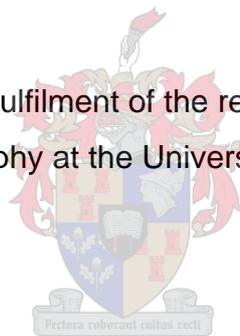


Tjommie en Vriende - An interactive language journey through the wonders of Afrikaans: A computer-based programme for international students.

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Thesis presented in partial fulfilment of the requirements for the degree of
Master of Philosophy at the University of Stellenbosch



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April 2006

Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

Date: 30 November 2005

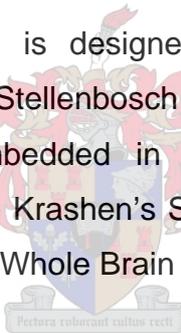


Abstract

Computers play an influential role in our daily lives. Language teachers need to understand the importance of computers and the role computers can play in language learning and instruction.

This study investigated the effect of an interactive computer application, *Tjommie en Vriende*, on foreign language students' accuracy in their Afrikaans language proficiency. The application aimed to improve students' overall communicative competence, but accentuated linguistic competence, in three of the four language skills namely speaking, listening and reading. *Tjommie en Vriende* is a supplement computer application that runs parallel with the course, Beginner Afrikaans for International Students (Level I). The application is based on an imaginative journey through *Afrikanopolis*, a metaphor for South Africa.

This Afrikaans language course is designed specifically for beginner foreign language students enrolled at Stellenbosch University. The methodological framework of the course is embedded in an integration of aspects of the Communicative Approach, Stephen Krashen's Second Language Acquisition theory, the Social Learning theory, and the Whole Brain theory.



This study contributes to the expanding body of research in the field of CALL. The study establishes the necessity of incorporating technology into programmes presented at tertiary institutions to enhance language learning in a multilingual and diverse society.

Opsomming

Rekenaars speel 'n invloedryke rol in ons daaglikse lewens. Taalonderwysers moet die belangrikheid van rekenaars verstaan sowel as die rol wat rekenaars kan speel in taalaanleer en –onderrig.

Hierdie studie het die effek van 'n interaktiewe rekenaarprogram, *Tjommie en Vriende*, op vreemdetaalstudente se akkurate gebruik van Afrikaans ondersoek. Die rekenaarprogram het gepoog om studente se kommunikatiewe bekwaamheid, met spesifieke fokus op linguistiese bekwaamheid, te verbeter in drie van die vier taalvaardighede, naamlik praat, luister en lees. *Tjommie en Vriende* is ontwerp as ondersteunende leermateriaal by die kursus, *Beginner Afrikaans vir Internasionale Studente* (Vlak I). Die program is gebaseer op 'n denkbeeldige reis deur *Afrikanopolis*, 'n metafoor vir Suid-Afrika.

Hierdie Afrikaanskursus is ontwerp spesifiek vir vreemdetaalspreekers op beginnervlak wat ingeskryf is by die Universiteit van Stellenbosch. Die metodologiese raamwerk van die kursus is gebaseer op 'n integrasie van aspekte van die Kommunikatiewe Benadering, Stephen Krashen se Tweedetaalverwerwingsteorie, die Sosiale Leerteorie en die Heelbreinleerteorie.

Hierdie studie lewer 'n bydrae tot die bestaande literatuur oor rekenaargesteuende taalonderrig. Dit beklemtoon ook die noodsaaklikheid van die belangrike rol van tegnologie 'n belangrike rol speel in die onderrig- en leerprosesse en dat tersiêre instansies hierdie tegnologie in kursusprogramme moet insluit. Die insluiting van tegnologie is 'n haalbare oplossing om taalprogramme in plek te stel in meertalige en diverse leeromgewings.

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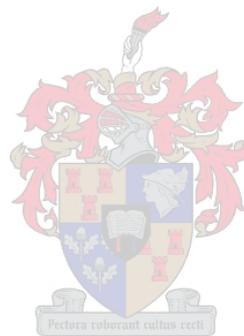
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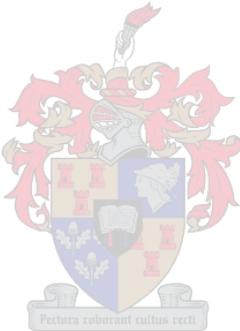
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CHAPTER 1

INTRODUCTION

1.1 Overview

This introductory chapter is devoted to a brief statement of motivational factors that led to this study. These motivational factors include firstly the nature of the existing language course, Beginner Afrikaans for International Students (Level I) 154; secondly, the Language Policy of Stellenbosch University; thirdly, the increasing number of international students and lastly the percentage of historically disadvantaged¹ students enrolled at the University and their changing needs. The chapter closes with a brief description of the research problem, the hypothesis and the research methodology relevant to this study.

1.2 Motivation of Study

This study is concerned with the acquisition of Afrikaans as a foreign language and the role of the computer as complementary language learning aid.

Computers play such an influential role in our daily lives that it is important for language teachers to understand the role of the computer in language instruction and learning. With such an understanding, teachers can better decide how to incorporate computers in their instruction and thus aid them in their instruction task.

The Unit for Afrikaans in collaboration with the Language Centre of Stellenbosch University offers a service to the University's International Office in the form of various language courses. One of these courses is the semester course, Beginner Afrikaans for International Students (Level I) 154. The main focus of the course is on authentic communication or "natural communication". Stephen Krashen (1981:1) states that authentic communication "requires meaningful interaction in the target language – natural communication – in which speakers are concerned not with the form² of their utterances but with the messages they are conveying and understanding."

¹ "Historically disadvantaged" students include "Coloured", African and Indian students

² Form = correct grammatical structure of an utterance

Meaning = the message of an utterance

Authentic communication achieved by means of the development of strategic competence is the main focus of the course. Meaning of students' utterances or output is therefore more important than the form in which the utterances or output are produced. Form is a secondary (but not necessarily less important) objective since most students following the course need basic Afrikaans for social purposes and not academic Afrikaans for survival in lectures. The strategic use of the target language is therefore more important than the accurate use of language form (linguistic competence). For the purpose of this study, a computer application was designed to address the issue of students' changing needs. More and more students not only need Afrikaans for social purposes but also for academic survival. They would therefore like to improve both their strategic and linguistic competence. The computer application designed for this study is called *Tjommie en Vriende* and is designed to focus on the accurate use of form (linguistic competence). The application is an attempt to create a balance between both the strategic and accurate use of Afrikaans. It is designed as a supplementary computer application to focus primarily on form but without compromising meaning.

Michael Levy (1984:1) defines Computer-Assisted Language Learning (CALL) as “the search for and study of applications of the computer in language teaching and learning.” The purpose of this study is to investigate whether the computer application, *Tjommie en Vriende*, with its focus on the accurate use of form, will have a positive influence on the overall communicative competence of a group of international students at Stellenbosch University.

1.2.1 Beginner Afrikaans for International Students (Level I) 154

Beginner Afrikaans for International Students (Level I) is designed specifically for international students with no prior knowledge of Afrikaans whatsoever. This course can be described as a fun-filled course offering a linguistic and cultural taste of Afrikaans as a language in a wider cultural context. It aims to develop students' ability to speak social Afrikaans confidently and fluently; to listen to and understand the gist of social conversations; and to read and understand the gist of short stories,

advertisements and notices. Basic grammar, vocabulary and idiomatic structures are taught in a defocused manner.

1.2.1.1 Nature of the Course

Beginner Afrikaans for International Students (Level I) is a semester course consisting of two sessions of 2½ hours each per week for 14 weeks. The methodology used in the course is based on an integration of various theories and approaches. The Communicative Approach in combination with elements of Suggestopaedia, the Language Learning Theory of Stephen Krashen, the Social Learning Theory and Whole Brain Learning, forms the theoretical framework in which the Unit for Afrikaans functions. Section 1.1.1.4 will discuss the methodological framework in more detail.

The context of the course is set in an imaginary country called *Afrikanopolis*. Using a journey metaphor correlates with the fact that the students who enroll for the course are indeed travelers. Not only are they on an intellectual journey of discovery, they are also traveling through South Africa.

Afrikanopolis is a metaphor for South Africa except that this country only has six provinces instead of nine. In each province the students come across a number of grammatical structures and rules during their journey. In each province one town is chosen as the main destination and context for this encounter. While students are staying in the town, the grammatical structures and rules are explained and dealt with in a true communicative fashion. In these towns the students meet fictional characters whose task it is to make their journey more pleasant. These fictional characters include Tjommie Toerien, Bella Ballerina, Bertus Bokser, Karel Kraai en Stompi Seekat. The researcher (who is also the presenter of the course) makes use of role-play situations to introduce these characters who supply the students with helpful hints to make the learning of Afrikaans easier.

The presenter of the course has a unique Afrikaans persona. She is known by the students as Tjommie Toerien, the tour guide from Tietiesbaai. Tjommie is

adventurous, wild, daring, outspoken and outgoing. She is indeed an extrovert and definitely not shy. The students also receive new Afrikaans personas while they are traveling through *Afrikanopolis*. Through these Afrikaans personas real life situations are simulated. Occupations, hometowns and hobbies are aspects of students' new personas.

The new persona often functions as a protective shield. Students don't mind making mistakes because it is seen as the mistakes of their personas and not the authentic persons behind the personas¹. See section 2.2.3 for a discussion of the Whole Brain Learning Theory and the effect of the limbic system on language acquisition.

1.2.1.2 General Outcomes

Through this course foreign language speakers are guided to:

- create and negotiate meaning and understanding;
- show critical awareness of language use;
- apply elementary knowledge of specific language structures and conventions in a meaningful context;
- gather, process and use information from different sources and situations;
- show appreciation of the aesthetic, affective, cultural and social value of texts and
- use appropriate communication strategies for specific goals and situations.

1.2.1.3 Specific Outcomes

The objectives of the course are explained within the framework of the following four components of communicative competence which always function as an interconnected whole in authentic communication. In the course, Beginner Afrikaans for International Students (Level I), the focus is mainly on the development of speaking, listening and reading while writing is activated as thinking tool and teaching aid. See section 2.2.2.1 for a theoretical discussion.

¹ During the past eight courses of Beginner Afrikaans for International Students (Level I) numerous students decided to keep their personas after they have completed the course or when they meet new Afrikaans students on campus. They choose to use the persona as protection because they feel less embarrassed when they make a mistake.

Accuracy (Linguistic Competence)

- Pronunciation problems like confusing word pairs, diphthongs and individual vowels
- Building context specific vocabulary to convey the correct message
- Problematic sentence construction like:
 - inverted word order in the simple sentence
 - negation in the simple sentence
 - the present, past and future tenses
 - the varying structure of the adjective

Appropriacy (Sociolinguistic Competence)

- Informal language use of the following language functions:
 - socializing
 - giving and asking for information
 - stating approval and disapproval
 - stating and denying a request
 - giving and asking advice

Fluency (Strategic competence)

- Uninterrupted speaking by means of compensatory strategies like body language and facial expressions, translation and circumlocution
- Strategic reading techniques like scanning, cloze and interpretive (dramatic) reading

Discourse competence

- Listening globally to and understanding the main gist of conversations

1.2.1.4 Methodology

The course is based on a problem solving approach, which integrates theories about language learning, social learning and the integrated function of the whole brain. The Language Learning theory puts a high priority on authentic communication based on context within a constant action-reaction chain. The Social Learning theory views successful learning as a process which progresses from cooperative learning in small groups to individualized learning. The Whole Brain Learning theory focuses on the simultaneous activation of the neo-cortex, limbic system and R-complex, thereby

integrating the student's holistic thinking, emotions, intuition and sensory system during the learning process. See chapter two for a more detailed discussion of the theoretical framework. Consequently the non-mother tongue speaker acquires the foreign language far quicker. That is why the learning process in class is also called accelerated learning.

1.2.1.5 Course Structure

This is a one semester course consisting of 2 sessions of 2½ hours per week. These sessions take place either on a Monday & Wednesday or a Tuesday & Thursday from 14:00 – 16:30 and Monday & Wednesday evenings from 17:00 – 19:30.

Students who follow Beginner Afrikaans for International Students (Level I) in the first semester can do a follow up course in the second semester. This is equivalent to a year course that further develops the language skills as mentioned in the specific outcomes.

1.2.2 Language Policy

The Language Policy (Appendix A) of Stellenbosch University states that Afrikaans is the default language of instruction and learning in undergraduate programmes (Stellenbosch University, 2002a). In 2002 the Council of Stellenbosch University approved the official Language Policy and Language Plan (Appendix B). The core of the policy can be summarized as follows:

The University of Stellenbosch is committed to the use and sustained development of Afrikaans as an academic language in a multilingual context. Language is used at the University in a manner that is directed towards engagement with knowledge in a diverse society (Stellenbosch University, 2002a).

An educational institution cannot operate in isolation and its existence depends on the continuous contact and conversations with other institutions of its kind. An educational institution's survival is therefore embedded in an international context. Stellenbosch University believes that this "international context is of crucial

significance in its engagement with knowledge” (Stellenbosch University, 2002a). In spite of this, the University also needs to function in a local socio-cultural context: in South Africa, in the Western Cape. “The University aims to apply locally the knowledge that has been discovered inter alia within the international context, taking into account the differences within the regional community and national society” (Stellenbosch University, 2002a).

South Africa has a unique national society within which we are challenged with no less than eleven official languages. The Constitution of South Africa states that the “official status to eleven different languages amounts to an acknowledgement that each of these languages is recognized as an asset that should be used as a means of developing the human potential of the country” (Stellenbosch University, 2002a). Stellenbosch University is located in the Western Cape where the majority of the population (55,3%) is native speakers of Afrikaans (Western Cape Province, 2005). In the whole of South Africa there are six million native speakers of Afrikaans and ten million secondary speakers (Afrikaans, 2005). These statistics would make one assume that it makes sense that Stellenbosch University should have a language policy serving the needs of the majority of the regional community.

1.2.2.1 Principles of the Language Policy of Stellenbosch University

Stellenbosch University has implemented the Language Policy with careful consideration of the following important principles:

1. The University is a centre of excellence directed toward the production of knowledge through research, learning and instruction.
2. The University *recognizes and respects the core values enshrined within the South African constitution.*¹
3. The University takes into consideration strategic national policy and the processes of policy formation.
4. The Language Policy takes into account the values and premises set out in the Strategic Framework of the University.

¹ My italicization

5. The University *recognizes the particular status of Afrikaans as an academic language and shares the responsibility for promoting Afrikaans as an academic language.*
6. The University recognizes the status of English as an important local and also acknowledged international academic language.
7. The University recognizes the status of isiXhosa as an important local language, but also as a developing academic language, and intends, within the limitations of what is possible, to contribute actively in its development.
8. The Language Policy takes into account the diversification goals of the University.
9. The Language Policy places the University in a position *to make a particular contribution to the promotion of multilingualism as an asset.*
10. The University accepts the principle that *the success of the Language Policy is dependent on the provision of acceptable and sufficient language services.*



(Stellenbosch University, 2002a)

Points two, five, nine and ten of the Language Plan are relevant to the study conducted. These four points emphasize the necessity for the development of Afrikaans support courses and the responsibility of the University to do so. Due to time constraints (e.g. semesters are one calendar week shorter in 2006) and lack of manpower (a government budget cut of R76 million for 2005 caused a significant staff cut in all departments in the form of severance packages and a moratorium was placed on all new appointments)¹ the development of Afrikaans language courses is no easy task. The development of computer-based instructional materials in the future, however, could be a feasible solution to the complex problem of too little language support within the various faculties.

¹ This information was sent to all staff members of Stellenbosch University via an electronic letter from the Rector's office.

To conclude:

the Language Policy of the University of Stellenbosch seeks to contribute, as a future-oriented policy, to the realisation of the ideal of creating a favourable learning and instruction environment for the benefit of the students; an environment within which Afrikaans as an academic language and the asset of multilingualism are combined in an imaginative way.

(Stellenbosch University, 2002a)

1.2.3 International Students

The number of international students enrolled at Stellenbosch University has increased over the past 15 years. In 1990 international students encompassed 2,5% of the total student population. This number increased to 4,3% in 2004. Most of these students study at the University for one or two semesters, but there is an increasing tendency for students to register for a complete undergraduate programme. A needs analysis conducted by the researcher identified a growing need for intensive Afrikaans language support courses.¹ To adhere to the Language Policy as stipulated in section 1.2.2.1, it is therefore necessary to develop these types of courses. Section 3.3.1 discusses this issue more thoroughly.

1.2.4 Historically Disadvantaged Students

The number of black students (historically disadvantaged students) enrolled at Stellenbosch University has also increased over the past 15 years. In 1990 historically disadvantaged students made up a mere 0,5% of the total student population. In 2004 this number escalated to 29%. 6,6% of the 29% of students speaks an other official South African language as a first language (International Office, 2005a).

All first year students enrolled at the University write compulsory language placement tests (also known as Academic Literacy Tests) at the beginning of the academic year. These tests determine students' academic language proficiency. A statistical

¹ The need for intensive Afrikaans courses are also reflected in the number of students enrolled for *Pretproe*, (a 90-hour intensive course) in January 2006. In June of 2005 11 students enrolled for the course whereas 39 students have enrolled for January.

analysis of the data obtained from these tests, written in 2005, indicates that historically disadvantaged students obtained the lowest mean score in the Afrikaans test (Van Dyk & Kistner, 2005). Considering the Language Policy of Stellenbosch University this is a serious problem that needs to be addressed.

Historically disadvantaged students are especially relevant for this study because lots of future research on CALL (Computer Assisted Language Learning) possibilities evolve around them. Point ten of the Language Policy and point nine of the Language Plan state that the University needs to provide acceptable and sufficient language services. A positive outcome in this particular study conducted, creates an opportunity for the development of computer-based instructional materials to help these students with their language needs. More attention will be given to this issue in Chapter 6.

1.3 Problem Statement

The problem that this study addresses is the development of linguistic competence (with the focus on the accurate and meaningful use of form) as an aspect of language proficiency of a group of international students at Stellenbosch University.

The question this study wants to answer is:

- How will the supplementary computer application, *Tjommie en Vriende*, with its main focus on accuracy, influence students' general Afrikaans proficiency, which includes strategic, linguistic, socio-linguistic and discourse competence?

1.4 Purpose of This Study

The purpose of this study is supported by four motivational factors. Firstly, since there are no similar computer applications available in Afrikaans as a foreign language (see section 6.3 for a limited choice of applications available), to develop an interactive computer application that will develop accuracy through focusing on both form and meaning. Secondly, the researcher will aim to determine if the computer application was indeed successful in its attempt to improve students' Afrikaans language proficiency with its focus on both form and meaning. Thirdly, in

order to adhere to point ten of the Language Policy and point nine of the Language Plan, this application will be an example of a creative way of putting language support courses in place to address (especially historically disadvantaged) students' language shortcomings. Lastly, should the computer application indeed be successful, it opens the door to endless future possibilities, for example the development of an E-Learning Unit within the Language Centre.

1.5 Hypothesis

The interactive and supplementary computer application *Tjommie en Vriende* might improve students' general communicative competence on a speaking, listening and reading skills level, in spite of the fact that the main focus of *Tjommie en Vriende* is on accuracy, e.g. only linguistic competence. In other words: it would therefore be interesting to see whether transfer of one competence to another is possible where students have extra training in accuracy.

1.6 Research Methodology and Design

This study uses a quantitative approach because it provides statistical data, collected via predetermined instruments, to support the hypothesis. Empirical observations and measures are necessary if one wants to produce objective data.

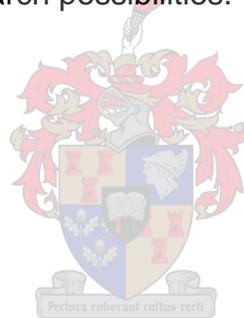
The experiment conducted uses a quasi-experimental, non-equivalent, repeated measures (pre- and post-test) and one-way design. The intent of the experiment is to determine and test the impact of an intervention, in this case *Tjommie en Vriende*, on an outcome. In this experiment the outcome is students' accuracy within their Afrikaans language proficiency.

The participants in this study consisted of a group of 15 undergraduate and postgraduate international students enrolled at Stellenbosch University for the semester course, Beginner Afrikaans for International Students (Level I) 154. The researcher also taught this course. Since students had already been grouped for the contact course, the researcher made use of a convenience sample, within which the experimental group selected themselves by volunteering to participate in the

research project. Five students volunteered to complete the computer application and formed the experimental group. These students included volunteers from Germany, America and Japan. The remaining ten students constituted the control group. These students included a mixture of German, American, French and isiXhosa students.

1.7 Preview

Chapter 2 discusses the theoretical framework on which the research of this study is based. Chapter 3 firstly describes how the theoretical framework influenced the choice of content of the application *Tjommie en Vriende*. Secondly, attention is given to the design aspects of the application. Chapter 4 aims to explain the chosen research methodology and Chapter 5 provides the results of the study, followed by a discussion and analysis. Chapter 6 will conclude the findings of the study and make recommendations for future research possibilities.



CHAPTER 2

A LITERATURE REVIEW FOR A THEORETICAL FRAMEWORK

2.1 Preview

This chapter includes a review of the relevant literature about theories on and approaches to second and foreign language acquisition. Three relevant theories and/or approaches, all relevant to the teaching methodology of the Unit for Afrikaans, are discussed. Also included is an overview of the role of the computer and how it can contribute to language learning.

2.2 Language Learning Theory and Approach

The language learning theories and approach discussed in this chapter is Stephen Krashen's Second Language Acquisition Theory, the Communicative Approach and the Whole Brain Learning Theory. Because there are so many language learning theories, approaches and methods (Larsen-Freeman, 2002) to language learning, a detailed summary of all theories and approaches falls outside the scope of this study. The researcher therefore chose two theories and one approach to support the hypothesis, because it forms part of the broader theoretical framework in which the Unit for Afrikaans operates and therefore also informs the instructional design of *Tjommie en Vriende*.

For a theory to be legit or to take part in an academic discourse, it has to be grounded in an accepted framework. Both Stephen Krashen's Second Language Acquisition Theory and the Communicative Approach comply with a sound framework as stipulated by Brown (1994:276-278). Brown's framework for a theory of second language acquisition suggests the following:

- A theory of second language acquisition includes an understanding, in general, of what language is, what learning is, and for classroom contexts, what teaching is.
- Knowledge of children's learning of their first language provides essential insights to an understanding of second language acquisition.

- However, a number of important differences between adult and child learning and between first and second language acquisition must be carefully accounted for.
- Second language learning is a part of and adheres to general principles of human learning and intelligence.
- There is tremendous variation across learners in cognitive style and within a learner in strategy choice.
- Personality, the way people view and reveal themselves in communication, will affect both the quantity and quality of second language learning.
- Learning a second culture in all its ramifications is often very much a part of learning a second language.
- The linguistic contrasts between the native and target language form one source of difficulty in learning a second language. But the creative process of forming an interlanguage system involves the learner in utilizing many facilitative sources and resources. Inevitable aspects of this process are errors, from which learners and teachers can gain further insight.
- Communicative competence, with all of its subcategories, is the ultimate goal of learners as they struggle with function, discourse, register, and nonverbal aspects of human interaction and linguistic negotiation.
- Ultimately we cannot know whether our teaching or our research hypotheses are valid unless we can devise tests of language that tap into the learner's competence and provide us with meaningful, interpretable information.
- Finally, a theory of second language acquisition must be comprehensive in including as many relevant factors as possible while at the same time it must have practical application in the real world.

