteit / Having high values - respect for society and creation, strive towards high quality, loyalty and integrity	1	2	3	4	5
27 Kulturele en etniese sensitiwiteit / Cultural and ethnic sensitivity	1	2	3	4	5
28 Vermoë om aan te pas / Being able to adapt	1	2	3	4	5

DEEL C / PART C						
The manier waarop rekeningkunde aangebied is (onderrig metodologie) tot op hede (MET SPESIFIEKE VERWYSING NA DIE COMMERCIUM PROJEK AS U AL DAARAAN DEELGENEEM HET) het my op die volgende vak inhoud effektief aangespreek: / The way accounting was taught (the teaching methodology) up to now (WITH SPECIFIC REFERENCE TO THE COMMERCIUM PROJECT IF YOU HAVE ALREADY PARTICIPATED IN IT) effectively addressed the following subject content:						
	Verskil sterk / Strongly disagree	Stem nie saam nie / Disagree	Neutraal / Neutral	Stem saam / Agree	Stem heelhartig saam / Strongly Agree	
C1 Rekeningkundige beginsels / Accounting basics						
29	Wat die rekeningkundige konteks is en wat die rol/doel van rekeningkunde is / What the accounting context is and the role/purpose of accounting is	1	2	3	4	5
30	Konseptuele raamwerk en rekeningkundige begrippe / Conceptual framework and accounting concepts	1	2	3	4	5
31	Rekeningkundige vergelyking en dubbel inskrywing reël / Accounting equation and double entry principle	1	2	3	4	5
Rekeningkundige siklus / Accounting cycle:						
32	- Transaksies / Transactions	1	2	3	4	5
33	- Brondokumente / Source documents	1	2	3	4	5
34	- Hulpjoernale / Subsidiary journals	1	2	3	4	5
35	- Algemene grootboeke en hulp grootboeke / General ledger and subsidiary ledgers	1	2	3	4	5
36	- Proefbalans / Trial balance	1	2	3	4	5
37	- Aansuiwerings / Adjustments	1	2	3	4	5
38	- Closing off / Afsluiting	1	2	3	4	5
39	- Wins bepaling / Profit calculations	1	2	3	4	5
40	- Finansiële state / Financial statements	1	2	3	4	5
C2 Finansiële staat elemente / Financial statement elements						
41	Vorraad / Inventories	1	2	3	4	5
42	Debiteure / Accounts receivable (Debtors)	1	2	3	4	5
43	Krediteure / Accounts payable (Creditors)	1	2	3	4	5
44	Kontant en bank / Cash and bank	1	2	3	4	5
45	Eiendom, aanleg en toerusting (Nie-Bedryfsbates) / Property, plant and equipment (Non Current assets)	1	2	3	4	5
C3 Verskillende entiteite / Different entities						
46	Eenman sake / Sole proprietors	1	2	3	4	5
47	Maatskappye / Companies	1	2	3	4	5
48	Vennootskappe / Partnerships	1	2	3	4	5
49	Beslote korporasies / Close corporations	1	2	3	4	5
50	Ondernemings sonder winsoogmerk / Non-profit organisations	1	2	3	4	5
C4 Diverse onderwerpe / Sundry topics						
51	Regstel van foute / Correction of errors	1	2	3	4	5
52	BTW / VAT	1	2	3	4	5
53	Versekeringsseise: Voorraad / Insurance claims: Inventories	1	2	3	4	5
54	Finansiële staat analise / Financial statement analysis	1	2	3	4	5
55	Onvolledige rekords / Incomplete records	1	2	3	4	5
56	Interne beheer / Internal controls	1	2	3	4	5
57	Begrotings / Budgeting	1	2	3	4	5
58	Bestuursrekeningkunde en vervaardigingsentiteite / Management accounting and manufacturing entities	1	2	3	4	5

DEEL D / PART D

The manier waarop rekeningkunde aangebied is (onderrig metodologie) tot op hede (MET SPESIFIEKE VERWYSING NA DIE COMMERCIIUM PROJEK AS U AL DAARAAN DEELGENEEM HET) kan as volg beskryf word: / *The way accounting was taught (the teaching methodology) up to now (WITH SPESIFIC REFERENCE TO THE COMMERCIIUM PROJECT IF YOU HAVE ALREADY PARTICIPATED IN IT) can be described as follows:*