2.2.1 Stephen Krashen's Second Language Acquisition Theory

The framework discussed in section 2.2 is thoroughly embedded in Krashen's theoretical perspectives. Krashen has received a lot of criticism (e.g. see the KrashenBurn website), especially since some academics claim that his theory has not been informed by any practical research. Despite this accusation, he has

contributed greatly to the discourse on second language acquisition. Lightbown (cited in Cook, n.d.) describes Stephen Krashen's theory as a combination of "a linguist theory (through its "natural order" hypothesis), social psychological theory (through its "affective filter" hypothesis), psychological learning theory (through its "acquisition-learning" hypothesis), discourse analysis and sociolinguistic theory (through both the "comprehensible input" hypothesis and the "monitor" hypothesis)". Ellis (cited in Cook, n.d.) talks about the "lucidity, simplicity, and explanatory power of Krashen's theory". Academic reactions like these contribute considerably to the popularity of Krashen's theory.

2.2.1.1 The Acquisition-Learning Hypothesis

The Acquisition-Learning hypothesis is regarded as the most fundamental of all Stephen Krashen's hypotheses. It distinguishes between two independent systems for second language competence: an "acquisition" system and a "learning" system.

Acquisition takes place subconsciously in a process similar to the way in which children develop their competence in their first language. "It requires meaningful interaction in the target language – natural communication – in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding" (Krashen, 1981:1).

Learning on the other hand takes place as a conscious process and is the product of formal instruction. Krashen (1982:10) refers to it as the "conscious knowledge of a second language, knowing the rules, being aware of them, and being able to talk about them". Learning is thus "knowing about a language" (Krashen, 1982:10).

2.2.1.2 The Natural Order Hypothesis

This hypothesis is not only based on theory but also on research findings (Dulay & Burt, 1974, 1975; Fathman, 1975; Kessler & Idar, 1997; Makino, 1980, cited in Krashen, 1982), which suggest that the acquisition of grammatical structures takes place in a predictable and natural order regardless of learners' first language. The

order of acquisition is independent of the learner's age, first language (L1) background and the conditions of the exposure to the new language. (Schütz: 2005)

2.2.1.3 The Monitor Hypothesis

The relationship between acquisition and learning is explained by the Monitor hypothesis. Acquisition and learning are activated in two very specific and different ways. Krashen (1982:15) describes the acquisition system as the initiator of utterances while the learning system acts as a 'monitor' or 'editor' of utterances. The 'monitor' has a planning, editing and correction function and focuses on the accuracy of utterances whereas the acquisition system is responsible for the fluency of these utterances.

In order for the 'monitor' to fully operate as an utterance editor, three specific conditions should be met. Firstly the learner should have sufficient time at his/her disposal to consciously think about and apply a grammar rule. Secondly the learner should also be focused on the form of his/her utterances and think about correctness (Dulay & Burt, 1978, cited in Krashen, 1982:16). Thirdly, the learner should know the rule that should be applied. Schütz (2005) points out that according to Krashen, the role of the monitor should be a minor one, and that it should only be used to correct "deviations from 'normal' speech and to give speech a more 'polished' appearance".

Krashen (1982:19) also suggests that there is individual variation amongst learners regarding the use of the monitor. He identifies three types of monitor users:

- *Over-users* are those learners who use the monitor all the time because they are so concerned with correctness that they speak much slower and therefore hinder the fluency of their utterances.
- *Under-users* are those learners who have not learned or who prefer not to use their conscious knowledge and are uninfluenced by the monitor. These users rely on their acquired system and therefore speak more fluently but incorrectly.
- *Optimal users* are those learners who use the monitor appropriately, e.g. when it does not interfere with communication.

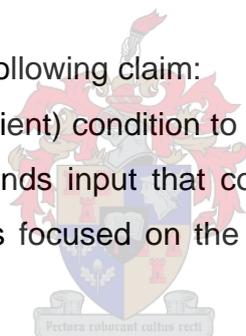
2.2.1.4 The Input Hypothesis

This hypothesis explains how a learner acquires a second language. The Input hypothesis is concerned with acquisition because as Krashen (1982:20) states, “if the monitor hypothesis is correct, that acquisition is central and learning more peripheral, then the goal of our pedagogy should be to encourage acquisition”.

This hypothesis states that a learner progresses along the predictable and ‘natural order’ when he/she receives input in the target language that is one step beyond his/her current stage of linguistic competence (Krashen, 1982:21). This can be explained as follows: if a learner is at stage i , then acquisition takes place when he/she is exposed to understandable and comprehensible input that belongs to level $i + 1$. In this example i represents a learner’s current competence and $i + 1$ the next level.

The input hypothesis makes the following claim:

A necessary (but not sufficient) condition to move from stage i to stage $i + 1$ is that the acquirer understands input that contains $i + 1$, where “understand” means that the acquirer is focused on the meaning and not the form of the message.



Krashen (1982:21)

Finally Krashen suggests that $i + 1$ should be natural communicative input. This will ensure that learners who are at different stages of language acquisition will receive some $i + 1$ input that is relevant for their current stage of linguistic competence (Schütz, 2005).

2.2.1.5 The Affective Filter Hypothesis

This is the last of the five hypotheses and states how affective variables relate to the language acquisition process. These factors play a “facilitative, but non-causal role” in second language acquisition (Schütz, 2005). These affective variables can be placed into one of three main categories namely motivation, self-confidence and anxiety. Learners with high levels of personal motivation, self-confidence and low

levels of anxiety, generally tend to do better in second language acquisition. On the other hand, learners with low motivation, low self-esteem and higher levels of anxiety, raise their affective filters. A raised filter can “form a mental block that prevents comprehensible input from being used for acquisition” (Krashen, 1982 & Schütz, 2005). Studies investigating the impact of affective variables on foreign language acquisition and computers support Krashen’s Affective Filter hypothesis (Beauvois & Eledge, 1995; Meunier, 1995; Nagata, 1996; Nutta, 1998 & Warschauer, 1996b).

2.2.2 The Communicative Approach

The last two decades of the twentieth century as well as the dawning of the twenty-first has been characterized by the focus on communicative language teaching (CLT) – the “teaching of second languages for the ultimate goal of communication with other speakers of the second language” (Brown, 1994:226). The focus of this approach is on authentic communication, centered on speaking and listening skills, writing for specific communicative purposes and on authentic reading of texts.

CLT can be better described as a broad approach to language acquisition instead of a method. The latter can be defined as “a generalized, prescribed set of classroom specifications for accomplishing linguistic objectives” (Brown, 1994:159). An approach on the other hand, is a “unified but broadly-based theoretical position about the nature of languages and of language learning and teaching” (Brown, 1994:245).

Brown (1994:245) defines CLT by ways of four interconnected characteristics:

- The desired outcomes of a class focus on the integration of all of the components of communicative competence and are not restricted to linguistic competence.
- The language learning techniques are designed in such a manner as to engage all learners in the pragmatic, authentic and functional use of the target language for meaningful purposes.

- Accuracy and fluency are complementary principles within communication. In some communication acts fluency may be of more importance than accuracy if one wishes to keep learners meaningfully engaged.
- In the communicative classroom students have to use the target language in unrehearsed contexts in a productive and receptive manner.

For the sake of completeness, the terms “authentic” and “meaningful” are further qualified. Firstly, in this kind of teaching the syllabus must be related to the “real language needs” of learners, and communication is the “real language need” (Weideman, 1988:93 & Allwright, 1979:167-168). Classroom activities should therefore simulate the real world and focus on solutions to real world problems. These activities should be presented as an integrated whole and not broken down into different components. The content of an activity and the social interaction between learners and facilitator should be authentic as if they are engaged in a real life situation.

Secondly, as Weideman (1988:93) points out, is the importance of emphasis on meaning. While communicating learners focus on the meaning of their utterances instead of the structure. Learners are not confronted with learnt structures that they only fill with meaning afterwards.

2.2.2.1 Communicative Competences

The term communicative competence was coined by the sociolinguist, Dell Hymes, in 1967, who felt that Chomsky’s definition thereof was too limited (Brown, 1994:227). Brown (1994:227) defines communicative competence as “that aspect of our competence that enables us to convey and interpret messages and to negotiate meanings interpersonally within specific contexts”.

In the 1970s Hymes did research on communicative competence and made a distinction between linguistic and communicative competence to indicate the difference between “knowing about” a language and “knowing how” to use a language (Brown, 1994:227). Hymes was followed by James Cummins (1979, 1980,

cited in Brown, 1994) who proposed a different distinction between cognitive/academic language proficiency and basic interpersonal communicative skills. Michael Canale en Merrill Swain (1980, cited in Brown, 1994) took these concepts and refined them to what is known today as communicative competence.

The construct of communicative competence consists of the following four different subcategories:

- *Grammatical competence* – the knowledge of lexical items and rules of morphology, syntax, sentence-grammar, semantics and phonology. It is the knowledge of the structure and form of a language.
- *Discourse competence* – the ability learners have to connect sentences in stretches of discourse and to form a meaningful whole out of a series of utterances. It is the knowledge of the rules of cohesion and coherence across sentences and utterances. It also functions as a listening skill: to understand the gist of an extended conversation or monologue.
- *Sociolinguistic competence* – the ability learners have to understand the social context in which language is used: the roles of the participants, the information they share, and the function of the interaction.
- *Strategic competence* – the verbal and nonverbal communication strategies that may be called into action to compensate for breakdowns in communication due to performance variables or due to insufficient competence. Savignon (1983:40, cited in Brown, 1994:228) paraphrases this as “the strategies that one uses to compensate for imperfect knowledge of rules – or limiting factors in their application such as fatigue, distraction, and inattention”. It is the knowledge of how to manipulate the language that you have, especially when it is “deficient”, in order to meet communicative goals.

(Brown, 1994:227–228 & Lee & VanPatten, 1995:149)

2.2.3 The Whole Brain Learning Theory

Everyone is born with amazing brain potential: between 100 and 200 billion brain cells and an extremely complex network of dendrites that transports stimuli to the brain cells. It therefore makes sense that knowledge of the brain and whole brain thinking enhances one’s chance of personal and professional success.

For centuries man has tried to fully understand the functioning of the brain. As early as 450 B.C. Hippocrates questioned why injuries to the left side of the head contributed to the deterioration of functions of the right side of the body and vice versa. Since then numerous researchers have tried to develop experimental techniques to try and locate, identify and measure to which extent skills and intellectual abilities are controlled by the R-complex, the limbic system and the neo-cortex (including the left and right hemispheres of the brain).

2.2.3.1 The Threefold Brain

The threefold brain consists of the R-complex, the limbic system and the neo-cortex. The R-complex experiences stimuli on a purely sensorial level whereas the limbic system gives a confused and diffused image of stimuli as it filters incoming stimuli through emotions. Lastly the neo-cortex (with its two hemispheres) transforms the filtered experiences of the limbic system into clear symbols i.e. language (Blanckenberg, 1999:23).

a) The R-complex

- It's also known as the reptile brain.
- It forms the memory center for simplistic conditioned responses and is therefore dependent on routine and ritual.
- It needs an authoritative figure whose behavior can be imitated.
- It needs the physical closeness of a group.

b) The Limbic System

- It's also known as the old mammal brain.
- It forms the affective or emotional gateway to higher thoughts in the neo-cortex, because all information is firstly filtered through emotions.
- It is the place where a person's self-image is created, because self-image is primarily created through emotions.
- A positive self-image is formed when the following emotional needs are fulfilled: play, joy, relaxation, humor, acknowledgement, honesty and variety.



c) **The Neo-cortex**

- It is also known as the thinking brain.
- It is the unique property of the human being, because language and thought is anchored here.
- The pre-frontal lobe of the neo-cortex is the head control station of the threefold brain because of the following strategic thinking functions:
 - searches, monitors and analyses all incoming information;
 - filters out irrelevant information in order to channel relevant information to the memory;
 - planning of and deciding about goals;
 - re-ordering and planning in the light of new perspectives and information;
 - derivation and establishing relations between connected chunks of information;
 - problem solving by means of derivation and establishing links between relevant information;
 - critical thinking about one's thinking strategies (meta-thinking); and
 - de-centering as a result of empathy for others.

(Blanckenberg, 1999:23-25)

d) **The Two Hemispheres of the Neo-cortex**

The strategic thinking functions of the pre-frontal neo-cortex can only function through the vertical integration of the brain structures in the subconscious (Blanckenberg, 1999:26). However, the strategic thinking functions can only operate successfully if horizontal integration also takes place. The horizontal integration between the left and right hemispheres of the neo-cortex is illustrated in Table 1.

Table 1: Horizontal integration between the left and right hemispheres of the neo-cortex

Left Hemisphere	Right Hemisphere
Analytical Breaks up information in fragmented chunks.	Holistic See the big picture, the whole, coherence and context.
Abstract Complete neutrality No emotions	Concrete Concepts are visualised through senses, facial expressions and intonation.
Scientific language Explains meaning explicitly through factual statements	Poetical (musical) language Suggest meaning through images, symbols, signs, rhythm, melody, repetition and patterns.
Words, phrases and sentences supply information in a linear fashion (e.g. a..b..c..d)	Graphs and mind maps supply information in a concrete and holistic fashion.
Understands argumentation and logic.	Understands stories and analogies.

(Blanckenberg, 1999:26-27)

2.2.3.2 Whole Person Involvement and Language Learning

The acquisition of a new language is more successful if it is presented within a given context. Grammatical structures should therefore never be presented in isolation but within a context of WHO, WHAT, WHERE, WHEN, HOW and WHY. Students and teachers therefore need to rely on their imagination to become part of the context in which grammatical structures are presented (Blanckenberg, 1999:15). However, the successful use of imagination necessitates *whole person involvement*. Whole person involvement is only possible if teachers tap into the full brain potential of their students. Blanckenberg (1999:28) further states that teachers need to integrate students' cognitive, affective, sensory and intuitive modes of consciousness to get them fully involved in their own language learning experiences. The integration of these four modes of consciousness is only possible through the horizontal integration of the left and right hemispheres of the neo-cortex as well as vertical integration of the neo-cortex, limbic system and R-complex (Blanckenberg, 1999:28).

2.3 Computer Assisted Language Learning (CALL)

In the past few years computers have greatly influenced our daily lives. However, with the advent of the personal computer, multimedia computing and the Internet, language teachers need to think about these technologies and the implications of computer use for language learning. Teachers need to consider the possibility of

computers supplementing and enhancing or even replacing existing teaching methodologies.

The following section will provide an overview of CALL, investigate the twofold tutor-tool role of the computer and look at the benefits of using computers to assist in language learning.

2.3.1 Computers and Language Learning: An overview

The acronym CALL is a fairly 'young' one, but the existence of CALL has existed in the academic literature for about the last 40 years (Levy, 1997:1). Computers have been used in language teaching since the 1960's. During this period three main stages or phases were identified, which roughly correlate with language learning theories and approaches over the past 40 years. These stages include behavioristic CALL, communicative CALL and integrative CALL. Although three phases have been identified, Warschauer (1996a:3) states that the "introduction of a new phase does not necessarily entail rejecting the programs and methods of a previous phase; rather the old is subsumed within the new".

2.3.1.1 Behavioristic CALL

This phase came into existence in the 1950's and was implemented during the 1960's and 1970's. It was based on the "dominant behavioristic theories of learning" of the time and consequently featured programmes consisting of repetitive language drills (also known as "drill and practice"). (Warschauer, 1996a:3 & Warschauer, 1998a).

Behavioristic CALL emphasized the tutor-characteristic of the computer since the computer operated in a mechanical fashion, never became tired, judgmental or bored and allowed students to work at their own pace (Warschauer, 1996a:3 & Warschauer, 1998a). It is these characteristics that make the computer so suitable for grammar instruction. One of the best-known tutorial examples within the Behavioristic CALL framework is PLATO. It consisted of its own hardware, central computers and terminals and featured extensive vocabulary drills, grammar

explanations and drills, and translation tests at various intervals (Ahmad, Corbett, Rogers, & Sussex, 1985 cited in Warschauer, 1998a).

2.3.1.2 Communicative CALL

This is the second phase that emerged in the late 1970's and early 1980's. As the name suggests, it was based on the Communicative Approach to language teaching. Supporters of communicative CALL felt that the drill and practice character of programmes did not allow for enough authentic communication, a prerequisite of CLT.

One of the leading proponents of the Communicative Approach, John Underwood, proposed a series of "Premises for 'Communicative' CALL". According to Underwood communicative CALL:

- focuses on the use of forms instead of the form itself;
- teaches grammar implicitly rather than explicitly;
- encourages learners to produce authentic and original utterances and not just to manipulate prefabricated language;
- does not judge and evaluate everything learners produce and then reward them with messages, lights or bells;
- avoids telling learners they are wrong if they produce an incorrect answer and supplies a variety of learner responses;
- uses the target language exclusively and supplies learners with a learning environment where using the language feels natural, both on and off the screen; and
- will never attempt to do anything that a book can do equally well.

(Underwood, 1984:52 cited in Warschauer, 1996a)

2.3.1.3 Integrative CALL

Towards the late 1980's and early 1990's it became evident that a next phase was about to emerge. Two important technological developments, namely multimedia computers and the Internet, made it necessary to review the current status of

computers. Kenning & Kenning (1990:90 cited in Warschauer, 1998a) also felt that computers only marginally contributed to the language learning process and that a shift towards more central elements was necessary. This led to the advent of the third phase, integrative CALL, a “perspective that seeks both to integrate various skills (e.g. listening, speaking, reading and writing) and also integrate technology more fully into the language learning process” (Warschauer, 1998a). One of the major advantages of integrative CALL is that learners learn how to use a “variety of technological tools as an ongoing process of language learning and use, rather than visiting the computer lab on a once a week basis for isolated exercises” (Warschauer, 1998a).

2.3.2 A Tutor-Tool Framework

An investigation of CALL in general calls for the necessary distinction between the two major functions of the computer, namely that of tutor and tool. Levy (1997:178) feels this necessary, especially to remove any misconceptions regarding the belief that “CALL is of the tutorial type, characterized by one-to-one interactions where the computer evaluates the student input and then presents the new material accordingly”. Chapelle (1994b, cited in Levy, 1997:178) supports his remark and emphasizes that CALL is indeed not just a single activity but rather a legion of activities “differing widely in function, character and content”.

2.3.2.1 The Computer as a Tutor

What classifies the computer as a tutor is its ability to evaluate and direct. This is the single most important characteristic that distinguishes it from the tool function. The computer as tutor is programmed to evaluate learner input, make decisions about the input and perform a certain action as a result of the interpreted data (Levy, 1997:180). Levy (1997:181) also suggests two assumptions about the tutor role: firstly, that when the computer functions as a tutor, the teacher is not present and secondly, that language learning is taking place outside of the classroom in self-access mode.

The computer as tutor forms the essence of behavioristic CALL, because it serves as a mediator for supplying the learner with instructional materials but remains the “knower-of-the-right-answers” (Taylor & Perez, 1989:3 cited in Warschauer, 1996a). It is therefore a function of the positivistic approach to knowledge where the outcome is seen as a predetermined product of learning.

The rationale behind the computer as tutor can be explained as follows:

- It is beneficial and essential to learning if learners are repeatedly exposed to the same materials.
- A computer is the ideal medium to practice repeated drills, because a machine does not get bored or tired when repeatedly presenting the same materials.
- A computer can provide immediate non-judgmental feedback.
- A student can proceed at his/her own pace, because the computer can present material for the individual.
- The computer can free up class time for other communicative activities.

(Warschauer, 1996a)

The computer as tutor is not only found in behavioristic CALL, (drill and practice exercises) but also features on the periphery of communicative CALL. In this approach to CALL the computer also remains the “knower-of-the-right-answer”, but the process the learner needs to follow in search of the answer, involves larger choice, control, and interaction (Warschauer, 1996a). Chapter 3 will discuss how the computer application, *Tjommie en Vriende*, utilizes the computer as a tutor.

2.3.2.2 The Computer as a Tool

In contrast with the computer’s role as tutor, the tool role of the computer is non-directive since tools are neutral objects, and one cannot predetermine how they will be used (Levy, 1997:181). Taylor & Perez (1989, cited in Warschauer, 1996a) also talk about the “computer as workhorse”, because it does not necessarily supply the learner with any language material but it creates the opportunity for the learner to use and/or understand the language.

Another difference between the computer as *tutor* and the computer as *tool* is that, as mentioned earlier, the tutor role intends to “replace” the teacher in one way or another. The computer as *tool*, on the other hand, strives to enhance or better the “efficiency of the work” of the learner or teacher (Levy, 1997:184).

The computer as *tool* is found in both communicative CALL and integrative CALL where the computer creates possibilities for authentic communication, e.g. via e-mail. It is therefore a function of the more constructivist approach to knowledge where the outcome is an ongoing learning process, e.g. not predetermined.

2.3.3 Advantages of CALL

Although many studies have failed to demonstrate exactly how effective CALL can be compared to classroom language instruction, sample studies have succeeded in proving its effectiveness (Cassidy, 1983; Nagata, 1996; Nutta, 1998 & Warschauer, 1995). For the purpose of this study, attention will only be given to the advantages of CALL where the computer is not seen as a substitute for the teacher, but as a mechanism that assists the teacher in creating an enhanced learning environment. *Tjommie en Vriende* is a supplementary and not a stand-alone application therefore its role as tutor doesn't substitute the teacher but aids in the students' learning process.

The most important advantages of CALL as indicated by multiple studies include:

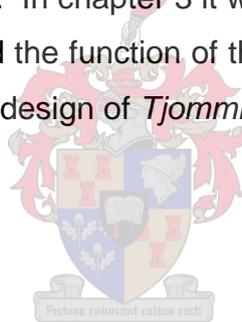
- multimodal practice and feedback;
- focus on the individual in a large classroom;
- pair work or small group work, collaboratively or competitively;
- fun element;
- availability of numerous resources;
- recognition of various learning styles;
- learning through exploring with large amounts of language data and
- the authentic real-life skill-building in the use of computers.

(Warschauer, 1998a)

Cassidy (1983) points out a few more advantages, especially regarding adult language learning. Firstly, CALL is ideally suited for adult learners because they prefer self-directed materials where they have control over their learning pace. Secondly, the great advantage of computers is “the ability to gather, handle and use the great amount of information acquired during and by the learning process and thereby increase teaching quality and teacher and student productivity” (Cassidy, 1983:15).

2.4 Review and Preview

This chapter firstly offered a concise look at Stephen Krashen’s Second Language Acquisition Theory and the Communicative Approach. Both contribute to the underlying theoretical framework on which *Tjommie en Vriende* is based. Secondly a brief discussion of CALL introduced the computer and the pivotal role it can play in language learning and instruction. In chapter 3 it will become clear how the language learning theory and approach and the function of the computer are integrated to form the foundation of the content and design of *Tjommie en Vriende*.



CHAPTER 3

***TJOMMIE EN VRIENDE*: CONTENT AND DESIGN**

3.1 Overview

Chapter 2 investigated Stephen Krashen's Second Language Acquisition Theory, the Communicative Approach and CALL and how they intertwine to provide a theoretical framework for the study conducted. This framework should always be firmly embedded in computer-based instructional materials in order to provide the necessary structure and a theoretical framework guide one from the point of initially identifying a need to ultimately achieving the goal.

The application relevant to this study is a supplementary computer-based application called *Tjommie en Vriende*. It was developed for international students at Stellenbosch University who enrolled for the course, Beginner Afrikaans for International Students (Level I) 154. The primary focus of the course is on authentic communication where students can make use of their strategic competence (see sections 1.2.1 & 2.2.2.1) to keep a conversation going. Linguistic competence with its focus on accuracy is a secondary underlying, (but not necessarily less important) objective. The application, *Tjommie en Vriende*, has been developed exactly in an attempt to emphasize this last objective. These considerations, together with the underlying theoretical framework, have an immense impact on content and design decisions for this supplementary application in which the computer is activated as tutor (see section 2.3.2.1).

This chapter investigates how the context of the Afrikaans course and the theoretical framework impact on the selection of content and the choice of design. An Instructional Systems Design Model will be used to describe the development process step-by-step.

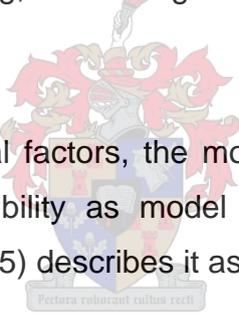
3.2 A Model for the Development of Computer-Based Instructional Materials

The design and development of a computer application is an intricate and laborious process because it is a continuous and circular. It therefore takes a considerable

amount of planning, development, testing and evaluation. To assist a researcher in this task, the use of a model or design plan can streamline the process. The purpose of such a model is to systematically guide the researcher through the design process and to consider all factors before making any final design and/or developmental decisions.

A model often used in the design and development of computer-based instructional materials is the Instructional Systems Design Approach. This model is “oriented directly towards computer delivery of instruction, so it includes not only designing a lesson on paper, but also implementing it on a computer and finally evaluating it” (Alessi & Trollip, 1991:244). Another appealing characteristic of this model is its flexibility. As a developer of computer-based instructional materials gains expertise in the development of applications, one can “mold it to your own individual needs and style of work by reordering, adding, or deleting steps” in the model (Alessi & Trollip, 1991:244-245).

Apart from these two motivational factors, the model also embodies five important features contributing to its credibility as model for the purpose of *Tjommie en Vriende*. Alessi & Trollip (1991:245) describes it as:

- 
- empirically grounded;
 - determined by elements contained in cognitive psychology;
 - one that gives prominence to creativity;
 - one that allows for the systematic and gradual progression from paper ideas to a final computer product. Drafting ideas on paper is an obligatory and indispensable phase of development and design;
 - a model that encourages a team-oriented approach.

3.2.1 An Instructional Systems Design Model

The Instructional Systems Design Model consists of ten interrelated non-linear steps that are constantly in dialogue and interaction with one another. Decisions made in step five, for example can influence decisions made in steps two and four and send the researcher back to the drawing board.

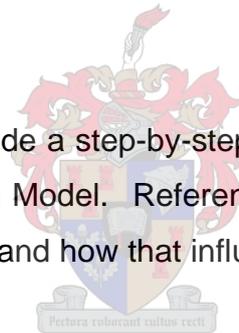
The Instructional Systems Design Model for developing computer applications comprises the following ten steps:

- Determine needs and goals.
- Collect resource materials.
- Learn and internalize content.
- Generate creative ideas.
- Design instruction.
- Flowchart the lesson.
- Storyboard the displays on paper.
- Program the lesson.
- Produce supporting materials.
- Evaluate and revise.

(Alessi & Trollip, 1991:245-248)

3.3 Programme Content

The aim of this section is to provide a step-by-step analysis of the different stages of the Instructional Systems Design Model. Reference will be made to the theory and approach discussed in chapter 2 and how that influenced the content of the computer application.



3.3.1 Step 1: Determine Needs and Goals

Each year Stellenbosch University attracts a number of international students from all over the world who wish to enroll for under- or postgraduate programmes. This group of students comprises approximately 4.3% of the total student population. Approximately 50% are undergraduate and 50% postgraduate (International Office, 2005a). They are placed into five different categories: Exchange Students, International Special Students (also known as “Free Movers”), International Student Exchange Programme (ISEP) Students, Affiliated Students and Service Providers Students (AIFS; Interstudy; GSAYA) (International Office, 2005b). They all meet the entry level English proficiency requirements (IELTS score of 6.5 or a TOEFL score of 550) but have no prior knowledge whatsoever of Afrikaans.

At Stellenbosch University Afrikaans is by default the language of learning and instruction at undergraduate level while English is used to a larger extent at postgraduate level. This implies that prospective undergraduate international students can only follow specific programmes, which are presented in English and form part of the International Programme of Stellenbosch University (IPSU). Postgraduate students are less constricted in their choice of programme since English is mostly used as the language of learning and instruction.

In the past few years however, there has been a growing tendency for prospective international students to enroll for a complete undergraduate programme¹. In such cases the University requires that “prospective students should have full command of Afrikaans” (International Office, 2005b). Students who fall into this category then complete an intensive 90-hour Afrikaans course in January (called “Pretproe”) or July (called “Kaggelklets”) or they have to at least complete a semester course of Beginner Afrikaans. It is therefore crucial that these students who enroll for a complete undergraduate programme need more than just survival Afrikaans for social purposes (with its focus on basic strategic competence) before they can commence their studies. Unfortunately an intensive or semester course is not sufficient to equip them with the necessary Afrikaans language proficiency to survive academically. For example, it takes approximately 660 contact hours (23-24 weeks) for an English or German speaking person to acquire a new language in the Germanic family. On the other hand a Japanese or Chinese speaking person would need 2200 (88 weeks) contact hours to achieve the same goal (Languages of the World, 2005).

Over the past two years of teaching the course, Beginner Afrikaans for International Students (Level I) 154, the researcher became aware of students’ changing needs. Undergraduate students, especially ISEP and Service Provider Students tend to extend their one semester to a full year of study. Postgraduate students, especially those in the Faculty of Law, wish to interact with their fellow classmates in Afrikaans. Through these needs it became evident that students not only want to be strategic

¹ The researcher made this observation over the past three years. In 2002 hardly any students enrolled for a complete undergraduate course. In 2005 nine students from Germany, Norway, Mauritius, Nigeria, Japan, China and the United Kingdom enrolled as undergraduate students and also enrolled for the courses that the researcher taught.

speakers of Afrikaans, but that they also want to improve on the accurate use of Afrikaans in the shortest possible time. The accurate use of Afrikaans improves students' academic listening skills, allows them to use a more sophisticated vocabulary and makes interaction with their fellow students easier. The students indicated the need for a semester course that does not only fulfill their need to speak Afrikaans strategically in a social context, but also help improve their accuracy. Therefore, the goal of the computer application *Tjommie en Vriende* is to help improve students' accurate use of Afrikaans. The completion of this CALL component of the Afrikaans course is not compulsory, but available to all students in the course who wish to improve their Afrikaans grammar.

3.3.2 Step 2: Collect Resource Materials

Resource materials include any kind of material that assisted in the successful development of *Tjommie en Vriende*. This includes materials relevant to the content, the development process as well as the use of the computer (Alessi & Trollip, 1991:246). This section only focuses on the collection of resource materials relevant to the content of the application.

In the case of this study, the collection of resource material can better be described as a "creating of" resource material. (See section 1.2.1 for a description of the nature of the Afrikaans course.) Very little material that already existed has been used, except factual material about language structures and grammar rules from authoritative sources. (Section 3.3.3 refers to the materials consulted.) The researcher felt it necessary to create new material within the imaginary storyline of *Tjommie en Vriende* to enhance the methodology that is followed in class. Within the methodological framework of the Whole Brain Theory an imaginary storyline would be more suitable than a real life storyline. Students adopt a new imaginary Afrikaans persona in class and travel through the make-believe *Afrikanopolis*. The playfulness of the students' fictional Afrikaans personas are also more suitable in a fictional country than a real world environment. By making use of fictional Afrikaans personas, students also become more daring when speaking Afrikaans. (Section 2.2.3 discusses the Whole Brain Theory and the important role of imagination and role-

play.) Whenever they make a mistake, they have a persona that “protects” them. It is the Afrikaans persona that made the mistake and not the person behind the persona. (See section 2.2.3 for a description of the power of suggestion and the importance of imagination).

Tjommie en Vriende can be described as an imaginary journey through the make-believe world of *Afrikanopolis* (a metaphor for South Africa). Metaphors can be a very powerful tool “in tapping in the suggestive power of language”, because they are “primary communicative means of the subconscious” (Dhority, 1984:66). In the make-believe world of *Afrikanopolis*, students become make-believe tourists with new Afrikaans personas, hometowns, occupations and hobbies. These metaphors can greatly assist students in “transforming the beliefs and self-images which may be limiting to them” (Dhority, 1984:66). The researcher also has a fictional Afrikaans persona and she operates as a tour guide (*Tjommie Toerien* the tour guide from Tietiesbaai)¹ that guides the students (now tourists) through *Afrikanopolis*. *Afrikanopolis* consists of six provinces. The itinerary takes them to a town in each province: *Die Toring van Babel*, *Leksikonopolis*, *Kronos*, *Kontekstus*, *Ordo en Tierlantuin*. The world of *Afrikanopolis* will be described in more detail in step four of the process.



The world of *Afrikanopolis* supply students with a story context in which grammar and language structures are explained, because to fully understand language facts one has to explain it within a context of WHO, WHAT, WHERE, WHEN, HOW and WHY. The right hemisphere of the brain needs context to understand the whole and the journey metaphor supplies this context.

The choice of research materials falls into the realm of the Communicative Approach, the Whole Brain Learning Theory and the teaching methodology of the Unit for Afrikaans. The researcher simulated a real-life South African adventure in a fictional country in the classroom. The journey metaphor makes the students’ communication more authentic since they are indeed real-life travelers on a journey of discovery in a

¹ The use of alliteration is a right hemispheric function and allows for better and faster retention.

foreign country. Not only are they busy with an academic journey of intellectual growth; they are literally travelers on an African safari¹.

3.3.3 Step 3: Learn the Content

This step of the model makes provision for the subject-matter expert to familiarize him/herself with the technical aspect of the project and vice versa (Alessi & Trollip, 1991:246). In the case of this study the researcher fulfills both the roles of content and design ‘expert’. The researcher had to thoroughly familiarize herself with the grammar of Afrikaans and think of creative ways how to present the material from a L2 perspective. A selection of source materials (Barnes, 1984; Culshaw & Water, 1987a, 1987b, 1987c; De Klerk, Esterhuizen, Hammann & Neethling, 1994; Lutrin, 1999; Odendaal, n.d.; Peacock, 1997; Van Schalkwyk, 1993) was consulted in choosing subject matter for *Tjommie en Vriende*. Table 1 provides a list of the primary grammar structures addressed by both the course and *Tjommie en Vriende*.

3.3.4 Step 4: Generate creative ideas

Alessi and Trollip (1991:246) are strong advocates of brainstorming “because it has proved to be a method that facilitates creativity and quickly produces a list that will include some interesting and good ideas”. The researcher unfortunately did not have the luxury of brainstorming with a team of specialists, but had ample of one-on-one inspirational contact sessions with both language learning experts and students. This step took a few months of research and contact sessions until the idea of *Afrikanopolis* (a fictional Afrikaans country) was eventually born.

Step two briefly introduced the make-belief world of *Afrikanopolis* but because of the nature of steps two and four they largely overlapped and interacted with each other. As mentioned in section 3.3.2 materials and resources were mostly created and not collected. As the idea of *Afrikanopolis* extended and grew from one to six

¹ “African safari” is the term used by most international students when they refer to their travels through South Africa.

provinces¹, resources were collected which led to more ideas. Steps two and four were therefore constantly in a process of “cross-pollination”.

Afrikanopolis is a make-belief world that represents South Africa. Where South Africa has nine provinces, *Afrikanopolis* only has six. The six provinces each have a town where travelers will stay over during their journey. The six towns are a metaphoric representation of the grammar content to be introduced during the run of the course. The names of some of the towns are derived from Latin while other are simply Afrikaans neologisms compiled in the same manner as the Jabberwocky created neologisms in Lewis Carroll’s *Alice in Wonderland*. The list below will introduce each of the towns, explain how their names were comprised and briefly describe the storyline as it unfolds during classroom contact sessions:

- *Die Toring van Babel*: This is the first town that students visit during their very first lesson. It refers to the Tower of Babylon, the story found in Exodus in the Bible. Since they all come from different countries and cultural backgrounds (German, American, French, Japanese, isiXhosa), *Die Toring van Babel* represents the town where they meet for the first time. They all speak different languages and this causes chaos and confusion amongst the tourists. Therefore the tower will have to be broken down and a new language must be acquired in order for them to eventually understand each other and fully enjoy the journey.

During their encounters in *Die Toring van Babel* it is made clear to the students that language facts (grammar and language structures) are never presented in isolation but in a context of WHO, WHAT, WHERE, WHEN, HOW and WHY. To fully understand the context students need to make use of imagination. Imagination necessitates “whole person” involvement in each activity. “Whole person” involvement is only possible if one makes use of one’s full brain potential.

- *Leksikonopolis*: The second town, *Leksikonopolis*, derived its name from the word “lexicon” and a town in the inspirational modern fantasy, *The*

¹ “Province” is a metaphor for “chapter”. Each “province” functions like a “chapter” in a textbook and deals with certain language topics.

Phantom Tollbooth, written by Norton Juster. The researcher decided on this name because *Leksikonopolis* is the first destination where students are truly confronted with new Afrikaans vocabulary and structures since English is still predominantly used in *Die Toring van Babel*.

While the tourists are visiting *Leksikonopolis* they stay in the *Dagbreek-hotel*. *Leksikonopolis* is world famous for its market. Each day the tourists visit the market and “buy” new words. The market has a variety of vendors selling word treasures and the owners of the vendors (the researcher makes use of role-play and assumes the role of these owners) make use of right-hemispheric strategies to internalize new structures. One of the owners e.g., is *Meneer Meer-As-Een*. He sells magnificent sunglasses that makes it possible to see double of everything. With their new sunglasses on, *Meneer Meer-As-Een* explains plurals. The students then walk through the classroom while *Meneer Meer-As-Een* calls out the name of an object he is pointing at, and the students respond with the corresponding plural.

- *Kronos*: The name of the third town is derived from Greek mythology. *Kronos* was the father of Zeus, Poseidon, Hades, Hestia, Hera and Demeter. The word “chronology” is derived from the Latin word for “chronos”, suggesting the sequence of events in time. This town addresses all the Afrikaans structures suggesting chronology, such as numbers, time and tenses.

During their stay in *Kronos*, tourists meet *Meneer Tik-Tak*, the curator of the Time Museum (the researcher in role). He explains that the town hall’s clock is broken and that it needs three new arms: a second, minute and hour arm. As the students master the three structures - numbers, time and tenses - they receive a new arm as reward. They rebuild the clock by adding a new arm with the completion of each structure. Before they leave the town they present *Meneer Tik-Tak* with the new clock and they can continue with their journey.

- *Kontekstus*: *Kontekstus* is directly borrowed from the Latin word for “context”. In this fourth town students learn to use the context questions words *who, what, where, when, how* and *why*.

In *Kontekstus* the tourists meet the infamous mayor *Lang Jan Louw*. He is a pretentious and snobbish character and the whole town despises him. He “forces” all visitors to answer a questionnaire before entering his town. Once he has granted his permission that the tourists may enter, he keeps on bombarding them with more and more questions. By the time that the tourists leave *Kontekstus* they can ask and answer their fellow tourists’ questions.

The use of context questions gives students a structure to hold on to and also provides them with a feeling of greater security. Due to numerous implicit and explicit drilling exercises, students acquire a greater amount of control and they feel as if they are truly communicating. Authentic communication is indeed simulated in *Kontekstus*.

- *Ordo*: The name of the fifth town is also a direct Latin translation. *Ordo* means “order” and as the name suggests, Afrikaans word order is primarily investigated in this town.

Ordo’s main attraction is *Stompi Seekat* (Sv1TOMPv2I), the singer of sweet serenades and composer of soothing symphonies. This octopus is a street musician and plays eight different instruments, one instrument per leg. His eight legs, each with an instrument, symbolize a different part of a sentence. (S = subject, v1 = helping verb, T = time, O = object, M = manner, P = place, v2 = action verb and I = infinitive). He teaches the tourists how to combine the instruments in possible ways in order to avoid a cacophony.

- *Tierlantuin*: The last town is an Afrikaans neologism comprised out of two words, namely “tierlantyne” meaning “frills and furbelows” and “tuin” meaning “garden”. “Tuin” suggests peace and tranquility, a relaxed green atmosphere where there is no anxiety. It is an attempt to eliminate the negative affective variables mentioned in Stephen Krashen’s (1982:30-33) Affective Filter hypothesis. “Tierlantyne” refers to all the extras one can start adding to a language once one has been exposed to the basics. A student can now start to add “frills and furbelows” to simple sentences. These “frills and furbelows” include degrees of comparison, intensive forms of the adjective, antonyms and synonyms to mention only a few.

Tierlantuin is a small town with a spectacular park situated in the center. The tourists are so overwhelmed by its serenity that they decide to spend all their time relaxing under the trees. In this calm setting they put all the Afrikaans together that they’ve acquired during their journey. They expand their existing knowledge and Tjommie gives them a few last word treasures, such as intensive forms.

The structural layout of *Afrikanopolis* is presented in Table 2. The second column indicates the primary structures addressed in each town and the third column indicates the themes and topics with which the structures are integrated.

Table 2: A layout of the sections of *Tjommie en Vriende*: grammatical structures and themes

Town	Primary structures	Secondary themes and topics
Die Toring van Babel	<ul style="list-style-type: none"> • Pronunciation 	<ul style="list-style-type: none"> • Text: <i>Confusion at Babylon</i>
Leksikonopolis	<ul style="list-style-type: none"> • Pronouns • Nouns <ul style="list-style-type: none"> ○ Singular ○ Plurals ○ Diminutives • The Negative Form 	<ul style="list-style-type: none"> • Colours • Clothes • My body • Occupations
Kronos	<ul style="list-style-type: none"> • Numbers • Time • Tenses 	<ul style="list-style-type: none"> • Emotions • Birthdays • Days and Months • Actions • Towns: general
Kontekstus	<ul style="list-style-type: none"> • Context Question Words 	<ul style="list-style-type: none"> • Food • Text: <i>Lang Jan Louw</i>
Ordo	<ul style="list-style-type: none"> • Word Order • Conjunctions • The Infinitive • Prepositions 	<ul style="list-style-type: none"> • Hobbies • Family
Tierlantuin	<ul style="list-style-type: none"> • Adjectives • Degrees of Comparison • Antonyms* • Synonyms* • Adjectives: Intensive forms* 	<ul style="list-style-type: none"> • Towns: specific • The Restaurant • Countries and its People

*These three elements do not have 'pages' in *Tjommie en Vriende*. They are addressed in class and tested in the application.

3.3.5 Step 5: Design Instruction

The design instruction of computer-based instructional materials is influenced by the developers "choice about instructional methodologies and factors" (Alessi & Trollip, 1991:246). The choice of a theoretical framework needs to be reflected in the material in a sound manner. Theory should never just be merely incidental. The theoretical framework underlying *Tjommie en Vriende* consists of Stephen Krashen's Second Language Acquisition Theory, the Communicative Approach and the Whole Brain Learning Theory. Table 3 will illustrate how the theoretical framework supports the choice of design instruction:

Table 3: A description of the theoretical framework underlying the design instruction

		Class	Computer
Methodological Framework	Stephen Krashen's Second Language Acquisition Theory	Acquisition: Meaningful interaction in the target language.	Learning: Knowing about the rules and grammar of a language.
		Subconscious process: Acquirers are not aware of the fact that they are acquiring a language, only that they are using the target language for authentic communication.	Conscious process: Acquirers are consciously aware of the fact that they are learning the rules of the target language.
		Meaning: The focus is on the message of utterances. <i>What</i> is a person saying?	Form: The focus is on the structure of utterances. <i>How</i> is the person saying something?
		Strategic competence: The manipulation of available language to meet communicative goals.	Linguistic competence: It encompasses the knowledge of the rules, grammar and structure of a language.
		↕	↕
		Fluency: An attempt to keep a conversation going by making use of compensation strategies in order to meet the communicative goal.	Accuracy: An attempt to apply the correct rules, grammar and structure as a function of Krashen's monitor.
	Communicative Approach	Meaning: The focus is on the message of utterances. <i>What</i> is a person saying and why is he/she saying it?	Form: The focus is on the structure of utterances. <i>How</i> is the person saying something?
		Defocused learning: Structures, grammar and rules are integrated into authentic communication, but the focus is on the communicative acts and games within meaningful context.	Focused learning: The focus is on learning the rules, grammar and structures of the target language, but also within the same context.
Disguised drill: Structures, grammar and rules are drilled in a disguised manner through the use of a variety of games.		Explicit drill: The drilling of structures, grammar and rules is in no ways disguised.	

Table 3 illustrates the intricate relationship between the theoretical framework and the design instruction. Certain aspects of the theoretical framework apply to the authentic communication that takes place in class. Other aspects have a stronger

relation to computer-based instructional materials. The use of computer applications can thus support a language course and focus on form without compromising the communicative nature of the classes. The computer can focus on the conscious learning of grammar, structures and rules in an explicit and focused manner. This can be done by means of tutorials, drills, simulations, games and tests (Allesi & Trollip, 1991:10).

The computer-based instructional material developed for this study is aimed towards the improvement of students' accuracy in Afrikaans. Accuracy can be improved through a) conscious knowledge of the form of a language and b) by repetitive drilling exercises that focus on grammar. *Tjommie en Vriende* makes use of a) the presentation of conscious knowledge by means of informational pages and b) by means of drills and tests to achieve this goal. The latter should not be seen as contradictive to Stephen Krashen's Second Language Acquisition Theory and the Communicative Approach. As Table 3 suggests, certain components of language learning can indeed be addressed through the use of a computer. Empirical studies have proven that computers can aid "in the rate and success of acquisition" (Ellis, cited in Kenning & Kenning, 1990). Firstly, computer-based instructional materials in the form of grammatical operations "are intrinsically suited to computer treatment, so much so indeed that it was a while before CALL moved away from exclusively grammatical applications" (Kenning & Kenning, 1990:118). Secondly, the computer "offers two of the conditions described by Krashen as necessary for the use of conscious rules since learners can be allowed as long as they want and can be helped to focus on form through a variety of display strategies" (Kenning & Kenning, 1990:118). Krashen suggest that "only rules that are learnable, portable, and not yet acquired should be taught" (Kenning & Kenning, 1990:119). *Tjommie en Vriende* contains rules and structures that are "learnable, portable" and not yet fully acquired.

3.3.5.1 Informational Pages

There is an intricate relationship between the theoretical framework and the content of the application. The content of *Tjommie en Vriende* has to echo what was done in class and it has to be presented in the same communicative fashion. This was a

challenging task to accomplish, because in this study the computer functions as a tutor, which is in essence more behavioristic than communicative. “Behavioristic” therefore implies that the application presents grammar in a more explicit manner than in a true communicative fashion. In an attempt to present grammatical structures less explicitly and more communicative, the researcher decided to make use of the characters, Tjommie, Stompi, Bella, Bertus and Karel. These characters are “communicating” in the first person with the student and simulating an authentic communicative act. The characters also use the same jargon that they use in class. Grammar is presented via informal and anxiety-free communication.