		Verskil sterk / Strongly disagree	Stem nie saam nie / Disagree	Neutraal / Neutral	Stem saam / Agree	Stem heelhartig saam / Strongly Agree
59	Leerder gesentreerd (gefokus op wat die leerder moet doen en nie onderwyser/dosent gedrewe) / <i>Learner centred (focused on what the learner must do and not teacher/lecturer driven)</i>	1	2	3	4	5
60	Het ook ongestruktureerde leergeleenthede gehad / <i>Also had unstructured learning opportunities</i>	1	2	3	4	5
61	Was nie noodwendig altyd vak inhoud gebaseer nie maar breë basis gerig / <i>Was not necessary always subject content based but broad based</i>	1	2	3	4	5
62	Onderwyser/dosent was 'n fasiliteerder / <i>Lecturer/teacher was a facilitator</i>	1	2	3	4	5
63	Daar was aktiewe leerder deelname / <i>There was active learner participation</i>	1	2	3	4	5
64	Het ook selfstudie en werk in die leerder se eie tyd geverg / <i>Required selfstudy and work in the learner's own time</i>	1	2	3	4	5
65	Het praktiese ervarings ingesluit wat leer relevant en interessant gemaak het. Het die werklikheid gesimuleer / <i>Included practical experiences that made learning relevant and interesting. It simulated reality</i>	1	2	3	4	5
66	Het gefokus om die vaardighede wat ek benodig vir my profesie / <i>It focused on the competencies I require for my profession</i>	1	2	3	4	5
67	Het geleentheid gebied vir groepwerk en om by mekaar te leer / <i>Provided opportunity for group work and learning from peers</i>	1	2	3	4	5
68	Het gebruik gemaak van multimedia en tegnologie / <i>Made use of multi-media and technology</i>	1	2	3	4	5
69	Het leerervaring deur verskillende sintuie (sien, hoor, ruik, fisiese aanraking en gevoelens) ingesluit / <i>Included learning through various senses (see, hear, smell, physical sensation and feelings)</i>	1	2	3	4	5
70	Het stapsgewys en logies plaasgevind / <i>Occurred in continual steps and in a logical manner</i>	1	2	3	4	5
71	Het my gehelp om 'n holistiese perspektief oor die vakgebied te kry / <i>Helped me to obtain a holistic perspective of the subject field</i>	1	2	3	4	5
72	Het geleentheid gebied vir interaksie en persoonlike kontak tussen leerders onderling en met onderwyser/dosent / <i>Provided opportunities for interaction and personal contact between learners and learners and between learners and the teacher/lecturer.</i>	1	2	3	4	5
73	Het my agtergrond, huistaal, ensovoorts in ag geneem / <i>Took into account my background, home language, etc.</i>	1	2	3	4	5
74	Het my vorige kennis en vaardighede in ag geneem / <i>Took into account my previous knowledge and competencies</i>	1	2	3	4	5

PART E						
75	Ek het al aan die Commercium projek deelgeneem / I have already played the Commercium game	Ja / Yes	1	Nee / No	2	
Voltooi die volgende vrae indien u al aan die Commercium projek deelgeneem het. / Complete the following questions if you have already participated in the Commercium project.						
		Verskil sterk / Strongly disagree	Stem nie saam nie / Disagree	Neutraal / Neutral	Stem saam / Agree	Stem heelhartig saam / Strongly Agree
76	My belangstelling in finansiële rekeningkunde is verhoog deur die Commercium projek / My interest in financial accounting has been enhanced by the Commercium project	1	2	3	4	5
77	Deelname aan die projek het my tegniese vaardighede bevorder / Participating in the project enhanced my technical competencies	1	2	3	4	5
78	Deelname aan die projek het my siening oor die rol van die rekenmeester verbreed / Participating in the project broadened my view on the role of the accountant	1	2	3	4	5
79	Deelname aan die projek het my sagte vaardighede soos gelys in vrae 21-28 gestel bevorder/verder ontwikkel / Participating in the project developed / enhanced my soft skills as stated in questions 21-28	1	2	3	4	5
80	Die projek was 'n effektiewe leerervaring / The project was an effective learning experience	1	2	3	4	5
81	Wat ek gedurende die projek geleer het sal my oor die langtermyn bybly / What I have learned during the project will stay with me on the longrun	1	2	3	4	5
82	Die projek het my insig in die verband tussen die teorie en praktyk bevorder / The project increased my insight into the relationship between the theory and practice	1	2	3	4	5
83	Ek verkies die projek in plaas van lesings / I prefer the project instead of lectures	1	2	3	4	5
84	Ek het die sosiale aspekte van die projek geniet / I enjoyed the social aspects of the exercise	1	2	3	4	5
85	Ek het die projek ernstig geneem, al was dit in die vorm van 'n speletjie / I took the exercise seriously even though it was in the form of a game	1	2	3	4	5
86	Ek is gemotiveer deur die projek / I was motivated by the project	1	2	3	4	5
87	Die projek het insig/toepassing van my verwag en nie net die blote weergee van kennis nie / The project demanded insight/application from me and not only knowledge replication	1	2	3	4	5

Voltooi die volgende om jou gesindheid teenoor die bordspel te toon. Die skaal strek van "1" (uiters positief) tot "7" (uiters negatief). A neutrale gevoel word getoon as "4". / Complete the following indicating your attitude towards the board game. The scale ranges from '1' (extremely positive) to '7' on the other end (extremely negative). A 'neutral feeling' is expressed by '4'.

88	Hou van / Likeable*	1	2	3	4	5	6	7	Hou nie van / Unlikeable
89	Goed / Good*	1	2	3	4	5	6	7	Slegs / Bad
90	Gelukkig / Happy*	1	2	3	4	5	6	7	Ongelukkig / Unhappy
91	Gemaklik / Comfortable*	1	2	3	4	5	6	7	Ongemaklik / Uncomfortable
92	Kalm / Calm*	1	2	3	4	5	6	7	Gespanne / Tense
93	Vol / Full*	1	2	3	4	5	6	7	Leeg / Empty
94	Natuurlik / Natural*	1	2	3	4	5	6	7	Kunsmatig / Artificial
95	Opwindend / Exciting*	1	2	3	4	5	6	7	Vervelig / Dull
96	Vars / Fresh*	1	2	3	4	5	6	7	Versmorend / Suffocation
97	Aangenaam / Pleasant*	1	2	3	4	5	6	7	Onaangenaam / Unpleasant

* Items from Kay's Computer Attitude Measure as used by Noyes et al. (2005:238)

98. Skryf een positiewe en een negatiewe element van die projek agter op u antwoord kaart / Write one positive and one negative element of the project on the backside on the answersheet.

99. As u die projek in een woord moes opsom, wat sal dit wees? / If you have to summarize the project in one word, what would it be?

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