3.3.5.2 Drills

Tjommie en Vriende is divided into six ‘towns’. Each town has a number of primary structures that it introduces and tests. Each primary structure is introduced by means of a summarized informational page that is succinct and includes only essential information (notes, examples and helpful hints) that correlates with the preceding contact class. Each summary is then followed by drill exercises that link to the newly presented information. The drills form part of the “practice phase of instruction” (Alessi & Trollip:91).

Drill exercises have received a lot of criticism, and many educators have claimed that “drills do not capitalize upon the power of the computer” (Alessi & Trollip, 1991:91). As mentioned in section 2.3.2.1, one should remember however, that *Tjommie en Vriende* utilizes the computer as a tutor, focusing on the behavioristic character and power of CALL. It is also not a stand-alone application, but integrates form and accuracy via the computer with meaning and fluency via the class into an integrated whole. (See table 3).

A second criticism of drill exercises is that they do not teach anything but merely provide the student with practice “with the assumption the student is already familiar to some degree with the subject matter” (Alessi & Trollip, 1991:91). In the case of the computer application used in this study, the material and exercises always follow on what has already been introduced in class. This implies that new structures have

been practiced in a communicative fashion via defocused learning and disguised drills. The computer now addresses grammar in a focused and explicit manner.

A third criticism is that many drill exercises are of low quality because they do not “incorporate good instructional principles” (Alessi & Trollip, 1991:92). As mentioned in section 3.3.5, *Tjommie en Vriende* incorporates the instructional principles of a theoretical framework based on Stephen Krashen’s Second Language Acquisition Theory, Communicative Approach and the Whole Brain Learning Theory, where class lessons and computer lessons complement each other. Each one contributes its forte to produce an integrated whole of the four competencies that constitute communicative competence. In an effort to assimilate good instructional principles, the researcher also developed all drill exercises to correlate with the context (of Afrikanopolis) of the preceding class lesson. The secondary themes and topics listed in Table 1 are consistently found in the exercises. Texts used in class are echoed in the drills (e.g. *Die Sagmoedige Reus & Lang Jan Louw*) and the students’ real life experiences (as a student in a foreign country) are reflected in the exercise materials.

3.3.5.3 Tests

A second type of instructional methodology used in *Tjommie en Vriende* is tests. Each ‘town’ is concluded with a journal entry written by Tjommie. This functions as a summary of what happened during the visit to the ‘town’. The summary is also written in such a way that it makes use of the primary structures and topics dealt with in the specific ‘town’. The exercises at the end of each “town” are not called tests, because it functions as “evaluation” – an ongoing process that monitors students’ gradual linguistic development and aids the teacher in adapting her classroom lessons to accommodate students’ persisting problems with accuracy. It is therefore an important phase of the Instructional Systems Design Model, and “an essential aspect of all instruction” (Alessi & Trollip, 1991:205). The ‘tests’ determine if students have internalized the material presented in class and via the computer and incorporated the rules in their body of knowledge. Section 3.4.5 will explain the rationale of how these ‘tests’ have been compiled.

3.3.6 Step 6: Flowchart the Lesson

A flowchart is a series of diagrams describing the operations a computer performs (Alessi & Trollip, 1991:247). Flowcharts are important because they supply developers of computer-based instruction materials with a visual representation of the sequence of a lesson. They can become very complex, but simpler methodologies (including drills and tests in the case of this study) require less complexity. Simple flowcharts “giving an overview of the lesson’s scope and sequence”, is sufficient (Allesi & Trollip, 1991:24). For the purpose of *Tjommie en Vriende* flowcharts were kept simple, starting with an objective and following a linear trail in order to reach the goal. Section 3.4.6 presents a flowchart of the layout of the complete *Tjommie en Vriende*.

3.3.7 Step 7: Storyboard Displays on Paper

This step of the model is the process where one prepares the textual and pictorial displays of the application. The textual and pictorial displays have to be organized in such a manner that it will fit within the display limitations of a computer (Alessi & Trollip, 1991: 247). Alessi & Trollip (1991:247) describe the process as such: “This step includes drafting the actual instructional messages students will see, such as information presentations, questions, feedback, directions, prompts, pictures and animations.”

3.3.7.1 Informational Pages

During this phase the researcher had to decide how each page would be constructed. Content and design were intertwined in this phase, and decisions about content had an effect on design and vice versa. Ultimately the content was divided into manageable chunks that would make sense to the student. Table 2 in section 3.3.4 supplies a framework for the grammatical and thematic division of information into chunks.

Preparing the textual information for each page took a considerable amount of planning. The process of writing for the computer so that students can read information on a computer screen with ease, differs from printed, paper design.

There are a few important factors one has to keep in mind when writing for the computer. Firstly and most importantly one should be succinct. Nielsen (1997) suggests that one should try to write no more than 50% of the text that one would have used in a hardcopy publication. By being succinct one compensates for human factors such as slower or reduced reading speed. Reading from a computer screen is in essence a totally different physical experience than reading printed text (Nielsen, 1997).

Secondly, one should write text that is easy to scan. Long continuous blocks of text appear unfriendly and can foster impatience (Nielsen, 1997). The text should be scannable with highlighted keywords. Keywords or key information should also differ typographically from the rest of the body of text. This makes it easier for the reader to pick out important and relevant information and disregard what is “less important” (Nielsen, 1997). Nielsen (1997) emphasizes that readers scan when reading on a computer screen and that web writers have to keep this in mind when writing. Texts can be made easier to scan by structuring information through the use of headlines, to-the-point headings in stead of creative or ‘cute’ headings, and highlighting or emphasizing important words to catch the user’s eye (Nielsen, 1997).

As mentioned earlier, textual information is presented in a summarized and compact manner to keep closely related information within the confines of a single screen. However, most pages are still longer than a single screen and students need to scroll. Unfortunately scrolling can lead to disorientation, and the reader’s loss of context is particularly troublesome when such “basic navigational elements as document titles, site identifiers, and links to other site pages disappear off-screen while scrolling” (Lynch & Horton, 2002). Section 3.4.7 will explain how the problem of scrolling was addressed in the technical design.

The factors mentioned above had a significant influence on how learning materials were presented and structured on each ‘page’ of the application. The next question to be answered was “What is the ideal length of a ‘page’? The Web Style Guide (2002) suggests that one looks at four important factors. Firstly one should determine

the relation between page and screen size. Secondly one should look at the content of pages and thirdly one should determine whether readers are expected to browse the content online or if they can print or download the documents for later reading. Lastly one should keep the bandwidth available to the audience in mind.

The most important factor regarding storyboarding the content was the content of the pages. *Tjommie en Vriende* is not a stand-alone application therefore students do not have to be overloaded with structural information. A selection of the most important information was made and presented in a summarized version. The motivation for doing this is that the researcher had about forty-five square inches above the “fold” (similar to a newspaper) to capture the students’ attention, because this is the first information the student will see (Nielsen, 1997). Since students have already been introduced to this information in class, received handouts and applied what they have learned in a communicative fashion in “real life simulations”, bombarding them with a double load of the exact information would be excessive and/or redundant. Figure 1 illustrates how each page has been designed.

Figure 1: An example of an informational page of *Tjommie en Vriende*

The screenshot shows a web browser window with the title "Woordorde - Microsoft Internet Explorer". The address bar shows "E:\Mpiil_myki\TMP\din6aqt69t.htm". The main content area is titled "Woordorde / Word order" and contains several tables and a text box.

Wie? / Wat?	Wat?	Wanneer?	Wie? / Wat?	Hoe?	Waar?	Wat?	Hoekom?
who? / what?	verb 1	when?	who? / what?	how?	where?	verb2	why? (to ...)
S		T	O	M	P		I
Subject		Time	Object	Manner	Place		Infinitive
onderwerp		tyd	voorwerp	wyse	plek		infinitief

My name is Stompi Seekat. Remember: Whatever you start a sentence with, the VERB comes next. S = subject, v1 = helping/auxiliary verb, T = time, O = object, M = manner, P = place, v2 = action verb, I = infinitive. If you remember my name, you can formulate wonderful and correct sentences!

S	v1	T	O	M	P	v2	I
Die musikant	speel	elke dag	sy kitaar	met oorgawe	op die straathoek		om geld te verdien.
Die musikant	het	elke dag	sy kitaar	met oorgawe	op die straathoek	gespeel	om geld te verdien.
Die musikant	sal	elke dag	sy kitaar	met oorgawe	op die straathoek	speel	om geld te verdien.

There are a few golden rules to remember:

- verb 1 = 'helping verbs'. These include auxiliary verbs and 'time verbs' (verbs that indicate in which tense the sentence is written).
- 'time verbs': het + ge(verb) = past tense / sal,gaan,wil = future tense
- verb 2 = the 'real' verb. These verbs indicate the actual action that takes place in a sentence.
- infinitive = 'om ... te'. This part of the sentence always include the 'om ... te' construction. 'om ... te' = to
- GOLDEN RULE:** No matter with which part of the sentence you start, the **VERB ALWAYS COMES NEXT!** The verb is always the second part of the sentence. Once you've applied the golden rule, follow the Sv1TOMPv21-order. [See examples below.]

Figure 1 illustrates how grammatical information has been divided into manageable chunks. Information has been divided into three categories: a) paragraphs, b) speech bubbles (graphics) and c) tables.

a) Paragraphs

Paragraphs contain verbal information about a specific rule or structure. It is more general information and does not include lists of examples. Information in paragraphs can also be presented in a bulleted list since it is easier to read than a long continuous paragraph.

b) Speech Bubbles

Information presented in speech bubbles function as helpful hints. Students met the different characters in class each time a difficult structure or rule was presented. In class the characters supplied students with helpful hints and creative ways of internalizing the more complex structures. For example, Stompi Seekat is a solo musician with eight arms playing eight different instruments. Each arm and instrument represents a part of the Afrikaans word order (S = subject, v1 = auxiliary or helping verb, T = time, O = object, M = manner, P = place, v2 = action verb and I = infinitive). Whenever students come across a character in the informational pages, it is a repetition of the helpful hint they received in class. The concrete sensuous thinking function of the right hemisphere of the neo cortex is activated through this character. The reason: long term retention of the Afrikaans word order because the learner can visualize it more easily and in a fun way (limbic system).

c) Tables

Tables contain lists of example material illustrating how a rule or structure functions. The amount of examples in a table varies from structure to structure. For example, the structures “Adjective” and “Degrees of Comparison” contain ample examples because it cannot simply be explained with only a few. A list is the only way to illustrate the many differences between words.

3.3.7.2 Exercises and Feedback

The exact same factors were taken into consideration for the development of the exercises and feedback as for the development of the informational pages. See section 3.4.7.2 for factors that played an influential role in the technical design of the exercises and feedback.

3.3.8 Step 8: Program Lesson

Steps one to seven all formed part of what can be described as an initial ‘paper’ phase. The content of the computer application and the ‘look’ and ‘feel’ have been determined. The next step is to translate what have been put on paper “into a series of instructions understandable to the computer” (Alessi & Trollip, 1991:247).

During this step the researcher had to decide how the paper ‘version’¹ of *Tjommie en Vriende* was going to be translated into the computer or electronic ‘version’. Step eight largely entails aspects of the technical design of the application and will be discussed in section 3.4.

3.3.9 Step 9: Produce Supporting Materials

Alessi & Trollip (1991:247) feel that no computer-based instructional materials are complete without the necessary supporting materials such as student manuals, instructor manuals, technical manuals and adjunct instruction. To determine which of these supporting materials are relevant to *Tjommie en Vriende*, one has to look at the context in which it will operate.

The application will only be available on Stellenbosch University’s intranet to students of the course, Beginner Afrikaans for International Students (Level I) 154, taught by the researcher. Therefore, no instructor manuals need to be available since the application will not be for sale to members of the public. Student manuals are also not necessary. The application supplies all the information necessary in the preface section.

¹ ‘Version’ is put in quotation marks because it can cause confusion. It does not imply that “Tjommie en Vriende” could have been designed as a simple study guide or textbook. ‘Version’ means the paper copy of what should be on the computer.

A concise version of what could be called a ‘technical manual’ is incorporated in the application. The researcher has included a preface guiding students through the workings of the application. The preface includes an Introduction, Navigation and Feedback section that provides students with the technical help they need. The Introduction explains how the application is constructed and how students should go about interacting with the content. Section 3.4.9 on technical design will discuss how the Navigational and Feedback sections support students in the application.

As mentioned before, *Tjommie and Vriende* is a supplementary application to the course, Beginner Afrikaans for International Students (Level I). Adjunct instruction is presented in the form of classes, communicative tasks and games, handouts, assignment sheets, tests and oral examinations.

3.3.10 Step 10: Evaluate and Revise

Evaluation of each step of the process is important for the development of high quality computer-based instructional materials. During the evaluation process emphasis should be given to the appearance of the material as well as its efficiency (Alessi & Trollip, 1991:248). The best way to evaluate materials is by working through the materials yourself and by letting experienced people such as computer-based instructional material developers or academics have a critical look at it. One can assess how well the lesson works by “observing the results of real students studying the lesson and assessing how much they learn” (Alessi & Trollip, 1991:248).

During the development of *Tjommie en Vriende*, the researcher showed the application, at different phases of development, to colleagues at the Unit for Afrikaans, graduates who have completed their MPhil degrees in Hypermedia and Language Acquisition and students in the target group. Chapters 4 and 5 will discuss this step in more detail.

3.4 Programme Design

The aim of this section is to provide a step-by-step analysis of the stages of the Instructional Systems Design Model with regards to the technical design of *Tjommie en Vriende*. Where necessary, reference will be made to the theories and approaches discussed in chapter 2 and how they influenced the technical components of the computer application.

3.4.1 Step 1: Determine Needs and Goals

The course Beginner Afrikaans for International Students (Level I) 154 is only available as a semester course. A follow up course, Beginner Afrikaans for International Students (Level II) is available, but only if numbers permit. A minimum of 15 students is required to financially justify the course. It happened in the past that there were too few students to justify the finances. Possible reasons include firstly, that students prefer to focus on their main subjects or programme. This is especially the case with postgraduate students. Secondly many undergraduate students get involved in community upliftment projects in Kayamandi that take up a lot of their time.

The methodology of the Level II course is also based on the Communicative Approach and therefore the focus is still mainly on the meaning of students' utterances. The accuracy of utterances receives more attention than in the first level, but are still secondary to meaning. This implies that even if students complete the second level, they may still lack the accuracy they wish to acquire.

All these factors led to the researcher's decision to actively address the need of accuracy in language proficiency. Once the decision to address the need had been made, the question of 'how' had to be answered. How could one go about improving accuracy in a 60-hour semester course? A semester consists of 14 weeks and students attend class twice a week for two and a half hour sessions. To extend the course from 60 hours to a possible 70 or 80 hours was not a feasible option. More classes would interfere with other courses in the IPSU programme; moreover, student feedback (gathered over the past five courses) at the end of the semester

also indicated that students felt that classes were too long at times. (Appendices C & D).

To incorporate monotonous language drills in a communicative class where meaningful comprehensible output is the most important outcome, was also not an option to consider. Therefore, the only possibility to address students' needs for accuracy, without compensating any class contact hours, was to make use of the available technology: computers. The researcher hypothesized that computer-based instructional materials could achieve the goal of improving students' accuracy.

3.4.2 Step 2: Collect Resource Materials

Section 3.3.2 dealt with the collection of resource materials relevant to content. This section dealt with the selection of materials aiding the technical design. The materials include computers, software programmes and the intranet of Stellenbosch University.

The software programmes used to develop *Tjommie en Vriende* included Dreamweaver MX as the primary software programme, Hot Potatoes version 6 and the graphic editors Paint Shop Pro version 8.10 and Macromedia Fireworks MX. Hot Potatoes were used to create the exercises.

The computers that students will have access to have the following technical specifications: 128MB of RAM, Windows XP and Internet Explorer 5+. All the computers have 17" monitors, are equipped with CD ROM drives, speakers, graphic and sound cards. These computers are located in a number of computer usage areas on campus. Most international students make use of the computers in HUMARGA (Humaniora Rekenaargebruikersarea), although some will make use of other usage areas. The students have access to these facilities 24 hours a day.

3.4.3 Step 3: Learn and Internalize Content

The researcher found this step to be one of the biggest challenges of the whole project. The process of familiarizing oneself with the technical aspects of computer-

based instructional materials is an ongoing process. One needs to stay in touch with the development of new software programmes in order to improve the quality of one's materials. Section 3.4.10 provides an example where the researcher had to learn an unfamiliar programme in order to enhance the pixel quality of buttons.

During the course of this project the researcher had to gain knowledge about hypertext documents. The first year of the course, MPhil in Hypermedia and Language Acquisition, formed the sound foundation of this knowledge. Knowledge of Hypertext Mark-up Language (HTML), the graphic editor programmes Paint Shop Pro version 8.10, Macromedia Fireworks MX, Macromedia Dreamweaver and Hot Potatoes version 6 was invaluable in the development of *Tjommie en Vriende*.

3.4.4 Step 4: Generate Creative Ideas

Anyone who attempts to create computer-based instructional materials should be extremely careful not to fall into the trap of too much animation and 'flashy bits'. Levy (1997:1) warns that just because the computer can perform certain tasks, it is not necessary to incorporate all these functions into an application. You have to determine what the students' needs are and keep your focus.

The focus of *Tjommie en Vriende* was to improve students' accuracy in their Afrikaans language proficiency by means of drill exercises. It is supplementary to the classes, which focuses on the meaning of students' utterances. The aim of the application is therefore definitely not to impress students with flashing or moving animation. De Stadler (2005) warns that animation can easily distract students from the main objective of the application, namely the content. However, this does not suggest that one can deliver poor technical quality and argue that the content of an application is the all-important factor. Successful computer-based instructional materials merge both content and design into an integrated whole.

3.4.5 Step 5: Design Instruction

Section 3.3.5 describes the design instruction of the content of the computer application and emphasizes the importance of a sound theoretical framework

necessary to support instructional materials. This section will focus on the technical aspects of the design instruction.

3.4.5.1 Informational Pages

The purpose of the informational pages is not to introduce new knowledge for the first time. As mentioned in previous sections, *Tjommie en Vriende* is not a stand-alone application but a supplement to the course, Beginner Afrikaans for International Students (Level I). Classes focus on authentic communication with strategic competence as the primary goal whereas the computer application focuses on grammar structures with rules and linguistic competence as the primary goal. Therefore the objective of the informational pages is to reinforce knowledge that has already been presented in class in a defocused and implicit manner. The computer application on the other hand presents grammar structures and rules explicitly. To sum up: the classroom's main objective is to promote "communication via language" whereas the computer's main objective is to promote "language for communication" (Allwright, 1979:167).

The instructional methodological framework underlying the application is based on Stephen Krashen's Second Language Acquisition Theory and The Communicative Approach and the Whole Brain Learning Theory. The Second Language Acquisition Theory accentuates the importance of the subconscious acquisition process above the conscious learning process. Acquisition in classroom context is thus the primary goal and learning is more peripheral (Krashen, 1982:20). The Communicative Approach integrates the grammatical and communicative components of language. Grammar is always presented in a defocused and implicit manner in classroom context.

These aspects of the methodological framework strongly influenced the technical design of the information pages where the focus is explicitly on conscious learning of rules. The content was broken up into manageable chunks in an effort not to drown students in an overload of grammar. Making use of graphics varies the paragraphs on each page. The graphics are kept simple and limited to the same four characters

(Stompi Seekat, Bella Ballerina, Bertus Bokser and Karel Kraai) the researcher uses in class to explain complex structures. They are also introduced to the students in the introductory pages of the application. The use of cartoon-like characters is in line with the imaginary and fictional world of *Afrikanopolis*.

The information presented on each page is organized in three categories: rules, helpful hints and examples. Firstly, less complex rules and information are presented in paragraph form. Secondly the characters are used to supply students with helpful hints. Whenever they see a character, they know that they will receive a helpful hint in order to internalize a more complex or difficult rule or structure. Thirdly, examples that clarify the rules or structures are presented in tabular format. These visual differences between types of information are an attempt to help the student to interact more efficiently with the application.

3.4.5.2 Exercises

The technical design of computer-based instructional materials is dependent on the choice of software. Software programmes determine what is possible to produce on a computer screen. In this study the researcher decided to make use of Hot Potatoes version 6. The choice of only one software programme can restrict one's variation of exercise possibilities, but on the positive side it allows for consistency. Students do not have to spend time to learn how numerous different exercises work. They become familiar with the exercise options and can more easily focus on the content of the exercises and not on the mechanics.

The five exercise possibilities of Hot Potatoes version 6 include: Cloze, Quiz, Mix, Match and Cross exercises. *Tjommie en Vriende* incorporates a mixture of all the different types of exercises. However, due to the nature and possibilities of some of the exercises, priority was given to Cloze, Quiz and to a certain extent, Cross exercises.

Cloze exercises feature prominently in the application because they comprise a large quantity of the exercises and are used in all the 'tests' at the end of each 'town'. The

reason for the exclusive use of cloze exercises in the ‘tests’ is based on research about the reliability of cloze tests. Cohen (cited in Poel & Weatherly, 1997) reports on studies which have found “high correlations between cloze test scores and tests of reading comprehension, (grammatically correct) writing ability, listening ability, and speaking proficiency, suggesting that the cloze test is an excellent indicator of overall language proficiency”. Furthermore, research conducted by Bachman (cited in Poel & Weatherly, 1997) indicates “cloze tests not only reflect low-level skills like phrase processing, but also complex skill such as human language processing capacity”.

In the compilation of the cloze exercises and tests careful consideration was given to the content of the exercises. Brown (cited in Poel & Weatherly, 1997) suggests that the “single most important variable in the effectiveness (reliability and validity) of cloze may be how well a given passage fits a given population ...[i]t may be necessary to provide a reading passage that is chosen for the specific learner population in order to obtain reliable and useful results”. The Communicative Approach emphasizes the importance of authenticity in communication and in the choice of texts. It is however, important that the choice of texts should be suitable to the needs of the student population. To comply to authenticity and address the needs of the student population concurrently, the researcher created texts that form part of the students’ frame of reference and comply to their current level of proficiency + 1, as suggested by Krashen (1982:20).

Apart from Cloze exercises, a variety of Quiz exercises (multiple choice format) also features in the application. Quiz exercises were a good choice to alternate with the cloze exercises because they provide two to four possible answers of which only one is correct so that students really need to concentrate and apply their existing knowledge. In the feedback to these questions, the researcher directs students’ attention to the small differences between possible answers and how they change the meaning of words and phrases.

Crossword puzzles were used to test new vocabulary. The researcher felt that this was a creative way to test vocabulary, since the crossword adds a fun element to a

type of exercise that can easily become monotonous. By choosing this type of exercise the researcher addresses the students' limbic systems need for variation. A crossword is also an effective way to supply the student with clues when they struggle with more difficult words. A student can start to fill in the words that they do know and then rely on those clues to guide them through the more difficult ones. In this manner the right hemisphere's need for coherence and a holistic view is satisfied.

Mix and Match exercises were used to test word order and sentence structure. Both of the types of exercises feature very little. A Mix exercise was used to test the correct use of the double negation in Afrikaans. Match exercises were used to test whether students had internalized the Sv1TOMPv1I¹ word order of Afrikaans. One exercise focused on the normal word order (Sv1TOMPv2I) and another exercise tested whether students could e.g. start a sentence with the Time or Manner phrase and still maintain the correct word order.

Table 4 will briefly summarize the character of the different types of exercises used in the computer application.

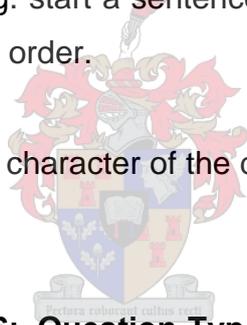


Table 4: Hot Potatoes version 6: Question-Types

Hot Potatoes Question-Types	Description
Cloze	<ul style="list-style-type: none"> This is a fill-in-the-gap type exercise. The gaps may or may not provide a clue to the student. Where students still need guidance, clues are provided. Gaps may also consist of a drop down menu to supply students with a choice of answers.
Quiz	<ul style="list-style-type: none"> This is a multiple choice answer exercise. The options as applied in this application can vary from two to four possible answers of which only one is correct. Where there are only two possible answers (e.g. "yes" or "no") there are no other

¹ Sv1TOMPv2I is an abbreviation used to explain Afrikaans word order. S = subject, v = verb, T = time, O = object, M = manner, P = place and I = infinitive. v1 and v2 distinguishes auxiliary/helping verbs from the real "action" verb. The character, Stompi Seekat, is used to explain how word order works. An octopus has eight legs and each leg represents the eight different possible parts of a sentence, but they all work together to form a coherent and functional system.

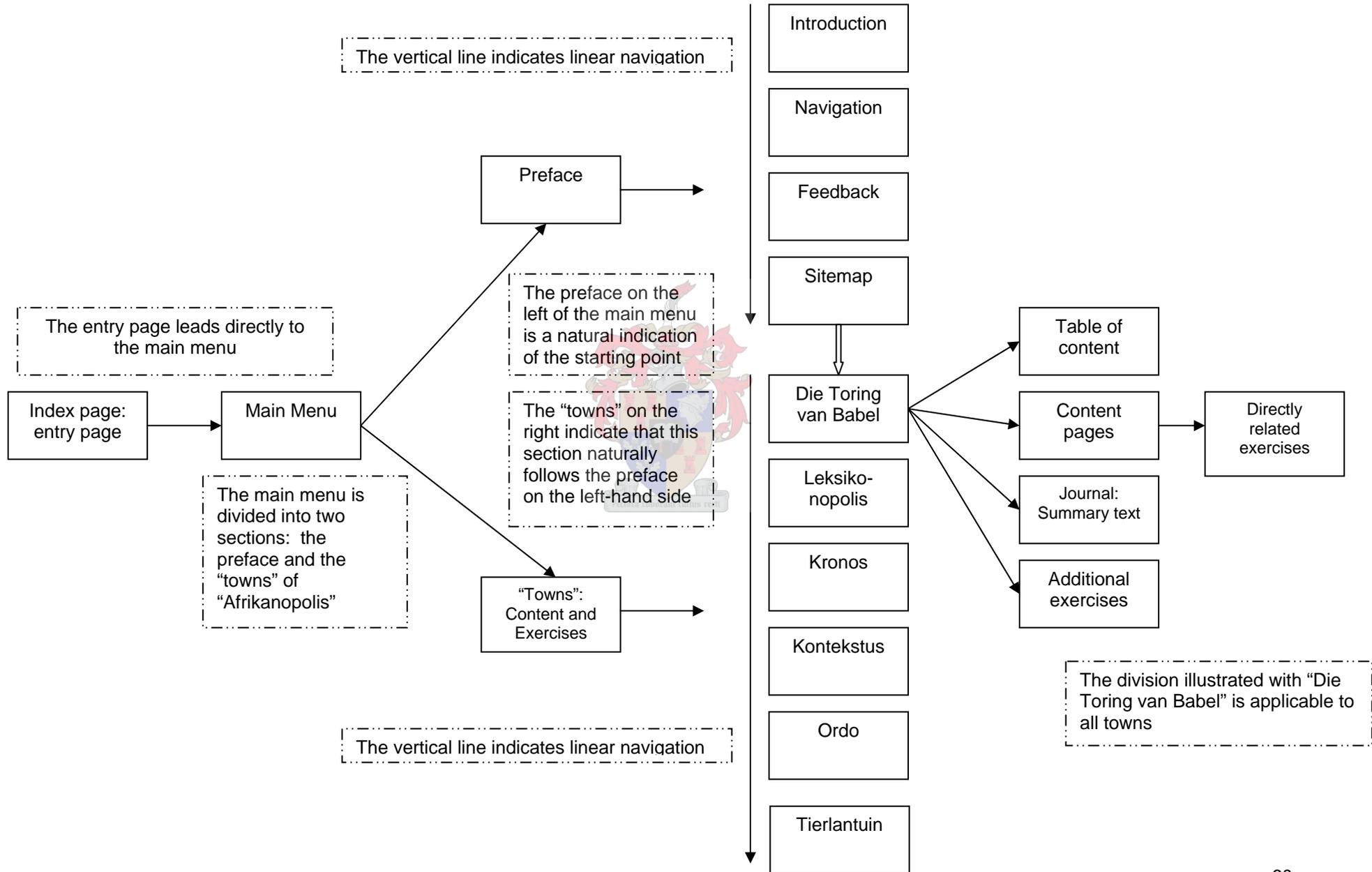
	possibilities included.
Cross	<ul style="list-style-type: none"> This is a crossword puzzle type exercise.
Mix	<ul style="list-style-type: none"> This is a jumbled word or sentence exercise. The individual letters of a word or the words of a sentence can be jumbled. The aim of the exercise is to place letters or words in the correct order to form a coherent word or sentence.
Match	<ul style="list-style-type: none"> This is a jumbled sentence or paragraph exercise. The individual words of a sentence or sentences of a paragraph can be jumbled. The aim of the exercise is to place the words or sentences in the correct order to form a coherent sentence or paragraph.

3.4.6 Step 6: Flowchart the Lesson

A flowchart is a graphical presentation of how a lesson or application progresses or flows. A flowchart is a “bird’s-eye view showing the structure and sequence of the lesson” (Alessi & Trollip, 1991:295). Only once a developer of computer-based instruction materials has completed this step, can he progress to the step of storyboarding where the structure is filled with the content of the application.

With *Tjommie en Vriende* the intention is that students start at point A and progress towards point Z in a linear manner. The format of the application determines the route the students need to follow. The Introduction section of the application also warns students not to skip sections. They should follow the linear navigation almost as if paging through a book. The application is designed without any blocking mechanisms to allow students the freedom to go back to sections or exercises, which they would like to practice or internalize again. Because *Tjommie en Vriende* is not a stand-alone application but one that supplies students with follow-up exercises of what has been taught in class, this “almost as if paging through a book” characteristic should not be seen as a negative one. The “paging” allows the student to follow the same learning route as the one followed in class. Figure 2 is a visual representation of the linear navigation and flow of the application.

Figure 2: A flowchart depicting the design layout of “Tjommie en Vriende”.



3.4.7 Step 7: Storyboard Displays on Paper

Section 3.3.7 explained how the textual and pictorial information was organized to fit within the display limitations of the computer screen and also how information was broken up and presented in manageable chunks. This section deals with the technical decisions behind each manageable chunk of information on both informational and exercise pages.

Before step seven can commence, one has to determine what computers will be at one's disposal. Designing computer-based instructional materials for a course presented only at Stellenbosch University, simplifies this task. The computers available in multimedia classrooms and computer user areas are all fitted with the same standard software. The computers have a screen size of 1024 x 768 pixels (or 17") and the same processors. (See section 3.4.2). With this vital information as background, the storyboarding phase can begin.

During this phase it is beneficial to the student and the quality of the application if the developer approaches the project from the user's perspective. In doing so the developer can ensure that the user clearly understands the objective of the application. Users of computer-based instructional materials seek "clarity, order and trustworthiness" (Lynch & Horton, 2002). Effective user-focused design can provide the clarity, order and trustworthiness mentioned above. The Web Style Guide (2002) states that the "spatial organization of graphics and text on the [Web] page can engage readers with graphic impact, direct their attention, prioritise the information they see, and make their interactions with your [Web site] more enjoyable and efficient." Careful consideration was given to seventeen basic principles before designing the pages for *Tjommie en Vriende*.

3.4.7.1 Visual Logic

Each page should have a visual logic and "seek an optimal balance between visual sensation and graphic information" (Lynch & Horton, 2002). Pages lacking visual logic, shape, colour, contrast and graphics are dull and not user-focused. A user seeks applications with contrast and visual relief. Too much text and too little

graphics create an imbalance of the visual sensation of a document. The researcher attempted to create a harmonious feel in the page design. A systematic approach to the design was followed in order to establish simple and easy navigation and therefore reducing students' errors. It is important that users "take advantage of the information and features" of the application (Lynch & Horton, 2002).

Each page was designed to "create a strong, consistent visual hierarchy in which important elements are emphasized and content is organized logically and predictably" (Lynch & Horton, 2002). At first glance, students can identify which information is important and what the hierarchy of the content entails. Pages are designed to be predictable; therefore all pages have the same look and feel. All informational pages have the exact same layout, and exercises have a unique look and feel that distinguishes it from the informational pages of the application. Figures 3 and 4 illustrate the visual logic of both informational and exercise pages. Although the colour scheme is consistent (blue), these pages each have a unique character that differentiates them from each other.

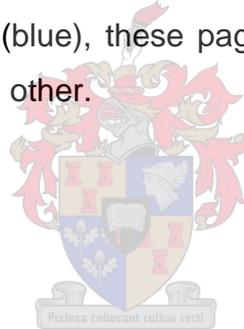


Figure 3: Visual logic and layout of informational pages of *Tjommie en Vriende*

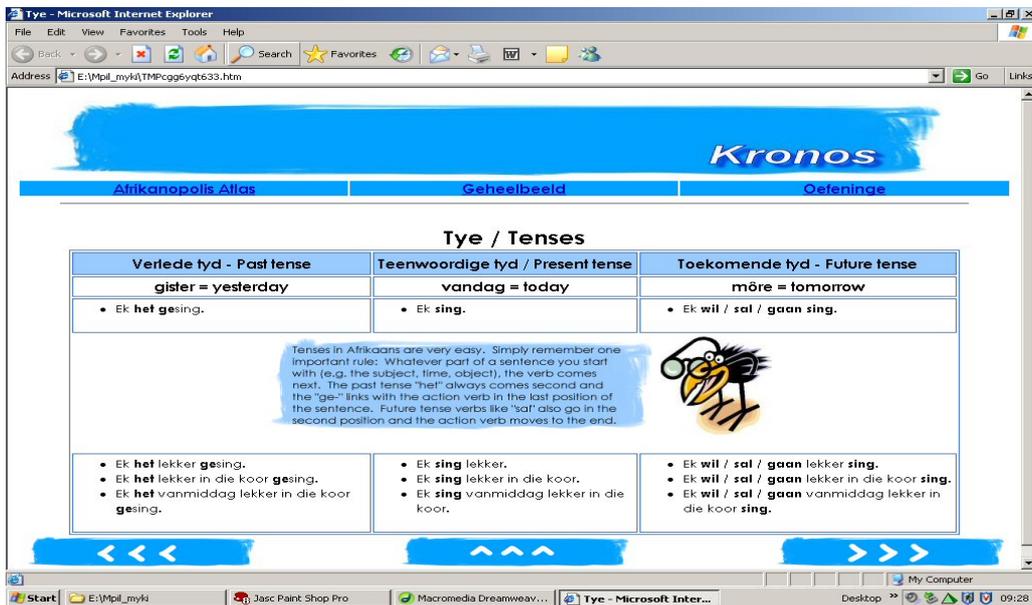
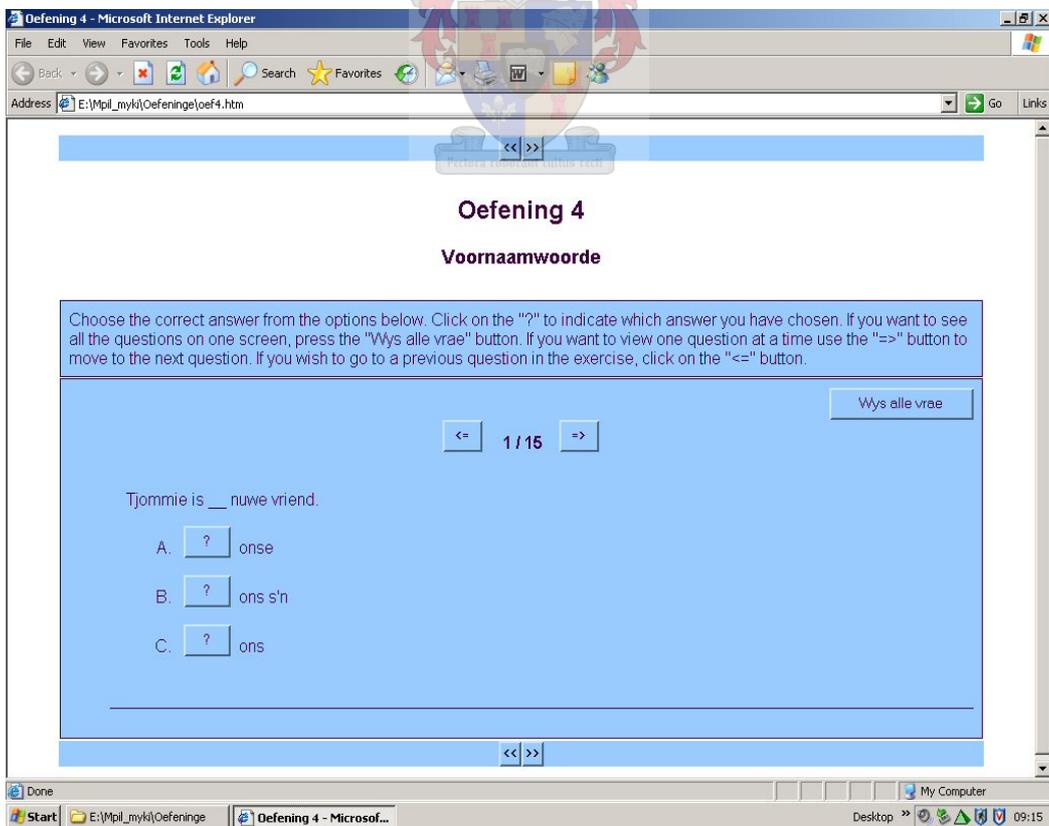


Figure 4: Visual logic and layout of the exercises of *Tjommie en Vriende*



In page design, contrast is essential. If pages contain too much solid text, it becomes a mass of undifferentiated grey matter. There should be an appropriate balance on the page that attracts the eye. In “*Tjommie en Vriende*” the information on each page is stripped to only the bare necessity and organised in such a way that the most important aspects are positioned in the top half of the screen.

As mentioned before, predictability is an important factor in user-focused design. Users don’t want to guess what to do next, where they should go next or what is going to happen when they press a button or link. By being predictable, you are being consistent, and consistency builds a “rhythm and unity across the pages” (Lynch & Horton, 2002). Consequently, users become familiar with the layout and navigation and can confidently predict where to find and access specific information and how to find their way in the application.

a) Headers and Footers

Interacting with a Web page is not only a visual experience, but also a reading and learning experience. There should therefore be a balance between text and graphics. The graphics displayed at the top of each screen are called headers which should be carefully considered and designed. Web writers can easily make use of oversized graphics within their headers. Not only do these graphics take long to download, but they also take up precious space. The bigger the graphic in the header, the more likely the reader has to scroll down to read. As determined earlier on, this is something the web writer would like to avoid.

The header should supply the reader with the unique and visual identity of the site (Lynch & Horton, 2002). In *Tjommie en Vriende* each page has the same visual identity which is echoed throughout the whole application and has already been introduced on the Main menu. The same design in headers (and buttons) is then deliberately echoed on every page to support the theme that is carried through in the class situation as well as in the application. This consistency breeds familiarity and causes a sense of direction and orientation within the application. Figure 5 illustrates the headers used on all informational pages.

Figure 5: Header of informational pages



Each informative page has an identical blue and white graphic as a header. They are all the same size and positioned in the same place on each page. In the right-hand bottom corner they are each named for easy identification and orientation within the larger context. The reader knows then which virtual town within the virtual country of *Afrikanopolis* he or she is visiting. These towns correlate with the exact same towns that students visit in class contact sessions.

A navigation bar is placed directly below the header of each page. Beneath the navigation bar is a horizontal line, which is a visual barrier between the graphics at the top of the screen and the text that follows.

The navigation bar is consistently found on each page and has three links that redirect students to the main menu, the sitemap or the exercise menu. This allows for a little freedom and mobility in the application and diverges from the intentional linear route students should follow. The rationale behind this design decision is to allow students who have completed the application, to go back to structures and exercises they want to work on again.

Apart from making use of headers, the developer also decided on a consistent set of footers. Figure 6 illustrates the footer used on all informational pages.

Figure 6: Footer of informational pages



The graphics displayed at the bottom of each page are called footers. Because students have to scroll, the navigation bar at the top of the page can disappear from the screen. To help the students to orientate themselves, the researcher imported a second set of links at the bottom of the page so that they don't have to go back to the top of the page to direct themselves to the next page, but can simply use the links supplied at the bottom. Table 5 describes the function of the links in the navigation bar at the top of the screen and the graphic links at the bottom of each screen.

Table 5: Navigational links used in *Tjommie en Vriende*

Link	Description
Afrikanopolis Atlas	When a student clicks on this button, it will take him/her back to the main menu of the application. From the main menu he/she can link to any "town"/section in the application.
Geheelbeeld	When a student clicks on this button, it will take him/her to the sitemap of the application. From the sitemap he/she can link to any information page in the application.
Oefeninge	When a student clicks on this button, it will take him/her to the exercise menu of the application. From the exercise menu he/she can link to any exercise within the application.
	When a student clicks on this button, it will take him/her back to the previous page that he/she has browsed.
	When a student clicks on this button, it will take him/her to the top of the page that he/she is currently browsing.
	When a student clicks on this button, it will take him/her to the next page within the application.

b) Page Title

The navigation bar is followed by the page title. This title explains in both languages what the reader can expect within the page. A title is provided in both languages in order to prevent possible confusion for beginner speakers of Afrikaans. The titles are short headings that supply information about the specific grammatical structure explained on the page. Some words give no linguistic clues as to what it means (e.g. "Voorsetsels" vs. "Prepositions"). There are no sound similarities in these two words.

It is not important for students to understand what the word “Voorsetsels” mean. What is important is that students know what e.g. “Voorsetsels” entail and how “Voortsetsels” work.

c) Typograpy

The Web Style Guide (2002) defines typography as “the balance and interplay of letterforms on the page, a verbal and visual equation that helps the reader understand the form and absorb the substance of the page content”. At first glance readers look at the whole page to survey the graphic patterns and then they zoom in on content and take a look at language. Only once they have looked at the language, do they start reading. “Good typography establishes a visual hierarchy for rendering prose on the page by providing visual punctuation and graphic accents that help readers understand relations between prose and pictures, headlines and subordinate blocks of text” (Lynch & Horton, 2002).

d) Characteristics of Type on the Computer Screen

Selecting a type for the screen is somewhat different than selecting a type for printed documents. Firstly, when selecting a type for the computer one has to keep in mind that the computer screen “renders typeface at a much lower resolution than” printed documents (Lynch & Horton, 2002). A printed document can show 1200 dots per inch (dpi), whereas a computer screen can seldom manage more than 85 dpi. This makes the reading of long web texts difficult because of the strain on the reader’s eyes.

A second concern when selecting a typeface involves the size of the computer screen. The area the developer can use is different to the area available in a printed document. Computer screens generally have smaller useable areas, thus limiting the information one can add to a page without having the reader scroll (Lynch & Horton, 2002).

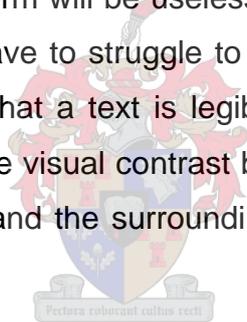
The last and most important concern is the variability of screen typography. The typography a developer chooses may not be the same typography displayed on the

reader's computer screen. The reason is that Web pages can change their "character" each time they are loaded into a Web browser. Web browsers re-create pages because the browser might be out-of-date or the developer chose a peculiar set of font (Lynch & Horton, 2002). Developers should rather then choose a recognisable typography to ensure that the reader will see the pages in the way they were designed. Careful attention was given to each of these concerns in the selection of the typography of *Tjommie en Vriende*.

The following sections will describe the typography rationale in more detail.

e) Legibility

The legibility of a computer application is of utmost importance. The purpose of an application is to present a student with a platform for internalizing new knowledge and then practicing it. This platform will be useless if the student can't access it due to poor legibility because they have to struggle to decipher the text before they can start reading it. To make sure that a text is legible, developers should know that: "Good typography depends on the visual contrast between one font and another and between text blocks, headlines, and the surrounding white space" (Lynch & Horton, 2002).



The first thing students see when they open a new page is the overall pattern and the contrasting elements. Next the eye picks up any "regular, repeating patterns". These repetitive patterns help the readers to "establish the location and organization of (...) information" (Lynch & Horton, 2002). *Tjommie en Vriende* made use of a repetitive pattern so that students can establish where they are in the application. For example, all helpful hints are placed in blue text boxes that differ from the general white layout of the pages. They also know what to expect, because repetition of typography makes it easier for them to recognize the importance and relevance of each block of text.

f) Alignment

Margins on a page define the reading area by separating the main text from the rest of the page environment (Lynch & Horton, 2002). Margins also provide visual relief from blocks of text. “Margins and other ‘white space’ is particularly important on a page design because the content must coexist on the computer screen with the interface elements of the browser itself and with other windows, menus, and icons of the user interface” (Lynch & Horton, 2002).

To create a balance between text and graphics within the page environment, the researcher made ample use of margins to visually separate these elements. Margins are placed between all text blocks, graphics, and new paragraphs within text blocks. These margins also create an illusionary/visual effect that information has been broken down into manageable chunks of information. To give the text and graphics an even more ‘blocked’ feeling, the researcher created white space on the left-hand side of each page. It makes the text more legible and gives the whole page a more polished look, almost as if all the page elements are embedded in the white of the page.

g) The justification of text

The researcher chose to make use of left-justification in the application. When writing for the computer “left-justified text is the most legible option for Web pages because the left margin is even and predictable and the right margin is irregular” (Lynch & Horton). All attempts were made to avoid any word-space problems such as “rivers” appearing in the text. Left-justification eliminates the appearance of such problems because the “inequities in spacing fall at the end of lines” (Lynch & Horton, 2002). Preference was given to the ‘ragged’ edge of the right margin to “rivers” since it adds some variety and character to the page and makes for the best legibility (De Stadler, 2005).

In accordance with the suggestions of the Web Style Guide (2002), all headings were left-justified to complete the flush look of the pages. The only headings that are not left-justified are the subtitles at the top of each page. These headings are all

centered because “centered display type contrasts with the asymmetry of the ragged right margin of left-justified body text” (Lynch & Horton, 2002).

h) Line length

Generally it can be hard to read text on a computer screen. The low resolution of screens makes reading difficult; moreover, having lines that are too long make the task of reading even more laborious. *Tjommie en Vriende* is aimed at being user-friendly and thus reader-friendly. A reader-friendly text should have a line length between 50 to 70 characters (Lynch & Horton, 2002). To comply with this guideline, the text was chunked into manageable bits of information. These chunks are presented in text blocks smaller than the 50 to 70 characters. Information presented in a ‘chunked’ form is highlighted from the rest of the text and receives more attention.

i) White space

The researcher made ample use of white space in *Tjommie en Vriende*. This was done in an attempt to emphasize chunks of information. The student’s eye sees an important piece of information physically situated in a surrounding white page environment. The eye has to notice these pieces of information, because they stand out from other pieces of text.

j) Typefaces

In *Tjommie en Vriende* the researcher chose a typeface that “produces a harmonious fit between the verbal and visual flow” of the pages (Lynch & Horton, 2002). The Web Style Guide (2002) recommends typefaces such as Georgia and Verdana, specifically designed for legibility on computer screens. These typefaces have ‘exaggerated x-heights’ and are quite large when compared to more traditional typefaces. A decision was made not to go for the most conventional and safe typeface namely the serif face, Times New Roman; moreover, because the look and feel didn’t fit with the choice of buttons, graphics and animation. *Tjommie* is an adventurer, a free spirit and a modern woman. The researcher felt that Times New Roman is too much of a safe choice and that it would send the wrong message to the

students. The typeface should reflect that Tjommie is not conservative and inhibited, but indeed daring, outspoken, outgoing and ready for any challenge.

To further emphasize the fact that Tjommie doesn't like restrictions, the researcher also decided not to go for a sans serif font but chose Century Gothic instead of Verdana. Three factors influenced this decision. Firstly, it is consistent with the typeface used in all of the class handouts. It is a typeface the students recognise and associate with Tjommie. Secondly, the researcher prefers serif above sans serif when writing for the computer screen. It is quite similar to Verdana and as mentioned in the previous paragraph, these fonts are designed to enhance legibility on the computer screen.

Thirdly and most importantly, the application is designed to operate in CD-Rom format in the Stellenbosch University computer usage areas, such as HUMARGA. All the computers in these labs have web browsers that can read Century Gothic. The typeface used in the application is indeed the typeface that will appear on their computer screens.

Finally the researcher also decided to stick to one typographic family. Century Gothic was used in all the informational pages with a variation of weight, size and emphasis to distinguish headings from other text. The only exception is where text blocks are used within a graphic, such as the journal entries at the end of each virtual town. In these cases Arial was used, because these fonts within the graphics look the same in most browsers. Arial is therefore a "safer" sans serif font to use than Century Gothic, because it is used by default.

k) Type size

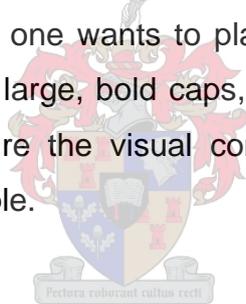
On all pages, informational and exercises, a consistent type size was used. Small variations were used to distinguish between headings and paragraphs. In an attempt to limit the amount of scrolling on behalf of the student, headings are never exaggerated in size. The type size of headings and paragraphs are in balance with the canvas of the screen.

l) Case

When a typeface was chosen, the main concern was the harmonious fit between verbal and visual flow. Pages should be legible without comprising design and style or look and feel. Upper case would be detrimental to legibility because it is very difficult to scan and places words in monotonous rectangles with few distinctive shapes that catch the eye (Lynch & Horton, 2002). It was therefore avoided at all cost in favour of more creative methods to emphasize important information. Section 3.4.5.1 e.g. explains the use of graphics to highlight helpful hints.

m) Emphasis

Emphasis or display type in a document provides certain landmarks that direct the reader through the content. “Display type establishes an information structure and adds visual variety to draw the reader into the material” (Lynch & Horton, 2002). Emphasis should however be used sparingly and economically, because economic use implies that less is more. If one wants to place emphasis on information, it is unnecessary to set everything in large, bold caps, coloured and underlined text and italics. A little variety will ensure the visual contrast you are looking for. One typographic emphasis will be ample.



n) Italics

Conventionally italics are used when listing book or periodical titles. Because of this convention the use of italics was avoided and only used when reference was made to the title of a book, magazine, periodical or to *Tjommie en Vriende* as the name of the application.

o) Bold

Bold print was used in two ways. Firstly, it was used to distinguish headings from the rest of the body of text. The reason for doing this was to guide the eye across the page while making students aware of the various chunks presented on one page. A bolder printed heading almost encapsulates the paragraph below it and separates it from the next chunk of information.

p) Underlined text

As is the case with italics, underlined text is only used as determined by convention. Underlining has a specific functional meaning in Web documents, namely to indicate hypertext links (Lynch & Horton, 2002). When text is underlined, it confuses readers in assuming that it could be a hypertext link. Because of this logical assumption of users, the only underlined text is hypertext links to other pages.

q) Coloured text

Coloured text also has a special functional meaning in Web documents. Users can assume that coloured text in text blocks is a possible hypertext link. Or they might see a different coloured text and think that it is a link they have visited or clicked on before. For these reasons a single text colour, namely black, was used consistently throughout *Tjommie en Vriende*. The contrast of black on white seemed like the most logical choice for a visual relief.

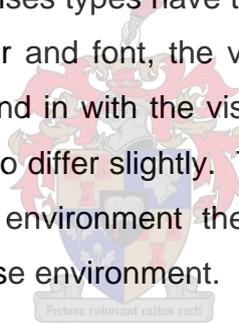
3.4.8 Step 8: Program the Lesson

During this step all the ideas that have been captured on paper are translated into an electronic computerized version. In order to do so one has to be knowledgeable about a language that the computer can understand and decipher. The language used to translate the paper 'version' to an electronic one, was Hypertext Mark-up Language, also known as HTML. The researcher used the Macromedia's Dreamweaver MX programme to help in the design. To work in Notepad would have been far too a laborious and unnecessary task. Apart from Macromedia's Dreamweaver MX, the researcher chose Hot Potatoes version 6 to compile the exercises in.

Tjommie en Vriende can be divided into two sections: informational pages and exercises. Macromedia Dreamweaver MX was used to compile the informational pages. The researcher decided to make use of tables instead of frames in the layout of the pages. The researcher also avoided the use of layers at all cost, because not all browsers view pages as the developer intended them to be viewed.

Macromedia Dreamweaver MX has a selection of flash buttons that one can choose from. After careful consideration the researcher chose to create her own buttons. The graphic editor programmes, Paint Shop Pro version 8.10 and Macromedia Fireworks MX were used for this purpose. The rationale for doing this is that the researcher wanted the buttons to be consistent with the rest of the page design, especially echoing the design of the 'banner'/heading found at the top of each page. Paint Shop Pro was used during the initial design process and Fireworks MX was then later used to refine and improve the pixel quality of the buttons.

Hot Potatoes version 6 was used to develop all the exercises. The researcher wanted to be as consistent as possible in the design of exercises and therefore decided against the use of more than one software programme. By making use of just one programme, all the exercises types have the same look and feel to them. By making use of background colour and font, the visual appearance of Hot Potatoes could also be manipulated to blend in with the visual appearance of the information pages. However, the exercises do differ slightly. The purpose of this distinction is to inform students of the specific environment they are in. The distinction either indicates an information or exercise environment.



3.4.9 Step 9: Produce Supporting Materials

Section 3.3.9 described the supporting materials relevant to the content of the application. The preface of *Tjommie en Vriende* includes an Introduction, Navigation and Feedback section that provides students with the technical help they need. The Navigation section explains how all the links and buttons on the computer interface work. The students are told exactly what will happen and where they will go if they click on a link or button.

The Feedback section provides students with an immediate opportunity to contact the researcher/developer to supply her with any comments regarding:

- the convenience of the application;
- the usefulness of the content;
- ways in which the design of the application might be improved;

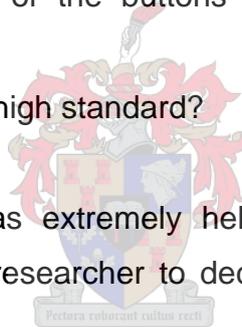
- topics or language structures which could be added;
- topics or language structures which require more clarification or
- any other helpful hints.

3.4.10 Step 10: Evaluate and Revise

The researcher constantly evaluated and revised the technical design of the application. Colleagues at the Unit for Afrikaans critically looked at the choice of links and buttons to answer questions such as:

- Is the choice of links and buttons logical?
- Do the names of the buttons make sense?
- Should the buttons depict universally understandable symbols or Afrikaans names?
- What links and buttons are necessary for a logical navigational structure?
- Does the appearance of the buttons fit the appearance of the whole application?
- Is the pixel quality of a high standard?

The feedback of colleagues was extremely helpful in the final decision-making process, because it helped the researcher to decide on a combination of symbols and Afrikaans for the buttons.

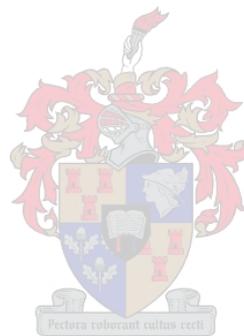


An important adjustment the researcher made after evaluating the appearance of the buttons was to try and enhance the pixel quality. Buttons were created with Paint Shop Pro version 8.10. in JPEG format. After exploring other software programmes, all the buttons were redone in Marcomedia Fireworks MX in PNG format increase the pixel quality.

This section only briefly touched on the evaluation and revision process. Chapters 4 and 5 will supply a more complete evaluation of the application.

3.5 Review

This chapter provided a bird's eye view of the laborious task of developing computer-based instructional materials and how it was applied to *Tjommie en Vriende*. Working with an Instructional Systems Design Model makes the task easier, because it provides a guideline that structures the development process in a logical manner. Content and design are inextricably linked in this model, allowing for the different steps to be interwoven and simultaneous. The model also allows the developer a certain degree of freedom, because he/she can eliminate steps of the model that don't correspond with the type of material he/she is developing. This freedom generates more creative ideas, and ultimately students benefit from the result: a quality computer application.



CHAPTER 4

RESEARCH METHODOLOGY AND APPROACH

4.1 Overview

The introductory chapter briefly referred to the research methodology and approach relevant to this study. This chapter explains the specific approach followed as well as the methodology it encapsulates. The process of testing the application will receive attention. More specifically, this chapter empirically investigates the effect that the computer application, *Tjommie en Vriende*, has on students' accuracy and linguistic competence in Afrikaans. (See section 1.5 for the hypothesis).

4.2 A Strategy of Inquiry

A strategy of inquiry provides specific direction for the procedures in a research design (Creswell, 2003:13). It also contributes to the final decision of an overall research approach.

Strategies of inquiries associated with quantitative research are the sort of strategies that "invoke the postpositivist perspectives" (Creswell, 2003:13). These include true experiments, quasi-experiments, correlational studies and specific single-subject experiments. Quantitative strategies have more recently also included complex experiments with several variables and treatments. The strategy followed in this study is that of an experiment, which is discussed below.

4.3 A Quantitative Methods Approach

Creswell (2003:153) suggests that if one is looking for objective data that result from empirical observations and measures, one should consider following a quantitative methods approach. This approach supplies a researcher with both empirical observations and objective data necessary to support a hypothesis.

In this study an experiment was conducted to test the impact of a treatment or intervention, while controlling as many external factors as possible that might influence the outcome.

4.4 Components of an Experimental Method Plan

As mentioned in section 1.5 this study wants to determine if the interventional computer application (the treatment), *Tjommie en Vriende*, had a positive influence on the accuracy and linguistic competence (the outcome) of the students in the target group. In order to conduct such an experiment, one should make use of an experimental method plan consisting of the following components: the participants, the variables, instrumentation and materials, and the experimental procedure. The remainder of section 4.4 will discuss the components of the experiment.

4.4.1 Participants

The participants that formed part of this study are 15 undergraduate and postgraduate international students who enrolled for the International Programme Stellenbosch University course, Beginner Afrikaans for International Students (Level I) 154, taught by the researcher. Participants included students from Germany, The United States of America, France, Japan and South Africa¹. They all met the entry level English Proficiency Requirements (IELTS score of 6.5 or a TOEFL score of 550) but had no prior knowledge of Afrikaans whatsoever.

The participants were non-randomly divided into two groups: an experimental group and a control group. A random selection would have ensured that the sample was representative of the class population. Unfortunately due to academic demands and different needs (see section 3.4.1) students were not allocated to a specific group, but chose whether they wanted to participate. The students who volunteered to participate formed the experimental group, and those who preferred not to volunteer, formed part of the control group. A group of five students consisting of three Germans, an American and a Japanese student constituted the experimental group; the other ten the control group. The researcher also made use of a convenience sample since she had a naturally formed group of participants who enrolled for her course.

¹ The participant from South Africa falls into the category of international students because he has no prior knowledge of Afrikaans whatsoever. As a staff member of the University, he is allowed to register for this course since he needs to learn Afrikaans as soon as possible.

4.4.2 Variables

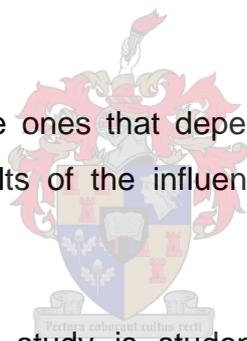
Variables refer to a “characteristic or attribute of an individual or an organization that can be measured or observed and that varies among the people or organization being studied” (Creswell, 2003:93). Four types of variables can be identified: independent variables, dependent variables, intervening or mediating variables and control variables.

4.4.2.1 Independent Variables

Independent variables are variables that “(probably) cause, influence or affect an outcome” (Creswell, 2003:94). The main independent variable in this study is the computer application *Tjommie en Vriende*. The researcher aims to prove that the influence of this independent variable will have a positive outcome on the dependent variable.

4.4.2.2 Dependent Variables

The dependent variables are the ones that depend on the independent variables; “they are the outcomes or results of the influence of the independent variables” (Creswell, 2003:94).



The dependent variable in this study is students’ accuracy and their linguistic competence in Afrikaans. The dependent variable will be measured in percentage values in two ways: firstly by means of a pre- and posttest focusing on listening and reading comprehension and secondly by means of an oral examination only as a posttest. The oral examination will be measured by means of an adapted version of the Brandon Carroll Interview Assessment Bands Scale. Section 4.4.3 will describe the instruments in more detail.

4.4.2.3 Intervening or Mediating Variables

These variables “stand between” the dependent and independent variables and they mediate the effects of the independent variable on the dependent variable (Cresswell, 2003:94). Possible intervening variables include personal factors as identified in Krashen’s Affective Filter Hypothesis. Self-motivation, self-confidence

and anxiety may stand between the independent and dependent variables. Other variables might include attitudes towards computers (Beauvois & Eledge, 1995; Warschauer, 1996b), preferred learning styles, gender and keyboard control (Meunier, 1995).

4.4.2.4 Control Variables

Cresswell (2003:94) warns that it is important to identify possible control variables in an experiment because they have the potential to influence the dependent variable. These are variables that need to be controlled “so that the true influence of the independent variable on the dependent variable can be measured” (Cresswell, 2003:94). Important control variables that the researcher had to consider are the nationality and first language of participants.

4.4.3 Instrumentation and Materials

This section looks at the instruments and the treatment material used to conduct this study. Instruments help the researcher to make observations or obtain measures at a pre- and/or posttest phase of the procedure. The treatment material or experimental treatment is the variable administered to the experimental group.

4.4.3.1 Quantitative Instrumentation

A combined listening and reading test (Appendices E & F) was used as instrument to determine students' language proficiency in Afrikaans. The same test was used as pre- and posttest since the test then operates as the only independent variable. By using the same test for both pre- and post testing a small correlation between the pre- and posttest is possible. A smaller correlation then indicates that the intervention was indeed successful (Blanckenberg & Van Dyk, 2005). See Appendices E and F for an enclosed copy of this test.

The combined listening and reading test administered at the pre- and posttest phase is a test developed by the Unit for Afrikaans for students at both beginner and postbeginner level. Its main purpose is to test general proficiency of listening and reading skills. This test is generally referred to as *Die Partytjietoets* because it is based on the social context of an office party.

The test consists of two sections: a listening section A and a reading section B. The listening section is based on two questions. A picture of the party scene depicting the office party accompanies both these questions. Students study the picture for five minutes before the test begins. Question 1 requires the students to listen to short one sentence descriptive statements about an office party scene. They make use of both the visual and aural clues to determine whether the statements are true or false. Question 1 consists of ten items each counting two points. The main listening skill is intensive listening, activating students' existing vocabulary.

Question 2 requires that students rely on their discourse competence. They listen to five extended conversations at normal speech rhythm between five different pairs of partygoers. In this question students have to determine which of the pairs is busy talking. Students once again make use of visual and aural clues. Since discourse listening is a more complex skill than the intensive listening in question 1, each of the items counts three points. The total of questions 1 and 2 adds up to 35 marks.

Section B determines students' reading comprehension of Afrikaans. This section of the test consists of three questions. Question 1 has ten multiple-choice items with three options each. These options are one-sentence statements functioning as answers to the question asked in each item. Students have to choose the option that correctly answers the question. Each of the ten items in question 1 counts two points each. This question is more or less on the same level of difficulty as question 1, section A, and also activates a student's vocabulary knowledge.

Question 2 is more challenging than question 1, because (as in question 2, section A) students have to rely on their discourse reading competence. In this question two of the partygoers are having a conversation in which they are talking about a specific object that one of the two owns. The conversations are filled with semantic clues but the object is not mentioned. Students have to read the conversations and use the picture to help them find the answer. They are not expected to answer this question in Afrikaans at pretest level since they have no prior knowledge of Afrikaans

whatsoever and therefore simply answer in English. The question only has two items counting three points each.

Question 3 is the most difficult question of the test. It is also a multiple-choice question and also tests discourse competence, which is regarded as the most difficult of the competences to acquire (Brown, 1994:228).

The total of these questions is also 35 points. The test counts a total of 70 points. The time allocated for the completion of the test is 70 minutes. Figure 7 is a visual representation of the listening and reading sections of the test and how the different sections are constituted. This question has three items and each item counts three points.

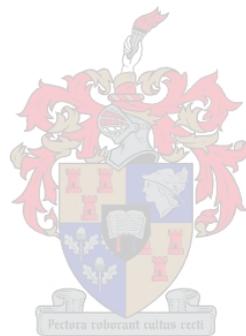
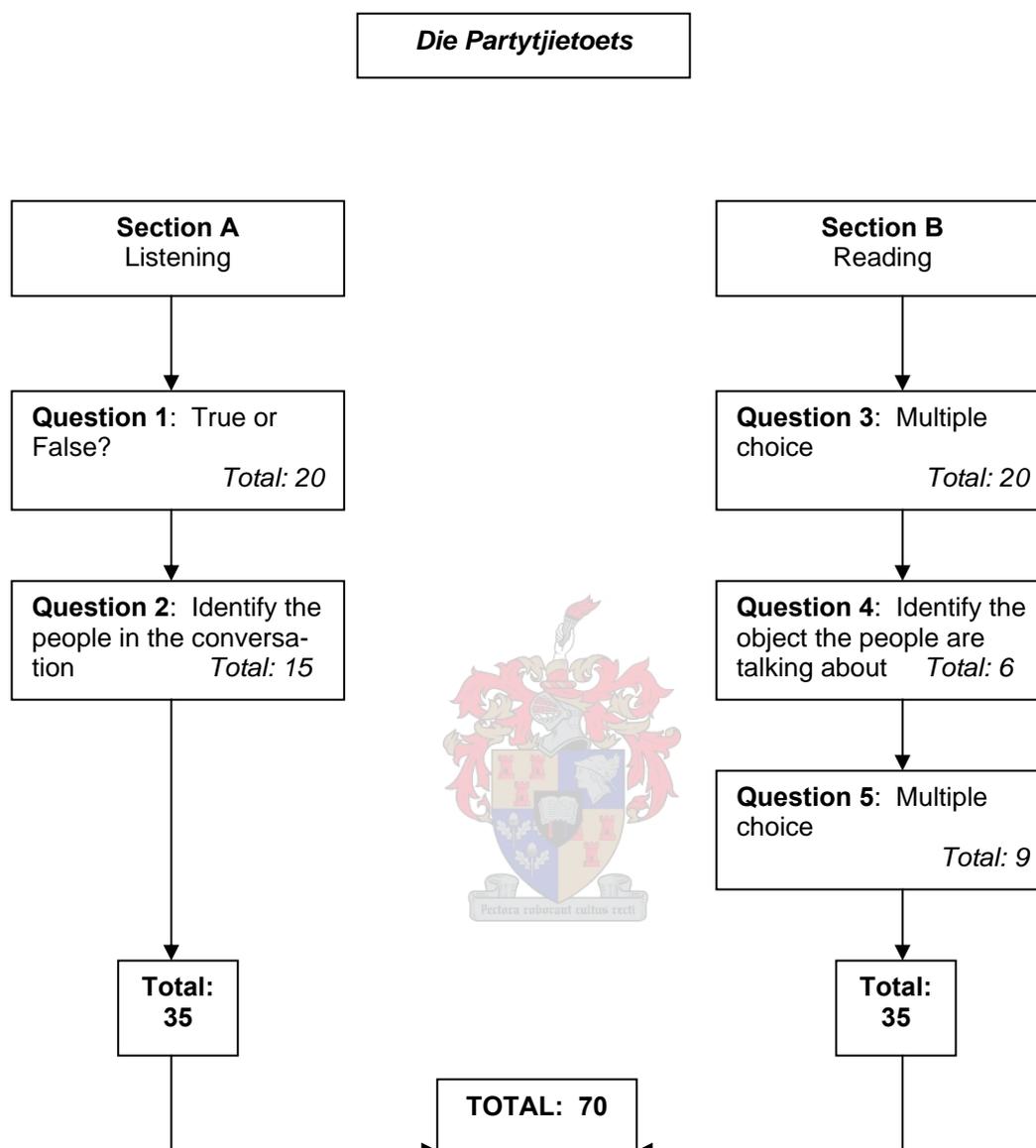


Figure 7: A visual representation of the components and mark distribution of the *Partytjetoets*



A second instrument used in this study is an adapted version of the Brandon Carroll Interview Assessment Bands Scale (Appendix G). The instrument has been slightly adapted by Martie van Heusden (Unit for Afrikaans) and Nicoline Rousseau (The Cape Peninsula University of Technology) in 1987 to better suit the needs of students within the South African context. It is used in the Unit for Afrikaans to measure students' communicative competence in an oral or interview situation. The Interview Assessment Band Scale is calibrated into nine bands and varies from band one, a non-speaker of a language, to band nine, an expert speaker of a second language on

a first language level. The description of each band clearly indicates the integrated nature of the different communicative competences. This instrument is used to measure students' overall oral competence with the focus on fluency.

4.4.3.2 Treatment Material

The treatment material or the experimental treatment used in this study is the interactive, computer application called *Tjommie en Vriende*.

The treatment material was presented to the experimental group only within the confines of the University's computer user's area, HUMARGA. Students completed the application through the course of the semester. Since they all worked independently and at their own pace, they spent different times interacting with the application. The average time spent working with the application was influenced by the difficulty of the material presented as well as the number of exercises.

4.4.4 Experimental Procedures

The experimental design of this study has a quasi-experimental character. A true experiment design was impossible because the experiment was voluntary. The researcher could not randomly assign participants to the experimental and control groups. Five participants formed part of the experimental group and ten formed part of the control group.

The experiment was also based on what is called a "between-subject design" (Creswell, 2003:167) where the researcher compared two groups with each other. Figure 8 illustrates the quasi-experimental research design followed in this experiment.

Figure 8: A nonequivalent (Pretest and Posttest) Control-Group Design

Group A	O1_____X_____O2_____O3
Group B	O1_____O2_____O3

- X represents an exposure of a group to an experimental variable or event, the effects of which are to be measured.
- O represents an observation or measurement recorded on an instrument.
- X's and O's in a given row are applied to the same specific participants.
- X's and O's in the same column, or placed vertically relative to each other, are simultaneous.
- The left-to-right dimension indicates the temporal order of the procedure followed in the experiment.

(Creswell, 2003:167-168)

O1 represents the pretest and the pretest scores gathered during the first week of classes. O2 resembles the posttest and the posttest scores gathered during the last class of the semester. O1 and O2 took place 14 weeks apart. O3 resembles the Brendan Carroll Interview Assessment Bands Scale and the oral examination. O3 took place six days after administering O2.

4.5 Statistical Analysis

The types of statistical analysis that were used in this study included RANOVA (repeated measures analysis of variance) and one-way ANOVA (analysis of covariance). A non-parametrical statistical test, the Mann-Whitney U Test was used should “data on a pretest or posttest show marked deviation from a normal distribution” (Creswell, 2003:173).

4.6 Review

This chapter provided an explanation of the research methodology and the approach followed to conduct the study. New terminology and the choice of experimental design were clarified. The results of this experiment will be discussed in Chapter 5.

CHAPTER 5

PRESENTATION AND DISCUSSION OF RESEARCH RESULTS

5.1 Overview

The objective of chapter 5 is to present and discuss the statistical data of the quasi-experiment conducted in this study. The research question posed in the introductory chapter will also be addressed. This chapter supplies the statistical evidence to prove whether or not the interactive computer application, *Tjommie en Vriende*, did indeed improve students' general communicative competence on a speaking, listening and reading skills level, in spite of the fact that the main focus of *Tjommie en Vriende* is on accuracy. In other words: is the transfer of competencies possible where students have extra training in accuracy?

5.2 Results

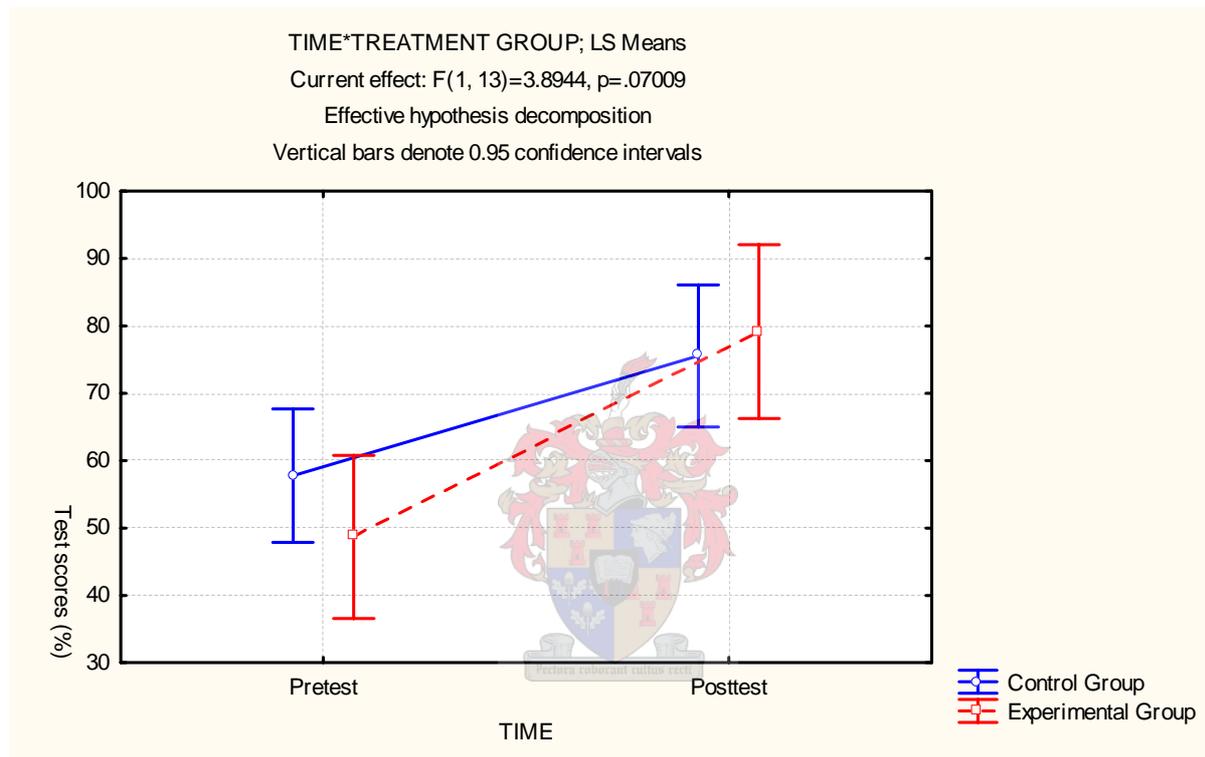
The hypothesis of this study postulates that the interactive computer application, *Tjommie en Vriende* could possibly improve students' general communicative competence in Afrikaans although the application mainly focuses on linguistic competence. To determine if the hypothesis could be proven to be true, a careful analysis of the statistical data is necessary. Two sets of data were compared to answer the research question. Firstly, the mean test scores of the experimental and the control group in the pre- and posttest (listening and reading skills) was compared. Secondly the mean scores of the groups in the oral examination were compared. Various statistical tests were conducted to determine if there were any significant differences between the two groups.

Firstly a repeated measures ANOVA test was conducted to see whether there was any difference in the mean performance of the pre- and posttest (listening and reading skills) scores of the experimental group and the control group. Secondly a one-way ANOVA test was conducted to determine whether the difference in mean scores in the oral examination of the experimental and control groups, was statistically significant. A third test, a Mann-Whitney U Test, was conducted to confirm the outcome of the one-way ANOVA test non-parametrically.

5.2.1 Repeated Measures ANOVA

Figure 9 summarizes the mean test scores of both the experimental and control groups in the pre- and posttests (listening and reading skills) conducted.

Figure 9: Graphical representation of the repeated measures ANOVA of the mean pre- and posttest scores



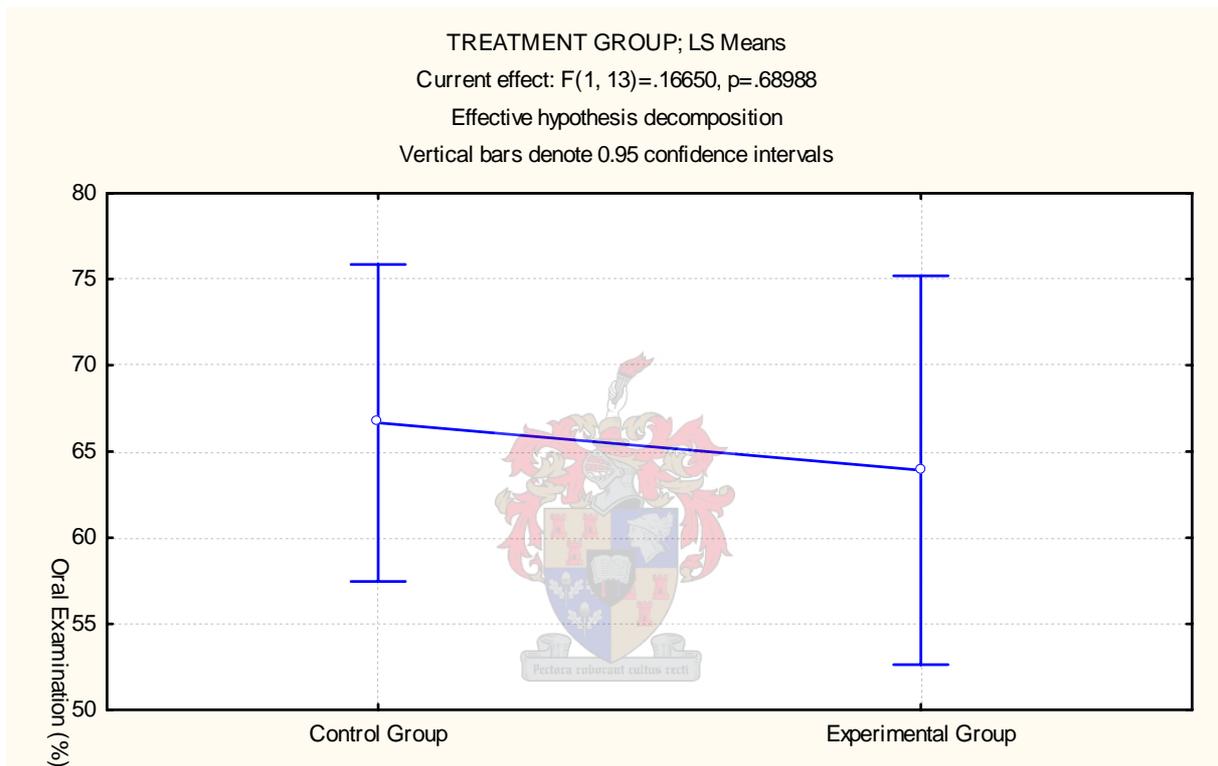
From the statistical analysis as displayed in Figure 9 it can be concluded that:

- There was no significant interaction between the time lapse and treatment of the groups ($p = 0.07009$).
- The lack of significant interaction between the groups allows for a direct interpretation of the main effects namely Treatment and Time.
- The participants in the experimental group as well as the participants in the control group were more or less on the same initial performance level.
- The scores between the pre- and posttest differ significantly; $p < 0.0001$
- The means scores between the posttest of the experimental group and the control group does not differ significantly; $p = 0.689 (> 0.05)$.

5.2.2 One-way ANOVA

Figure 10 summarizes the mean scores of the oral examination of both the experimental and control groups.

Figure 10: Graphical representation of a one-way ANOVA of the mean scores of the oral examination between the experimental and control groups



From the statistical analysis as displayed in Figure 10 it can be concluded that:

- The mean score of the experimental group does not differ significantly from that of the control group: ($p = 0.168$).

5.2.3 Mann-Whitney U Test

A Mann-Whitney U Test was conducted to determine whether the results obtained with the one-way ANOVA was indeed correct. The statistical results of the one-way ANOVA was tested non-parametrically with the Mann-Whitney Test and confirmed the non-significance of the difference between the two groups where $p = 0.18$. The results of the Mann-Whitney U Test are summarized in Table 6.

Table 6: Nonparametric comparisons of the experimental and control groups by means of the Mann-Whitney U Test

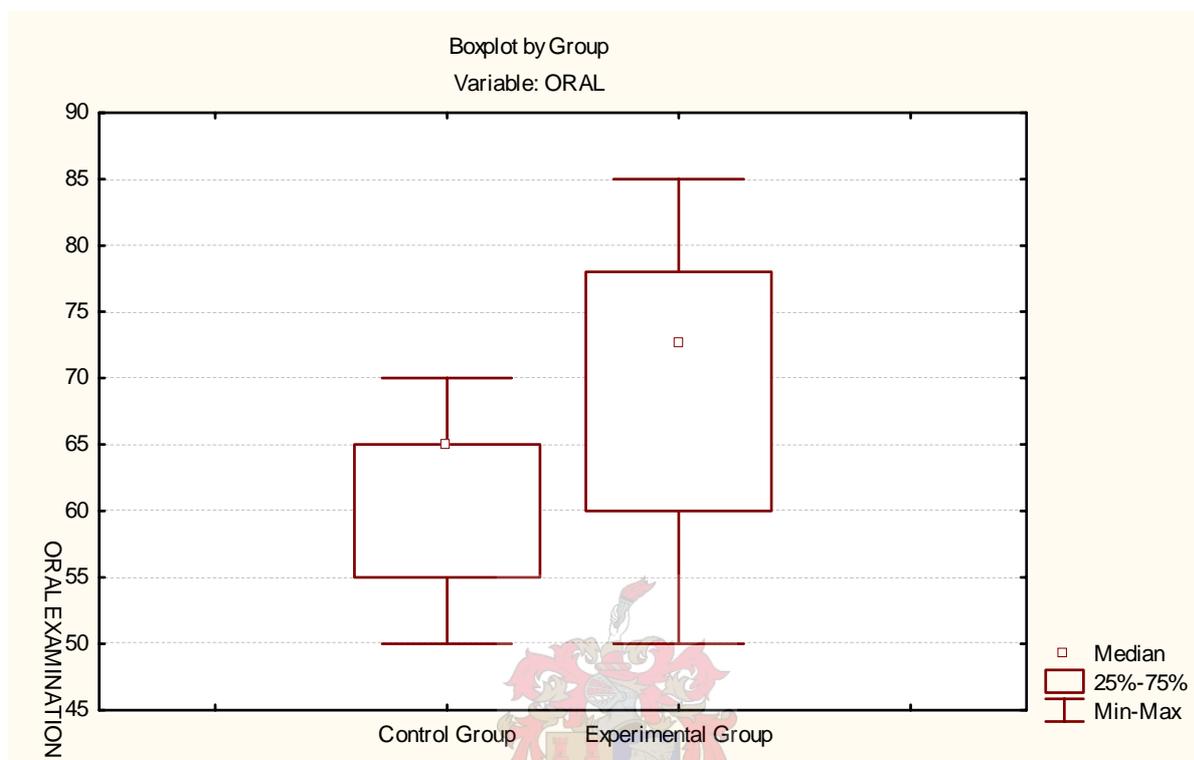
Mann-Whitney U Test (DATA2005115.sta)									
By variable TREATMENT GROUP									
Marked tests are significant at $p < .05000$									
variable	Rank Sum Group 1	Rank Sum Group 2	U	Z	p-level	Z adjusted	p-level	Valid N Group 1	Valid N Group 2
ORAL	60.50000	59.50000	15.50000	-1.35529	0.175327	-1.37507	0.169109	9	6

5.3 Discussion of the Statistical Results

An analysis of the statistical data collected in this study indicates that the interactive computer application, *Tjommie en Vriende*, has a slight effect on students' general communicative competence in Afrikaans. However, the slight effect of the application is not proven to be statistically significant. The difference between the pre- and posttest scores of the experimental and control groups obtained via a repeated measures ANOVA test, indicates that $p = 0.689 (> 0.05)$. The difference between the mean scores of the oral examination of the experimental and control groups obtained via a one-way ANOVA test, indicates that $p = 0.168$.

The fact that the two groups do not differ significantly can be ascribed to mainly two factors. The first and most important factor that influenced the outcome of the study is the fact that the experimental group consisted of only five participants compared to the ten participants in the control group. Possible reasons for this uneven distribution are summarized in section 4.4.1. The comparison of mean scores of the two groups therefore gives a warped reflection of the achievements of the experimental group. If one looks at a Boxplot (Figure 11) of the median of the two groups, it is evident that the majority of participants in the experimental group achieved higher marks in their final oral exam than participants in the control group.

Figure 11: A Boxplot of the medians of the experimental and control groups of the oral examination

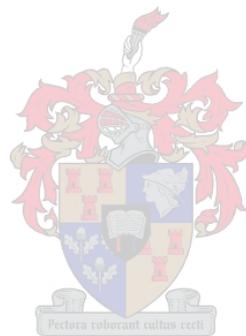


The participants' entry level of language proficiency is a second relevant factor that played an important role in this study. All the participants were on the exact same entry level. They all met the 'requirements' of the course that implied that they have no prior knowledge of Afrikaans whatsoever. This means that even without the instructional treatment of the computer application, it can be concluded that participants in both groups should perform better in the posttests and in the oral examination after 14 weeks of class.

5.4 Review and Preview

The purpose of this study was to investigate the hypothesis postulated in the introductory chapter. Can *Tjommie en Vriende* improve students' general communicative competence although its main focus is on linguistic competence? The need for a computer application that can focus on students' linguistic competence and improve their accurate use of Afrikaans grammar structures and

rules was identified and addressed. This study therefore aimed to achieve the goal of developing a computer application and empirically determines whether or not it can positively influence students' general communicative competence. Chapter 6 will make concluding remarks about the conducted study and include suggestions for future research.



CHAPTER 6

CONCLUSIONS AND POSSIBILITIES FOR FUTURE RESEARCH

6.1 Preview

The aim of this conclusive chapter is to provide an overview of the results of the conducted study as well as comment on the implications for future research in the field of computer-based instructional materials. Specific reference will be made to possibilities for future research in the field of Afrikaans computer-based instructional materials at Stellenbosch University.

6.2 Hypothesis

The research question postulated in this study is formulated as follows: The interactive and supplementary computer application *Tjommie en Vriende* might improve students' general communicative competence on a speaking, listening and reading skills level, in spite of the fact that the main focus of *Tjommie en Vriende* is on accuracy, e.g. only linguistic competence. In other words: it would therefore be interesting to see whether transfer of one competence to another is possible where students have extra training in accuracy.

An interpretation of the statistical data indicates that the interactive computer application, *Tjommie en Vriende*, does indeed have a positive influence on students' general Afrikaans communicative competence, but that it is a statistically insignificant influence. Section 5.3 provides possible reasons for the small difference in mean test and oral scores between the experimental and control groups. The most important factor contributing to the insignificant difference is the size of the experimental group.

6.3 Possibilities for Future Research

The academic discourse on computer-based instructional materials in Afrikaans is virtually non-existent. The most obvious reason for this is the lack of available materials. The materials that are available on the market include the stand-alone applications, *Colloquial Afrikaans: The Complete Course for Beginners*, *EuroTalkinteractive* (it includes *Talk Now!* and *World Talk Afrikaans*), *Linguaphone*

Afrikaans, Praat Afrikaans and *Teach Yourself Afrikaans*. Colloquial Afrikaans is developed by Bruce Donaldson, an Australian, who in his introduction warns potential learners that Afrikaans is a very difficult language to acquire. EuroTalk*interactive: Talk Now! Afrikaans* and *World Talk Afrikaans* on the other hand, supplies essential words and phrases for absolute beginners, but overlook to add any grammatical and structural information about the language.

In recent years, however, Northwest University has done research in the field of CALL in Afrikaans at the Potchefstroom Campus. The University bought the 1990 project, *Instap*, from Vista University and is currently busy upgrading the technical design of the application (Van Rooy, 2005). Apart from *Instap*, other projects include an application set to be released in March of 2006. This project is aimed at complete beginners who want to learn Afrikaans (Van Rooy, 2005). A second long term project includes the development of computer-based instructional materials in all the official languages of South Africa (Van Rooy, 2005). Apart from these future projects, the University has one Afrikaans application that is currently in use. It is an application developed to help improve the language skills of second language speakers (Van Rooy, 2005).

It seems as if Northwest University is playing a leading role in the field of CALL. It might be that other tertiary institutions are also developing computer-based instructional materials, but because these materials are not available to the public, one does not know of its existence. The remainder of this section will look at two possibilities for future research.

6.3.1 True Experimental Design vs. Quasi-Experimental Design

The pioneering study conducted by the researcher might hopefully be the beginning of an academic discourse in the field of Afrikaans computer-based materials at Stellenbosch University. The statistical results of this study beg for follow-up research. Firstly, in order to acquire more significant statistical data, the experiment should be conducted for a second time. This time however, a true experiment should be conducted with the random assignment of participants to equally sized

experimental and control groups. In this case the researcher hypothesizes that the computer application, *Tjommie en Vriende*, with its main focus on accuracy will significantly improve students' general communicative competence in Afrikaans.

6.3.2 Language Policy of Stellenbosch University

Chapter 1 briefly discussed a few motivational factors that led to this study. A strong motivational factor was the Language Policy of Stellenbosch University. Afrikaans is the default language of undergraduate learning and instruction. To many students this is an obstacle that prevents them achieving academic excellence. At this stage only the Faculties of Engineering, Arts and Humanities and Medicine, have a language support system in place that provides students with language courses tailored to meet their needs. These courses are not mere generic courses but integrate the students Engineering or Medicine programme content into language.

Point nine of the summary of the Language Plan (Appendix B) stipulates that “the Language Centre assumes the responsibility for the provision of and/or co-ordination of the relevant language support required for the effective implementation of the Language Policy and Plan” (Summary: Language Policy and Plan, 2002b). The Language Centre is therefore obliged to adhere to the Language Policy and Plan and should therefore provide the necessary language support. One way in which the Language Centre can provide support is by starting an E-Learning Unit that develops materials addressing the language needs of the students. In order to measure the success of such an E-Learning Centre and the quality of materials they produce, empirical studies will need to be conducted.

6.4 Conclusion

This study is a pioneer in the field of Afrikaans computer-based instructional materials. Although the study was conducted with a group of international students, it contributes to the body of research of language and instruction in the South African context. Regardless of the statistical results, it is a positive contribution to the larger discourse of CALL research. It established the necessity of incorporating technology in tertiary institutions to enhance language learning in a multilingual a diverse society.

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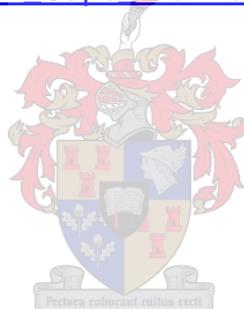
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APPENDIX A

Language Policy

of the Stellenbosch University

The core of the policy

The University of Stellenbosch is committed to the use and sustained development of Afrikaans as an academic language in a multilingual context. Language is used at the University in a manner that is directed towards engagement with knowledge in a diverse society.

1. Introduction

The core function of the University of Stellenbosch is its engagement with knowledge. The spectrum of knowledge of the University is compact in the sense that a number of focus areas form its core, and broad in the sense that it covers a variety of academic disciplines and that it also includes learning and teaching at undergraduate and postgraduate levels and research.

The University takes as a starting point that the international context is of crucial significance in its engagement with knowledge. At the same time the University is situated within a local socio-cultural context, both within South Africa and particularly in the Western Cape region. The University aims to apply locally the knowledge that has been discovered *inter alia* within the international context, taking into account the differences within the regional community and national society.

One aspect of our society is that a variety of languages function within it. The ascription in the Constitution of official status to eleven different languages amounts to an acknowledgement that each of these languages is recognized as an asset that should be used as a means of developing the human potential of the country. This important personal, professional and social asset should be exploited on a collective basis by the South African tertiary education sector to achieve this end.

Against this background, the University makes a contribution to the development of Afrikaans as an academic language, but at the same time takes into consideration the multicultural and multilingual reality of South Africa by, alongside the particular focus on Afrikaans, also taking English and isiXhosa into account.

2. Principles

The Language Policy of the University is implemented taking the following important principles into account:

1. The University is a centre of excellence directed toward the production of knowledge through research, learning and instruction.
2. The University recognises and respects the core values enshrined within the South African Constitution.
3. The University takes into consideration strategic national policy and the processes of policy formation.
4. The Language Policy takes into account the values and premises set out in the Strategic Framework of the University.
5. The University recognises the particular status of Afrikaans as an academic language and shares the responsibility for promoting Afrikaans as an academic language.
6. The University recognises the status of English as an important local and also acknowledged international academic language.

7. The University recognises the status of isiXhosa as an important local language, but also as a developing academic language, and intends, within the limitations of what is possible, to contribute actively to its development.
8. The Language Policy takes into account the diversification goals of the University.
9. The Language Policy places the University in a position to make a particular contribution to the promotion of multilingualism as an asset.
10. The University accepts the principle that the success of the Language Policy is dependent on the provision of acceptable and sufficient language services.

3. The multilingual context

The University's commitment to Afrikaans as an academic language does not exclude the use of various languages at the University in its engagement with knowledge: apart from Afrikaans, English and isiXhosa, Dutch, German and French are included.

Afrikaans

The University is committed to the exploitation of the academic potential of Afrikaans as a means of empowering a large and diverse community. This includes a significant group from disadvantaged communities, a considerable number of non-Afrikaans speakers as well as Afrikaans speakers who have a better command of Afrikaans than English. The University wishes to empower all such groups through university education in Afrikaans.

The Afrikaans language community is *demographically*, on the grounds of both the number of its users and its geographical distribution regionally and nationally, one of the stronger language communities in the country. Speakers of Afrikaans are in the majority at the University of Stellenbosch among both students and staff. *Culturally* Afrikaans is a standard language that has for decades functioned as an academic language and is a national asset as a fully developed cultural language.

English

The University of Stellenbosch makes use of English in its engagement with knowledge because of the language's international and local function, the strong presence of English speakers in the University and the need for academic proficiency in English for students who do not have English as their home language. English functions in combination with Afrikaans in the University

isiXhosa

isiXhosa is an official language used by one of the larger language communities spread over a large area of South Africa that is on the increase in the Western Cape, among other regions. The University undertakes to contribute by means of particular initiatives to the development of isiXhosa as an academic language

4. Provisions of the Language Policy

The Language Policy of the University is summarised in the following provisions:

1. Afrikaans is the default language of undergraduate learning and instruction ¹
2. English is used in particular circumstances as a language of undergraduate learning and instruction.

¹ The term "default" is the wellknown sense "automatically", and, as far as the management of the Language Policy and Plan is concerned, in the sense "the option not needing any further motivation." Both these senses are well-established.

Provisions 1 and 2 mean that, unless otherwise determined, the A-specification of the Language Plan applies automatically in all undergraduate modules. Any deviation in undergraduate modules from this default position will be allowed only after the reasons have been thoroughly considered.

3. Afrikaans and English are used in postgraduate learning and instruction.
4. The academic literacy of students in Afrikaans and English will be developed systematically.
5. The default institutional language of the University is Afrikaans.
6. English is used alongside Afrikaans as a language of communication for the University, as circumstances may require.

Provisions 5 and 6 mean that Afrikaans is used in all circumstances as the language of internal communication, but that the particular needs of non-Afrikaans speaking staff and students are catered for with the appropriate sensitivity.

7. Afrikaans, English and, where possible, isiXhosa are the University's languages of external communication.
8. Provision is made for isiXhosa in some programmes with a view to professional communication.
9. The University promotes isiXhosa as a developing academic language, amongst other ways, through its Language Centre.

With provisions 7, 8 and 9, the University wishes to emphasise the earnestness with which it treats its position within the multicultural and multilingual context of South Africa. The Language Centre will be launching particular actions to that end through its Unit for isiXhosa, a unit that functions in close co-operation with the Department of African Languages.

10. The University of Stellenbosch provides language services with respect to Afrikaans and English, and, in a limited sense, isiXhosa.

5. Language policy formation as a dynamic process

The University of Stellenbosch considers the forming of a Language Policy to be a dynamic process. For that reason, the University undertakes to test the Language Policy against changing circumstances by:

- doing research on the implementation, application and monitoring of the Language Policy,
- consulting regularly with the wider university community,
- processing and making known the information emerging from this research and consultation, and
- adapting the Language Policy according to circumstances.

6. Language Plan

The Language Policy of the University is accompanied by a detailed language plan that is set out in the Calendar.

7. A policy directed toward the future

The Language Policy of the University of Stellenbosch seeks to contribute, as a future-oriented policy, to the realisation of the ideal of creating a favourable learning and instruction environment for the

benefit of the students; an environment within which Afrikaans as an academic language and the asset of multilingualism are combined in an imaginative way.



APPENDIX B

SUMMARY: LANGUAGE POLICY AND PLAN

The official Language Policy and Plan of the University of Stellenbosch was approved by the Council of the University in 2002. The following summary is provided in the interests of brevity, but must be read in conjunction with, and is subject to, the full Language Policy and Plan. The full version is available at [http://www.sun.ac.za/ taal](http://www.sun.ac.za/taal).

A. Language Policy

1. The University is committed to the use and sustained development of Afrikaans as an academic language in a multilingual context. Language is used at the University in a manner that is directed towards its engagement with knowledge in a diverse society.
2. The University acknowledges the special status of Afrikaans as an academic language and accepts the responsibility to promote it. At the same time, it takes account of the status of English as an international language of communication and of isiXhosa as an emerging academic language.
3. The University distinguishes between the use of the three languages in the following manner:
 - Afrikaans is by default the language of learning and teaching at undergraduate level, while English is used to a greater extent at the postgraduate level;
 - isiXhosa is promoted as an emerging academic language. The University creates opportunities for students and staff to acquire communication skills in isiXhosa.
4. The institutional language of the University is, by default, Afrikaans, while English is also used, depending on the circumstances, as an internal language of communication. All three languages are used, where possible, for external communication.

B. Language Plan

1. The Language Plan distinguishes between the implementation of the policy in learning and teaching situations and in the support services and management.
2. Choices between various language options may be made in learning and teaching situations, depending on the language abilities of the lecturer and the composition of the students and programme. These language options are arranged in a hierarchy. Reasons must be provided for deviating from the default option (see point 4 for details).
3. Three general guidelines apply with regard to the language of learning and teaching in class:
 - Modules in which a language is taught are conducted mainly in the language in question (e.g. isiXhosa is taught mainly in isiXhosa, Mandarin in Mandarin) and tasks, tests and examinations are set and answered accordingly.
 - Questions papers in all other modules are set in Afrikaans and English and students may answer in Afrikaans or English.
 - Except in cases where the aim of the module is language acquisition or the study of the language, students may ask questions and expect answers in Afrikaans or English.

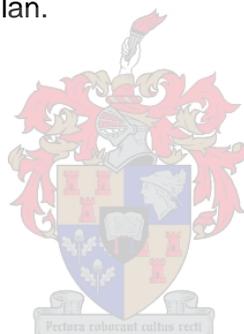
4. Departments choose and implement the various language specifications as follows (the above three points apply generally for all options):

Language specification	Rationale	Characteristics
A specification*:	Applies as the default mode for all undergraduate modules. No reasons need to be given for exercising this option.	<ul style="list-style-type: none"> • Teaching is mainly in Afrikaans • Study material (textbooks, notes, transparencies, electronic learning and teaching material) may be in Afrikaans and/or English • Study framework is in Afrikaans <u>and</u> English.
T specification* (bilingual classes):	<p>Is used for classes where</p> <ul style="list-style-type: none"> • students' language competence requires greater use of English • a programme offered is unique to the University • multilingualism is important in the context of a specific occupation • the lecturer does not yet have an adequate command of Afrikaans. 	<ul style="list-style-type: none"> • Teaching is in Afrikaans for at least 50% of the time. • Textbooks and reading matter are in Afrikaans and/or English. • Study notes, transparencies and electronic learning and teaching material are fully in Afrikaans and English, or alternately in Afrikaans and English.
E specification (English as the main medium of instruction)	<p>Is used only in highly exceptional circumstances for</p> <ul style="list-style-type: none"> • programmes unique in South Africa • programmes in which students do not have adequate language skills (foreign or English-speaking students) • modules in which the lecturer does not have a command of Afrikaans • regional co-operation and strategic aims necessitate English. 	<ul style="list-style-type: none"> • Teaching is primarily in English • Textbooks and reading matter are in Afrikaans and/ or English • Notes are in English with core notes in Afrikaans • Transparencies and electronic learning and teaching material are in English.
A&E specification (separate 'streams' in Afrikaans and English):	<p>Used only in most exceptional circumstances when academically and financially justified and attainable for</p> <ul style="list-style-type: none"> • modules with large numbers of students • regional co-operation and attaining strategic goals 	The characteristics of the A and E options apply respectively here.

	<ul style="list-style-type: none"> programmes offered by satellite technology or distance education. 	
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* For both of these options an academic language competence in Afrikaans and English is essential for successful study.

5. Afrikaans is the default language of communication for the support services and management. All official documents of the University are available in Afrikaans. 'Default' does not, however, mean 'exclusively': important policy documents are available in English and communication with staff is also conducted in English. Guidelines are provided for the language to be used at meetings. Documents relating to the service conditions for staff are available in Afrikaans, English and isiXhosa.
6. Written communication with students is conducted in Afrikaans and English, and recruitment is conducted, where possible, also in isiXhosa. Oral communication is conducted in Afrikaans or English, according to the language of preference of the student.
7. The corporate image of the University reflects the Language Policy and Plan.
8. A Language Committee is appointed by the Council to implement the Language Policy and Plan.
9. The Language Centre assumes the responsibility for the provision of and/ or co-ordination of the relevant language support required for the effective implementation of the Language Policy and Plan.



APPENDIX C
BASIC AFRIKAANS FOR INTERNATIONAL STUDENTS (LEVEL I)
STUDENT FEEDBACK QUESTIONNAIRE

Fill in or draw a cross in the applicable square.

Date: _____

What achievement (final) mark do you expect for this course?

Less than 50%	50-59%	60-74%	75-100%
---------------	--------	--------	---------

How many hours do you spend per week on preparation for this course (over and above the contact sessions)?

None	1-2h	3-4h	5-6h	7-8h	9-10h	More than 10h
------	------	------	------	------	-------	---------------

How often do you attend contact sessions?

Practically always	Less regularly	Rarely
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Asses the facilitator's TEACHING on a scale from 1 to 5 (where 1 = very bad and 5 = excellent; n.a. = not applicable);

This facilitator:

1. is accessible to all learners

1	2	3	4	5	n.a.

2. is punctual regarding appointments and contact sessions

1	2	3	4	5	n.a.

3. presents study material enthusiastically

1	2	3	4	5	n.a.

4. is well prepared for contact sessions

1	2	3	4	5	n.a.

5. has a good general expertise in the subject

1	2	3	4	5	n.a.

6. organizes the learning environment (e.g. practicals, study material, helping aids, electronic resources) effectively to support my learning and comprehension

1	2	3	4	5	n.a.

7. communicates clearly (verbally, electronically and through writing) so that I know exactly what I have to do

1	2	3	4	5	n.a.

8. helps me in various ways to master difficult concepts / words / structures

1	2	3	4	5	n.a.

9. uses a variety of task types to keep me involved in the learning process

1	2	3	4	5	n.a.

10. fosters during group work authentic communication between me and other learners

1	2	3	4	5	n.a.

11. enables me to master the course content sufficiently before it is tested

1	2	3	4	5	n.a.

12. provides feedback on tests, tasks, etc. within reasonable time

1	2	3	4	5	n.a.

APPENDIX D
BASIC AFRIKAANS FOR INTERNATIONAL STUDENTS (LEVEL I)
STUDENT FEEDBACK QUESTIONNAIRE
PERSONAL EXPERIENCE

PLEASE ANSWER THE FOLLOWING QUESTIONS THOROUGHLY AND HONESTLY. YOUR INPUT IS OF GREAT VALUE.

1. What were your expectations of the course before you started it?

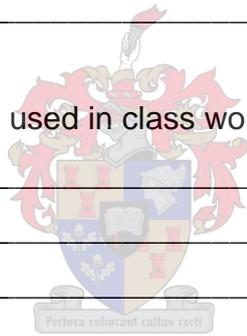
2. In the introductory session the methodology of the course was explained (terminology like Whole Brain Learning, Suggestopaedia, Accelerated Learning and Communicative Approach were introduced). Did your expectations change after the first introductory session? If so, in which manner?

3. Did the course meet your expectations as stipulated above?

4. What is your honest opinion about this methodology?

5. Do you think you would have learnt more or better Afrikaans if the classes were presented in a traditional manner (e.g. lecture type manner)?

6. Which task types that were used in class worked the best for you?

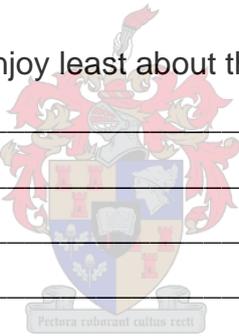


7. Were there any task types that did not work for you at all? Can you pinpoint why?

8. Are there activities that you would have wanted in this course?

9. What, in general, did you enjoy most about this class?

10. What, in general, did you enjoy least about this class?



11. Which topics discussed in this class meant the most to you? Could you say why?

APPENDIX E

BASIESE AFRIKAANS VIR BEGINNERS
ELEMENTÊRE LUISTER- EN LEESVAARDIGHEID

NAAM EN VAN: _____

KURSUS: _____

DATUM: _____

NASIONALITEIT (bv. Suid-Afrikaner): _____

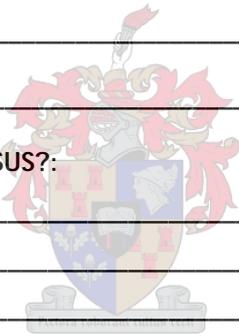
GEBOORTEDATUM: _____

WAT STUDEER JY? (bv. Politieke Wetenskap): _____

VOORGRAADS / NAGRAADS: _____

BEROEP (bv. dokter): _____

HOEKOM (why) DOEN JY HIERDIE KURSUS?:



VERSTAAN (understand) JY ENIGE AFRIKAANS? MOTIVEER INDIEN JA:

<p>Voortoets:</p> <p>1. ____ 2. ____ TOT. ____/70 ____%</p> <p>Natoets:</p> <p>1. ____ 2. ____ TOT. ____/70 ____%</p>

ELEMENTÊRE LUISTER EN LEESVAARDIGHEID

AFDELING 1 – LUISTERVAARDIGHEID

VRAAG 1

You will hear short descriptive statements about a party scene portrayed on the separate page of this paper. Each statement will be given twice at normal speech rhythm.

You have 5 minutes to study the party scene before the statements are read to you. Keep on watching the picture while carefully listening to each statement. After the two readings you only write TRUE (T) OR FALSE (F) next to the number of the appropriate statement.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

10 x 2 = 20
_____/20

VRAAG 2

Listen to five conversations between five pairs of party goers and indicate in each case the names of the speakers in the space provided below. Each conversation will be played twice. Use the picture as well as the verbal clues in the conversation to help you decide.

1. _____
2. _____
3. _____
4. _____
5. _____

5 x 3 = 15
_____/15

TOTAAL
_____/35

AFDELING 2 – LEESVAARDIGHEID

VRAAG 1

Read each question below about the party scene carefully and then decide which of the three alternative answers is the most appropriate one according to the detail in the picture. Circle only the relevant symbol in each case.

1. Wat is die algemene atmosfeer wat deur die prent gesuggereer word?

- A – somberheid
- B – vrolikheid
- C – hartseer

2. Hoeveel van die mans het strikdasse aan?

- A – vyf
- B – drie
- C – twee

3. Hoeveel mans dra baadjies?

- A – vyf
- B – drie
- C – twee

4. Waarom word hierdie partytjie gehou?

- A – Koos is vandag vyftig jaar oud.
- B – 'n Geldige afleiding is onmoontlik.
- C – Ellen se mondigwording word gevier.

5. Wat doen Koos?

- A – Hy gesels vrolik met 'n meisie.
- B – Hy staan skeeloog en glimlag.
- C – Hy staar skeeloog na sy glas.



6. Hoekom lyk Ellen nie vrolik soos die ander nie?

- A – Sy is bekommerd dat Koos dronk is.
- B – Sy het niks om te drink nie en voel afgeskeep.
- C – Sy is skaam oor haar nuwe kort haarkapsel.

7. Watter meisie dra 'n halternekrok?

- A – Marie
- B – Petra
- C – Ellen

8. Hoeveel meisies dra moulose lang rokke?

- A – vier
- B – drie
- C – twee

9. Hoe kommunikeer Andries met Ellen?

- A – Hy vat aan haar middellyf en frons diep.
- B – Hy vat aan haar skouer en beduie met sy regterhand.
- C – Hy vat aan aan wang en sug diep.

10. Hoe lyk die vertrek?

- A – Die tafel het blomme op.
- B – Die mure is bont geverf.
- C – Daar hang orals ballonne.

$10 \times 2 = 20$ _____/20

VRAAG 2

Read the following two dialogues carefully. In each case a specific object also seen in the picture is the main topic of conversation. Write down only the name of this object in the space provided after each dialogue. Also try to say to whom the object belongs. You may write in English.

Dialogue 1 between Ernst en Maria

Ernst: Jy moenie nog spot nie, my vrou! Ek sukkel regtig vanaand om jou behoorlik te kan sien.

Maria: Het jy nie dalk vergeet om dit skoon te maak voordat ons gekom het nie?

Ernst: Nooit! Ek maak dit elke dag twee maal skoon.

Maria: Ag, toemaar, jong! Jou oë lyk in elk geval groot en dromerig agter die raam.

ANTWOORD: _____

Dialogue 2 between Piet en Petra

Piet: Dink jy regtig ek gaan die prys wen hiermee?

Petra: Definitief! Met so 'n haakneus is die prys joune?

Piet: Maar is jy nie nuuskierig om te weet hoe lyk die regte Piet nie?

Petra: Ja, nogal, maar op die oomblik geniet ek jou ander gesig baie.

ANTWOORD: _____



$2 \times 3 = 6$ _____/6

VRAAG 3

Read the following incomplete speech sequences. Also read the three alternatives given below each sequence for the incomplete part and choose the most appropriate one according to the context of the interaction. Only circle the relevant symbol in each case.

Sequence 1 – Ben en Tessa

Ben: Wil jy 'n bietjie gaan rus?

Tessa: _____

Ben: Nou ja, kom ons dans dan nog 'n bietjie!

- A – Nee wat, ek begin dit nou eers regtig geniet.
- B – Ja, ek is nou regtig gedaan.
- C – Nee, ek wil liewers huis toe gaan.

Sequence 2 – Janet en Johan

Janet: Kry jy nie vreeslik warm met daardie trui nie?

Johan: _____

Janet: Want jy begin al sweet?

A – Mag ek nie warm kry nie?

B – Lyk dit vir jou so?

C – Hoekom vra jy?

Sequence 3 – At en Sarie

At: _____

Sarie: Maar haal dit dan af sodat jy makliker kan asemhaal.

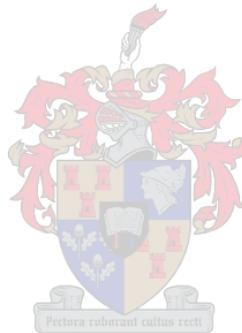
A – Hierdie partytjie is regtig vir my flou.

B – Hierdie boordjie en strikdas sit hopeloos te styf.

C – Hierdie musiek begin my nou verveel.

$3 \times 3 = 9$ _____/9

TOTAAL _____/35



APPENDIX F

DIE PARTYTJIE-TOETS: MEMORANDUM

Vraag 1: Die stellings

1. Daar is tien mense in die prentjie.
2. Ernst en Maria dans passievol op die maat van die musiek.
3. Die vertrek is vrolik versier.
4. Slegs een persoon dra 'n volgesigmasker.
5. Twee mense dra een of ander partytjiehoed.
6. Daar word geen kos of drank bedien nie.
7. Almal is aangetrek in formele aanddrag.
8. Petra streel Piet se neus en kyk dromerig na hom.
9. Janet dra slegs vloeiende langrokke na partytjies.
10. Ellen lag uitbundig vir Andries se grappies.

Afdeling 1

Vraag 1 (10 x 2 = 20)

1. False	6. False
2. False	7. False
3. True	8. False
4. True	9. False
5. True	10. False

Vraag 2 (5 x 3 = 15)

1. Janet en Johan
2. Ellen en Andries
3. Ernst en Maria
4. Marius en Marie
5. Piet en Petra



Afdeling 2

Vraag 1 (10 x 2 = 20)

1. B	2. C	3. A	4. B	5. C
6. A	7. B	8. C	9. B	10. C

Vraag 2 (2 x 3 = 6)

1. Ernst se bril
2. Piet se masker.

Vraag 3 (3 x 3 = 9)

1. A	2. C	3. B
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APPENDIX G

Brendan Carroll interview assessment bands

%	Band	Outcomes
95 - 100	9	Expert speaker on mother tongue level. Speaks fluently and with authority on general and professional topics. Initiates conversation. Expands and develops the theme systematically and logically. Responds excellently to changes in attitude and tone. Language patterns used correctly throughout. Vocabulary professional, extensive, accurate and appropriate. No trace of foreign accent.
88 – 94	8	Very good / excellent non-native speaker. Speaks fluently but with less authority (than speaker on band 9) on general and professional topics. Initiates regularly and effortlessly. Systematic and logical development of theme, but less sophisticated than speaker on band 9. Reacts very well to changes in attitude and tone. Some structure errors which don't impede intelligibility. General and professional vocabulary less extensive, accurate and appropriate than band 9. No conspicuous mispronunciations: approximates the Afrikaans accent.
79 - 87	7	Good non-native speaker. Speaks fluently and with authority on general topics. Develops the theme coherently but with less logic and flexibility than on band 8. Initiates regularly. Less fluent and systematic on professional topics. Reacts well to changes in attitude and tone. Sporadic hesitation owing to irregular structural accuracy. Vocabulary general and professional but less extensive, accurate and appropriate than on band 8. A discernible Afrikaans accent.
68 - 78	6	Competent non-native speaker. Speaks fairly fluently on general topics owing to compensatory strategies. Does not cope with professional topics owing to lack of sophisticated vocabulary. Initiates sporadically. Reacts fairly well to changes in tone and topic. Hesitation in speech owing to self-correction of structure errors. Vocabulary less appropriate. Accent less distinctly non-Afrikaans.
59 - 67	5	Modest non-native speaker. Speaks less fluently than on band 6, but sustains the conversation owing to compensatory strategies. Shows signs of initiating. Understands the gist of conversation, but has to ask for clarification and/or repetition of detail. Structure errors and inappropriate choice of words sometimes impede intelligibility of message. Copes but not with great style. Accent distinctly non-Afrikaans.
50 - 58	4	Unsure non-native speaker. Sustains the dialogue owing to compensatory strategies but in a rather passive manner. Rarely takes initiative or guides the discussion. Speech is halting and sometimes even unintelligible owing to regular structure errors and inappropriate choice of words. Follows Afrikaans at normal speed with difficulty. Accent distinctly non-Afrikaans.
31 - 49	3	Limited non-native speaker. Dialogue is drawn out, with hesitations and misunderstandings owing to regular inaccuracies and limited vocabulary. Barely follows Afrikaans at normal speed. Speaks in phrases. Accent distinctly non-Afrikaans.
1 - 30	2	Extremely limited non-native speaker. Speaks sporadically and only in individual words. Does not follow Afrikaans spoken at normal speed. Extremely foreign accent.
0	1	Non-speaker. Not able to understand and/or to speak.

